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BULLETIN  
OF  
THE UNIVERSITY OF TEXAS

NO. 298

FOUR TIMES A MONTH

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GENERAL SERIES, NO. 33

OCTOBER 8, 1913.

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*Studies in Agricultural Economics*

BY THE TEXAS APPLIED ECONOMICS CLUB

EDITED BY

LEWIS H. HANEY  
PROFESSOR OF ECONOMICS



PUBLISHED BY THE UNIVERSITY OF TEXAS  
AUSTIN, TEXAS

Entered as second-class mail matter at the postoffice at Austin, Texas





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## PREFACE.

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The papers which make up this little volume might be called "undergraduate studies in agricultural economics." They are a continuation of the work of the Texas Applied Economics Club, the first fruits of whose activities appeared last year under the title, "Some Corporation and Taxation Problems of the State." Under the general direction of the faculty of the School of Economics, certain select students—mostly undergraduates—pursuing advanced courses in Economics at the State University have been encouraged to investigate various economic problems which concern the State of Texas. The result is no erudite monograph; but the editor believes that a considerable mass of thoughtfully presented information is made available, and several practical suggestions for State policy have been ventured.

The reader's attention is called to the discussion of co-operation, and especially co-operative credit. The papers on the Farmers' Union, on Farm Tenure, and on Labor, will be found interesting by anyone who desires knowledge about Southwestern agricultural conditions. Important suggestions for State legislation appear in the articles on Roads, Taxation, and Labor.

LEWIS H. HANEY.



## THE CROP MORTGAGE SYSTEM IN TEXAS.

BY SAM L. JOEKEL.

During the period immediately following the Civil War the Southren producer was in a sad plight. Crop produce loans to the amount of \$500,000,000 had been issued to be paid for in the home products of the South.<sup>1</sup> Besides this, money had become extremely scarce. Paper money was issued to excess in hope that the issue might be met through the sale of the home produce. However, neither of the above issues was met. Hence, at the end of the war, prices were high, production was small, and the producer had to bear the brunt of the existing conditions. This led to a system of borrowing money by giving as security the capital used in production, which, in the case of the farmer, consisted almost wholly of his live stock and implements. Then followed the custom of giving a lien on the crop in return for money with which to raise said crop. The first record of such a lien in Texas is found to have been in 1866, (Oct. 27).<sup>2</sup>

This started a movement which, though at first advantageous to the farmer, has now developed into one of the greatest problems of the day. Presumably the purpose of the crop lien, or crop mortgage system, is two-fold: in the first place, it is calculated to enable the farmer to raise a crop, and thereby enable him to earn a livelihood for himself and family. Secondly, and perhaps most prominently, it serves as security on behalf of the lender, who, in Texas, is almost invariably a merchant or business man of some sort. How well the present system fulfils each side of this two-fold purpose will soon be made evident.

What is the nature of the agreement? First there must be two or more parties. Let us say, for instance, that there are two. A desires to raise a crop, but has no facilities for so doing. He goes to B, a merchant, who readily lends him the money to secure the facilities or capital for making his crop, but in return A must invariably make over to B a lien on that crop, due when it shall have been gathered. In other words, A binds himself to dispose of his crop to B until the obligation shall have

<sup>1</sup>Rhodes, *History of the United States*.

<sup>2</sup>Hammond, *The Cotton Industry* (Amer. Econ. Assoc. Pub., 1897).

been met. The mortgage is usually prefixed by the uniform promissory note, bearing, as a rule, 10 per cent. interest, though in some places the rate is lower. This note contains the amount and time of the loan with names of both parties involved. Then follows the mortgage proper which runs something like this:—

THE ABOVE OBLIGATION (the note) is given in settlement for goods, wares and merchandise furnished to.....by said .....for the purpose of enabling.....to make a crop for the year 19...., and without which advances it would not be possible for.....to make a crop; and it is hereby agreed, in consideration of the premises, that the above amount, together with any further advances hereafter made to.....upon conditions herein named, are intended and shall operate in law as a perfect and bona fide LIEN upon all such crops, either CORN or COTTON.....as may be grown upon.....farm .....in..... COUNTY, TEXAS, the present year.

And upon default on.....part to pay the above described obligation when due, out of the first of the proceeds of said crops, it is agreed and understood that the said.....may enter upon the said premises and take possession of the said crops, or such portions of the same as may be sufficient in amount to discharge and pay off this obligation and such necessary expenses as may be incurred in collecting the same. This is the only encumbrance upon the above described crops.

WITNESS:.....

The above agreement is then filed on record with the County Clerk.

As has already been stated, the purpose of the lien is to benefit both parties involved. Let us now look at the system from the point of view of the lender. Clearly the terms of the contract are most favorable to him. Nevertheless, he has several problems which may be taken up separately.

1. Can the lender be sure that the borrower will invest the capital in the manner agreed upon? If he does not, the lender will have no means for the recovery of his loan save through the courts. For ideal working, then, there must be mutual confidence. This is generally not the case.

2. Let us suppose that the tenant farmer, or borrower, has invested his borrowed capital in the manner agreed upon, but that the crop proves a failure. What recourse is left to the lender? Some provision must be made for such an emergency.

3. And, thirdly, let us suppose that the borrower has invested his capital as agreed, that he has tended and harvested his crop, but that because of economic conditions the crop, when thrown on the market, will not bring in a sufficient return to cover the

amount of the loan. Here is another problem worthy of consideration.

In view of the foregoing facts it will be necessary for the lender to employ some means of guaranteeing security to himself. In doing this, several courses are left open to him.<sup>3</sup>

1. In the first place, he may adopt the "informer system," that is, he may set the tenant's neighbors as spies to keep himself informed as to the activities of the mortgagor.

2. Another remedy, and one more regularly employed, is to take a lien only upon a cash crop. The lender will insist on the tenant raising a cash crop before he will take the mortgage.

3. The most common precaution resorted to in the South, and the one which causes the most dissatisfaction to the farmer is the setting of a low maximum limit for the loan. In many cases the lender will set as a maximum for the loan only about 50 per cent. of what he believes the crop will actually yield. In Texas this is pretty commonly true.

So much then for the point of view of the merchant, or lender. The borrower is bound to take another view. He does not like the idea of being spied upon; he feels that he is restricted when forced to plant a certain kind of crop; and he thinks that he is not getting his money's worth. He sees the merchant, not as a benefactor, but as a grafter who is taking advantage of him because he has him, as it were, under his thumb. All this **can not** lead to any satisfactory or harmonious arrangement. Problems and dissatisfaction such as these will naturally lead on to evils.

In addition to the above mentioned undesirable features may be mentioned some that are more nearly classified as evils, because of their effect on the parties involved and on their relations to each other. Taking up the matter from the standpoint of the farmer, we find:

1. The present crop mortgage system arouses in the minds of the farmers suspicion as to the actions of the merchant or lenders. The farmer fails to take into consideration the point of view of the lender, and vice versa.

2. The crop mortgage, as it exists at present, is a bond. The farmer is, in a way, bound to the soil. It is a restriction on the farmer's freedom of action, inasmuch as he is bound to raise cer-

<sup>3</sup>Hammond: *Cotton Industry*.

tain crops, and is bound to dispose of them to the merchant who has financed him. The element of competition is not allowed to come in.

3. Still a third defect,—an ethical evil,—is one which leads to the deterioration of a class of tenant farmers through the crop mortgage system. They know that the crops they are tending are not their own. Therefore, the individual is not likely to put forth a very strenuous effort. He becomes accustomed to living from season to season on the strength of the mortgage. The majority of the shiftless negro farmers in the South are kept in that condition because of the privileges allowed them by the crop mortgage.

4. And now for the last but foremost evil. We hear much in the present day of diversified farming, and of rotation of crops for the improvement of the soil. Where these methods have been put into practice, good has inevitably resulted. There can be no denying of the fact that the future success of our farmers lies in improved methods and scientific farming. These methods take in both the above mentioned devices. Now what is the effect of the crop-mortgage on these devices? In the first place, it puts a damper altogether on diversified farming. It has already been shown that the merchant is unwilling to take a mortgage except on a cash crop. Diversified farming is practically prohibited, inasmuch as the farmer can obtain a lien only on that crop which is prevalent in his community. In south Texas this is invariably cotton or corn. And thirdly, diversified farming and rotation of crops are out of the question because of the unwillingness of the merchant to take a lien on a crop which he himself cannot handle, and it is rarely the case that a merchant who handles cotton will be in any other produce business to any great extent. Further than this, the soil is worn out by the same crop being raised year after year.

From the merchant's point of view, the crop mortgage is undesirable in one or two respects. The unreliability of a certain class of farmers has already been mentioned. Then, while the merchant usually secures himself fully, still he is liable to lose the whole loan. The undesirability of having to appear in court, and in many cases the absolute futility of so doing, constitute another ground for the merchant's opposition.

Altogether the crop mortgage system affords an unstable, undesirable point of security. It is more desirable from the standpoint of the merchant than of the farmer, because the merchant has the power to dictate the conditions of the loan to a great extent. He will take pains not to cheat himself, and to guard against all mischance. The farmer, on the other hand, has to submit to the terms of the merchant if he wants the loan. To him it is altogether too much of a one-sided deal,—one which very soon goes off into oppression.

To give rise to a fair crop mortgage system we would have to have ideal conditions. This would mean that we must have energetic, conscientious farmers; we must have fair minded, sympathetic merchants; we must have good land in all cases, and continually good prospects for crops. With these conditions we would have no need for a crop mortgage system whatever. But inasmuch as these conditions cannot prevail, we must attempt to remedy the situation through a better and different system of credit.

# THE NEED AND POSSIBILITY OF CO-OPERATIVE RURAL CREDIT IN TEXAS.

BY LEWIS H. HANEY.

## *Coöperative credit in a nut shell.*

It is generally recognized that "credit" rests upon two bases: *character* and *solvency*. What a man or group of men can borrow depends both upon the integrity of the individual or individuals concerned and upon the ability to pay. The fundamental problem in coöperative credit, then, is to strengthen or increase these bases.

A careful examination of the working of credit associations abroad shows that they operate to solve this problem in two general ways. In the first place, they seek to reduce risk to a minimum. In the second place, they endeavor to secure the cheapest possible management. It is most important to understand the means through which these economics are effected.

### (1) *Reduction of risk.*

As implied in the bases of credit, risks may be reduced either by strengthening character or integrity or by increasing ability to pay. In the credit associations of Germany we find several means used to strengthen the character element. (1) As the writer of the following paper explains,<sup>1</sup> good standing in the community is one test for membership; and to facilitate the application of this test the membership is restricted to a small district. Thus, *the integrity of the coöperative unit is raised above the average*. (2) It is a fact that the capital is nearly all drawn from the coöperating membership composed of men who are mutually interested and willing to make sacrifices in hard times. Nearly 90 per cent. of the capital of the German personal credit unions consists of the deposits of farmer members and small local savings. In a word, the coöperative spirit makes the group more trustworthy. (3) A more tangible fact is the collective guarantee that the membership gives for the

<sup>1</sup>See below, p. 18.



loans to each individual member. The credits of the individuals who compose the association are pooled, as it were, and, as this decreases the lender's danger from bad debts, it increases the confidence in the group's *will* to pay.

The foregoing point suggests the means taken to diminish risk by increasing *ability* to pay,—solvency; for the collective guarantee just mentioned, by pooling the resources of all the members, makes possible the prompt and regular payment of larger sums. Collective action may mean both improved character and greater solvency. It must mean both if credit is to be most strengthened. (4) More than this, there is a joint and unlimited liability<sup>2</sup> on the part of each member which directly increases the solvency or debt-paying resources of the group,—and indirectly makes for integrity by holding each responsible for the others.

(5) Partly as a necessary precaution when liability is unlimited, and partly as a distinct means of insuring solvency, it is highly important that the purpose and application of all loans be carefully scrutinized. As the Massachusetts bank commissioner puts it, loans should be made “only for the purposes which promise to result in a saving or a profit to the borrower. Each applicant for a loan must state the object for which he desires to borrow in order that the credit committee, which passes on all loans, may rigidly exclude thriftless and improvident borrowing.” For all practical purposes, credit may be defined as a promise to pay money in the future in return for goods received in the present. Now, no measure is of more lasting importance as a guaranty of ability to pay in the future than is one calculated to insure honest and wise investment of loans in the present.

(6) Finally, the coöperative credit association is able to make its security readily negotiable. As a result, a market is made for credit instruments which in this country our banks are loath to handle. The security (based on character and farm property) is brought together in such quantities and is so reinforced by coöperation that it can be made the basis for con-

<sup>2</sup>It would perhaps not be necessary to have *unlimited* liability. Perhaps double liability, or liability in some proportion to borrowing, might answer.

venient and salable issues of bonds. It is a just general criticism of the banking system of the United States that land and the durable products of land are not made sufficiently available as a basis of credit. By pooling the credit of mortgagors, or borrowers, and issuing bonds of small denomination, on the collective security thus gained, this criticism may be removed. By coöperation, then, rural credit is made more mobile. This decreases the risk of the lender,—the buyer of the bonds.

(2) *Economy of management.*

It is a necessary part of real coöperation that the direction of the business concerned lies with the members of the association. The body of the members bears the risks and makes the ultimate decisions as to what shall be done. This being the case, if the business is so simple that the average member can understand it thoroughly, there is an opportunity for the least expensive management possible.

In coöperative credit associations the following means of cheap management are used:

(1) The operation of the association is confined solely and exclusively to getting cheap credit for its members. It sticks to its own business. And by keeping free from commercial transactions and away from the lure of profits, the business is simplified and management made easy.

(2) The local units are small and are very simply organized. This makes for facility of management.

(3) There is only a very small permanent capital, and the dividends paid are almost insignificant in amount. It follows that the administrative machinery for handling the funds of the association is relatively small and the problems and dangers attendant upon dividend payment are not found. As already observed, the business is not run to pay dividends, but to get cheap credit.

(4) A central organization gives to the local association such economies of large-scale operation as are desirable. This central organization, as explained in the next paper, affords a general supervision of the scattered operations of the small associations, and it acts as a clearing-house for loans and investments. Through it the surplus funds of one local association can be

readily placed at the disposal of another which needs to make loans.

The foregoing points should make it clear that ordinary commercial banks can never quite fill the place occupied by local coöperative credit associations. Banks are hardly local enough; they do not come close enough to the individual farmers. Above all, they cannot take the place, where it exists, of the coöperative spirit of self-help with its resulting reduction of risks and economy in operation.

*Different kinds of credit association needed.*

One cannot study very long on the problem of rural credit without becoming convinced that two kinds of loans are needed by farmers, and that two kinds of credit association are required to supply these loans. In business, everywhere, there are the long-time obligations or "bonds" ("funded debt") and short-time paper (current liabilities, short-term notes). So it is with the farming business. In Texas, the farmer needs long-time credit for constructing irrigation and drainage systems, roads, planting orchards, etc. For such loans he now resorts to the ordinary farm mortgage which is taxed,<sup>3</sup> and, having a narrow market, bears a high interest rate. On the other hand, he also needs short-time credit to enable him to plant and gather his crops, or to hold them for a profitable sale. At present, he often resorts to the crop mortgage<sup>4</sup> or to the usurious money lender. Neither class of loans is satisfactorily supplied,—though the Texas Bankers' Association has done something, as will be indicated below. No existing credit agency comes close enough to the individual farmer, or is able to get sufficient security to enable the lowest possible rates. To meet the situation we need, first, a form of coöperative organization which is designed to make loans running for long periods—say up to fifty years. As security for such loans, real estate, or similar security, is necessary. Such a form of organization is especially needed by the propertied classes to enable them to make improvements which pay for themselves only after a long time has elapsed. Second, we need another and different kind of organization which will form an agency for supplying short-time loans—

<sup>3</sup>See below, p. 128 f.

<sup>4</sup>See above, p. 5.

generally to cover the period between the planting and the harvesting of a crop. Such loans are needed, not so much by well-to-do proprietors, as by tenant farmers and small-scale owners to supply the needed working capital for current operations; and, accordingly, the security must generally be of a personal nature. If we are to supply all the legitimate demand for better credit facilities by coöperation, we must have at least these two forms of organization. Nor does it seem expedient to attempt to straddle the fence and combine the two; they rest on different bases of risk and function. To this extent we can follow German experience with its separate Raiffeisen personal credit unions and land mortgage associations (*Land-schaften*)

*Some limitations of coöperative credit.*

Several limitations set by American and Texas conditions must ever be remembered, lest we be led astray in our ardor for cheap credit. First, there is the personal basis of credit which is seriously restricted by the character of our population. The extreme individualism and inability to pull together which is common among our farmers is one of the most serious difficulties in the way of coöperation of any sort. One must not forget, also, that credit unions have flourished where a *settled* population of peasant *proprietors* or *long-lease* holders exists. It would be all but impossible to build the basis of good credit among a shifting or shiftless body of *short-term* tenants and debt-encumbered small farmers. In Texas large numbers of those who need credit worst are debarred from securing it cheaply by coöperation or by any other means. Second, our out-of-date homestead exemption law—which already operates to keep interest rates high in this State—is a serious obstacle, both to long-time and short-time credit associations. Nor can this exemption be got around by the simple device of going through the motions of deeding the land to a joint-stock company, for the law will hold this to be an evasion—as, indeed, it would be.

Again, the Texas farmer cannot hope to secure loans at 4 per cent. through coöperation. The best that can be done by any organization is to get loans at the lowest price warranted

by conditions of demand and supply. In Germany the commercial interest rate appears to range around 4 per cent, and consequently coöperative credit associations are able to lend funds at that rate; but in Texas, where the commercial rate ranges around 7.5 per cent., a rate of 6 per cent. would be about all that the farmer could hope for under existing conditions.

In conclusion, I would call attention to the fact that much improvement is possible in our present system—without the introduction of coöperative credit. The Texas Bankers, for example, have devised a plan whereby the farmer can secure \$35 a bale on his cotton in warehouse at the rate of 6 per cent. This may help the farmer obtain short-time credit.

By improving our currency system so as to remove the fall stringency, farmers would profit directly by being able to obtain credit more readily during the crop-moving season and by lower interest rates. This improvement might be accomplished by a plan similar to the National Monetary Commission's central reserve association, a modification of which appears about to become a law.

Perhaps it would be expedient somewhat to modify the strictness of our banking law limiting the amount of loans on real estate.

Certainly much remains to be accomplished by education and by the adoption of business methods. The banker is too apt to regard a loan as a personal favor; while the farmer, on his part, is too prone to resent the necessary precautions taken by the banker to safeguard his loan. Rural credit should rest on a strictly business basis, and to that end the banker should be allowed every facility for insuring the soundness of loans. It is not always impertinence that he should inquire into the use of the loan. It is good business. In accordance with this idea, it has been suggested that it is possible to have farm owners rated somewhat as business houses are rated by Bradstreet or Dunn.

But after all has been said and done, there remains a place for coöperation; and the sooner the farmers of Texas can get together in local groups and pull together for the mutual good, the better for them as users of capital.

## CO-OPERATIVE AGRICULTURAL CREDIT.

BY W. TRENCKMANN.

The topic of coöperative agricultural credit divides itself naturally into two fields, *land credit* and *personal credit*. Under the latter head, it is the purpose of this article to consider, chiefly the so-called "Raiffeisen" credit unions; and, under the head of the former, the "Landschaften",—both of which institutions are today most highly developed in Germany. Both will be considered with a view to their adaptation to Texas.

Enough information has come from such sources as the American Bankers' Association, the Southern Commercial Congress, the Texas Farm Life Commission, State and national governments and the press, to make unnecessary statistics—establishing the efficiency of the first named institutions, in all countries where they have been applied.

A Raiffeisen credit union may be described as an association of farmers for the purpose of extending cheap credit to its members, the association operating in and recruiting its members from a very restricted district. The members are, as a rule, liable without limit for the debts of the association.

The Landschaften may be described as associations of landed proprietors, operating usually throughout a province, (about as large in area as a Congressional District with a population of from 100,000 to 1,000,000), and lending money to their members upon a surrender by them of mortgages on land. The loans are made by means of mortgage bonds, guaranteed by the associations and payable to bearer, which are negotiated upon the open market, sometimes by the borrower.

### THE PRINCIPAL FEATURES OF THE RAIFFEISEN CREDIT UNIONS.

#### 1. *The district of operation.*

It was Raiffeisen's idea that the operations of the individual credit union should be confined to the immediate vicinity,—taking in about the trade territory of a village ("Kirchspiel").

The reason for this regulation is that it lessens the risk both of creditors of the unions and of the members who are individually liable for the debts of the union. It permits the members to know one another and to be acquainted with the trustworthiness of the ones who borrow. They can watch the application of the loan. Again, the restricted area makes possible a gratuitous business management. To some extent, too, it acts as a deterrent upon speculation. The followers of the purely Raiffeisen idea regarded it as a protection against defalcation by their officers, because of the ease of detection. The restricted district is a feature of the Raiffeisen credit unions in all countries in which they have been adopted, and is generally endorsed.

## 2. *Organization and management in the Individual Credit Unions.*

Raiffeisen's plan of organization was as follows: 1. A board of directors (*Vorstand*) of five members, headed by a chairman (*Vorsteher*), which determines as to the granting of loans and matters connected therewith; 2. A secretary-treasurer (*Rechner*) who executes the orders of the board of directors and keeps the books; 3. A supervisory board (*Verwaltungsrat*) of nine members which supervises the work of the board and the treasurer; 4. A general assembly of all the members, which decides all questions not delegated to the above specified organs.

This organization in its completeness may have experienced some modifications, but it is safe to say that in the main it still exists generally and that whatever modifications have been made are based upon local conditions. The secretary-treasurer is generally the only officer who receives remuneration for services. Expenses of management are as a general rule remarkably small; but there is a wide variation, the minimum being .04 per cent. of the total business done, the maximum .53 per cent. of the total business. Commenting on this feature, Dr. Stoeger says that in some communities it has been found impossible to get a management without pay, and in such cases it would be better not to organize, for if the men at the head have no more patriotism they could hardly be expected to instil a coöperative spirit into their fellow-members. He says, furthermore, that many people would rather serve out of community spirit than

for pay. Raiffeisen himself seems to have regarded gratuitous management as a proof against defalcation, in that it would put the men on their honor. These views are entitled to credit, but we cannot escape the fact that neither gratuitous management nor the restricted district have been altogether successful in preventing defalcation. The opinion of Dr. Crüger, a later authority, seems to be more acceptable in this respect. He says that gratuitous management is only a natural consequence of the restricted district and the small amount of business of each union. Past experiences in Texas reveal a great deal of corruption in most cases where services are either underpaid or not paid at all and certainly warrant a reasonable remuneration for services. The most important qualification of the secretary-treasurer seem to be honesty and adeptness at figures.

#### 8. *Membership.*

The chief qualifications of membership seem to be: residence in the district (precluding a membership in two credit unions by the same man), honesty, thrift, and a disposition to save. Membership is not usually limited in number. In Germany, it ranges all the way from 7 to 1,400, 75 to 90 being the more usual figure. In Texas, it should, as a rule, run still lower, because our sparse population precludes sufficient acquaintance among a larger number. Raiffeisen aimed to extend membership to all in the immediate neighborhood not disqualified by their character. The words of DeFourmantelle, a French authority on this subject, are valuable in so far as consistent with the foregoing. They are: "Agricultural credit banks should carefully recruit their members. Do not admit too many members. Begin with 15 or 20 convinced founders of good standing in the neighborhood." That character, rather than property should be qualification, even in Texas, is well borne out by a statement of the president of one of the national banks in Austin to the effect that his bank would lend to a thrifty tenant much rather than to a shiftless farmer owning a valuable farm, and that honesty of the borrower is a large factor in the extension of their loans.

#### 4. *Regulation of loans to members.*

As to the size of the loan, we are told by Dr. Stoeger: "The



maximum loaned is regulated according to the credit (*"Kreditwürdigkeit"*) of the borrower and the means of the association, the question being: What sum can he, according to his personal circumstances and the purpose for which he intends to use the money, pay interest on and liquidate?" This seems to be the basis of regulation in credit unions today and is certainly sound.

The rate of interest charged the debtor runs from 3 to 5 per cent. It should be as low as is consistent with safe business management, remunerating the union for costs of administration and the interest it pays for the capital used in making the loan. *The first aim should be to furnish cheap credit to members and not to make profits for shareholders.*

The time of the loans varies from 6 months to 3 or sometimes—though rarely—as much as 10 years. The purpose to which the loan is to be put and the time in which it promises returns seem to be the chief consideration in fixing the term. Raiffeisen contended that short time loans were not adapted to the needs of the farmer and recommended loans from two to ten years. This idea was severely criticized as a violation of the banking principle which demands investment in readily realizable securities. Raiffeisen made the mistake of attempting to meet the criticism by making the loans subject to call on four weeks' notice. Dr. Stoeger rightly says that very few farmers are in a position at any time to liquidate on four weeks' notice and points out that in actual practice it is regarded as a pure formality. He suggests, however, that the provision may be of advantage in that the union will be in a better position to protect itself in case of gross mis-application of the loan. It would seem the better plan to make the loan subject to instant recall in such cases.

In Germany, in 1909, 28.3 per cent. of the loans were subject to call, while only 15 per cent. of the working capital was subject to call. This appears to be a satisfactory solution, at once meeting the really existing demand of the farmer for long time credit, and adjusting a portion of the loans so as to be able to meet attacks on the working capital.

The chief *security* for these loans lies (1) in the restricted district, (2) the unlimited liability, (3) the judgment and care

exercised by the management in making the loan. As a rule, personal credit with one or more endorsements is preferred to mortgage. Raiffeisen himself opposed formal evidences of debt, and to some extent, even today, loans are made on the borrower's mere note or verbal promise.

To a greater extent, loans are based on pledges and like securities. Local conditions and particular circumstances should be considered in regulating the evidence of the debt, demanding pledges, etc. The first three securities mentioned, should always be present.

The objection to mortgages seems to be that they are too complicated and involve too many questions of law for the simple business machinery of these unions. This objection would hold good to a much greater extent in Texas, where exemption statutes make a great majority of the population execution proof.

#### *5. Unlimited liability of the members.*

Unlimited liability is the general rule among the credit unions of Europe, being found in 92 per cent. of those in Germany. Liabilities thus accepted per member in that country vary from \$175 to \$750. A fraction of the remaining unions have liability to make supplementary payments apportioned among the members. The authorities regard unlimited liability as the soundest basis for small cultivators. It fosters care in accepting new members, in making the loans, and in watching the application of the loans, among the members as a whole as well as the management. It inspires among third parties a confidence in the paper of the unions. It is therefore a material element in their success.

Mr. David Lubin suggests that limited liability is necessary where there is wide variation in the wealth of the members. Such variation is productive of discord, however, and it is hardly desirable to have a union composed of such elements.

#### *6. Capital and its constituents.*

a. *Deposits.* In Germany, in 1909, 90 per cent. of the working capital of these unions was furnished by members, 75 per cent of it in time deposits and 10 per cent in deposits on current account. The advantages of this are: 1. Members, being liable for the debts of the union, are not likely to withdraw their de-

posits in time of stringency. 2. It creates a healthy spirit of independence and of self-help. 3. Pride in an institution of their own making, the distribution of the benefits locally, and interest in the safety of the institution, help to draw savings of members to its coffers and counteract a greedy demand for a high rate of interest.

b. *Entrance fees.* Raiffeisen opposed an entrance fee, regarding it as a discouragement, and in many cases as a bar, to new members. Just what proportion of the capital of these unions comes from this source, the writer has not been able to ascertain. But it is exceedingly small and in a great many cases non-existent. Undoubtedly, entrance fees should never be permitted to debar an honest, thrifty applicant from membership, as that would greatly minimize the value of the union and would be contrary to the principle already set forth, that honesty and thrift are the soundest basis for success. A small entrance fee, not debarring such people, will contribute a helpful, and, in the infancy of the union, a much needed supply of working capital. People who pay a large entrance fee usually look for a direct, material return, for which reason large entrance fees are likely to stimulate plunging into dangerous, profit-making enterprises, and should be avoided.

c. *Shares.* In Germany, in 1909, the share capital of these unions constituted only 1.2 per cent of the total liabilities. The law makes it necessary to take shares for purposes of organization. Raiffeisen was strictly opposed to shares and the purely Raiffeisen unions practically evade this law by making shares extremely small—from \$1 to \$2.50, in face value. The average in 1909 was \$4.75. Even in the unions which do not adhere so strictly to the Raiffeisen principles, shares seldom run over \$25.

As a general rule, in Germany, the unions with unlimited liability restrict each member to one share. In limited liability unions, however, each member may take as many shares as he wishes. The purely Raiffeisen unions are opposed to the distribution of profits, evading the law requiring such distribution by rules which make possible the declaration of only a negligible dividend. Even the other unions, with but few exceptions, limit the rate of the dividend to the rate of interest usually charged borrowers. In 1909, of a total of \$1,750,000 in profits,

only one-eighth was apportioned as dividends. The rest went to reserves. The dividend was in no case greater than 4 per cent.

Raiffeisen's opposition to shares was based upon the fear that they would stimulate entrance into speculative enterprises for the purpose of reaping higher dividends. An iron rule that dividends shall not exceed the rate of interest paid by borrowers, should, to a large extent, avoid this danger. A small share, not so large as to debar worthy members—about \$5 in Texas—would provide the unions with a working capital, which is indispensable to them in their infancy, and would give the stability and inspire the confidence so greatly and rightly stressed by the critics of Raiffeisen's dogmas. A dividend on such a share would be so negligible that members would probably willingly surrender it to be applied to the common good.

A statement from a Texas source gives some valuable information on these points. Mr. Griffith, organizer and for a long time president of the Alvin Truck Growers' Association—an association which, while primarily organized for purposes of production and marketing of fruit and truck, has many of the characteristics of credit unions—said in effect in a recent address: "Shares in this association cost \$10. A member may have as many shares as he likes, but he has only one vote. Our success dates from the time we abolished voting in respect of shares. We pay no dividends. The profits are expended for the common good." Taken with other remarks by Mr. Griffith concerning failures of coöperative schemes, this warns credit unions against using their organization for purposes of profit-making. The elimination of voting according to the number of shares held, as above suggested, seems to be the better method of avoiding a speculative aim in taking a large number of shares.

d. *Reserves.* In Germany, in 1909, the reserve constituted 2.6 per cent. of the liabilities of the unions. In the beginning, it will necessarily have to be made up of payments for shares, entrance fees, and contributions or donations. As soon as possible, the profits of the union should be substituted for this, for the reason that such a reserve is independent of the change of members. The reserve should, so far as is consistent with the purpose of the unions, be sufficiently large to safeguard mem-

bers from contribution to make up defalcations and to inspire confidence in the safety and stability of the unions.

e. *Loans from outside sources.* In Germany, such loans constitute only about 11 per cent. of the liabilities. They should be avoided so long as capital furnished by members will suffice. The greatest assets of the unions in getting the loan and securing easy terms will be: 1. The reserve. 2. Reputation for stability, honesty, and good management. (It was this that prompted many wealthy people in Germany in the panicky times of '70-'73 to lend their funds to these unions without charging interest.) 3. The unlimited liability of the members. (In Texas, our exemption statute makes this a very uncertain safeguard at law, but the moral influence is by no means to be neglected.) 4. The intervention of district banks in an organized system. (To be discussed later.) A valuable suggestion at this point is to be found in the fact that many Raiffeisen banks avoid large loans from any one source for the reason that the sudden withdrawal of a large amount might embarrass the union.

f. *Government subsidies.* Government subsidies are not favored by the authorities on this subject. They are regarded as paternalistic, and as stifling independence and the spirit of self-help. They are most pronounced in France, where nearly two-thirds of the working capital of the unions under government sponsorship consists of non-interest-bearing loans from the Bank of France. It is said to have created a harmful spirit of dependence, the unions frequently omitting to make payments on the principal of these loans as they fell due. The policy of the Austrian government, that of making a contribution to the initial capital stock to be bought in by the unions as they grow self-sustaining, is the sounder one, its final aim being complete independence of government aid.

In Texas, state advances would be impossible at present, on account of the constitutional inhibition against appropriating public money for private use.

#### 7. *Other kinds of government aid.*

In Italy, the unions are for a certain time exempt from taxation. Such assistance, though valuable, should not be given

except in cases of urgent necessity. It militates against the spirit of self-help. The best kind of state aid consists in distributing information and in encouraging the formation of unions by instruction particularly in regard to the principles governing the business methods of these institutions.

The Prussian Government supervises and controls the Prussian Central Bank for Coöperative Societies, with which are affiliated some 6,000 Raiffeisen unions. The purposes of the Central Bank are, the negotiation of loans on the open market and the investment of surpluses for the individual unions and the district banks intervening between them and the Central Bank. Its capital is furnished privately, chiefly by the unions themselves. The government, by its supervision, to a large extent succeeds in giving stability to all the institutions of the system and in promoting an equitable distribution of benefits.

#### 8. *Federations.*

There are two kinds of federations of these credit unions: (1) A provincial federation to direct organization and management, to inspect and audit their accounts, to promote the creation of new unions, to furnish legal advice, and to manage and furnish inspection service for the bulk purchases of local unions; (2) provincial central banks to equalize the need of credit of the individual banks, to furnish them money when needed, and to use their surplus funds.

The federations of the first kind are now loosely affiliated in the National Federation with headquarters at Darmstadt. In illustration of the inspection service rendered the local unions, we are told that in 1909 an inspection of one-fifth of all the purchases of the local unions resulted in securing for them \$65,000 of compensation for shortages.

We are cautioned that these federations have on occasions shown too much willingness to enter upon business enterprises for which they are not adapted either because of the technical knowledge required or because of a resulting dissipation of funds and energies. Thus, a crisis in one of the German federations is to some extent attributed to the purchase of a fertilizer factory and entrance into other commercial enterprises. The advice is worth heeding, and is applicable to the local unions

as well. We find coöperation for purposes of consumption, cattle breeding, dairying, etc., conducted as a rule either in entirely independent unions or in clubs subordinate to the credit unions, interfering as little as possible with the purposes of the credit unions.

Another question to be carefully considered is the degree of centralization advisable. Centralization may easily be carried to excess. The danger-line is where as a result of centralization the failure of one union or provincial federation will involve others. Centralization should be carried only so far as is necessary for economy and stability.

The central banks, constituting the second type of federation, are, like the administrative federations, usually organized by provinces. The working capital is supplied largely from the capital stock and deposits of members. Shares are to a large extent owned by individual unions, these being as a rule required to take shares in order to be entitled to receive the benefits of the central banks, and to a less extent by individuals. Liability is limited, as are also dividends. In addition to the rate charged them by the central banks, the local unions add 0.5 per cent. when lending to the farmer, making the latter pay about 4 per cent.

On the subject of central banks, Hugenberg says: "Having no business managers they (the local unions) must avoid financial and commercial transactions with the outer world—the world outside the associations—if the agricultural societies are to administer their affairs on a sound basis and remain true to themselves. This makes necessary the establishment of a central office for a large number of banks, the purpose of which is to direct their technical banking operations."

#### *9. Some other suggestions.*

The rate of interest charged by these unions must be taken relatively to the general rate. It is usually .5 to 1 per cent. lower than that charged by regular banks. Hence we cannot expect a rate of 4 per cent., even if the unions should be inaugurated here.

In Germany, the operation of the unions is chiefly among the

middle and lower class peasantry. The value of the unions, aside from the furnishing of credit on favorable terms, consists in the spirit of association, of self-help, of common interest and of saving fostered, and in the other coöperative enterprises stimulated.

#### *10. Application of Raiffeisen to Texas.*

Numerous obstacles will have to be met in introducing such unions into Texas. Among them are:

1. *The character of the people.* In almost direct contrast to the people of Europe, among whom these unions now operate, our people are to a very large degree of a roaming, unsettled disposition, heterogeneous in character, and individualistic, each one depending on himself. The latter is particularly true of the agricultural population of Texas. It is certainly in itself an admirable trait; but, with the gradual disappearance of our uncultivated area, it will be inadequate to supply the growing population with the wealth to which the natural resources still remaining justly entitle them. Like the roaming disposition and the lack of homogeneity, it militates against the spirit of coöperation and association, which, in older countries, have shown themselves invaluable in the combat against the steadily growing limitations of natural advantages. But we may safely regard these traits as temporary in character and destined to pass away—in fact, already passing away, with the youth of our country. We see evidences of the growth of the spirit of association in farmers' unions, public improvements, social clubs, truck growers' associations, etc.

Again, our people are to a very large extent still used to quick profits. We have still a large field for profitable investments of capital. In institutions like the credit unions, whose appeal is largely to the disposition to save, which offers only an indirect return—however desirable it may be in the long run—which offers to capital borrowed safety rather than high interest, will to a large extent be unpalatable both to its prospective membership and to the capital which is to furnish its funds. Here also, we find indications of a change. Great numbers of people, fearing the risk involved in many of the more profitable investments, place their savings with banks on time



deposits, in municipal bonds, or with the postoffice. Careful management will soon draw the funds of such people to the credit unions.

Another obstacle is:

2. *Our exemption statutes.* The chief items in the homestead exemption are 200 acres in the country and a lot worth not over \$5000 at its purchase, regardless of improvements thereon, in the city. Enough is added in the way of inventory to make many owners of property worth as much as \$100,000 execution proof, and to make very uncertain at law the remedy of the creditor of such a union, even though its members accept unlimited liability. But we must remember that by a *scire facias* proceeding, every ten years, a judgment may be kept alive forever, and this, together with the moral liability which, according to the statement of a prominent Texas banker, is not neglected in actual practice, will constitute a great asset to the unions in placing their loans. It is the opinion of a number of the thinking men of Texas that our exemption act—unreasonable with our present day land values—because of the higher interest rates and the mistrust of investors which it has caused, is productive of more harm than good. A reduction to a reasonable amount is at least worthy of consideration.

Very similar in their effect on the remedy of the creditor, though less formidable, are our *crop and tax liens*.

We have several examples of successful insurance and marketing coöperation,\* but not enough to brush aside the conviction that the obstacles pointed out are very formidable, and an absolute bar to a speedy introduction of these unions into Texas. If they are to be introduced at all, the introduction must be based upon a slow growth in the beginning, careful, honest, painstaking management, the establishment of a reputation for these qualities, and the absence of all attempt at profit making.

The latter, with its influence on the members both individually and collectively, has frequently figured in the failure of coöperative schemes that have been introduced into Texas to date.

Several months ago a plan for a credit union in Texas was

\*See below, pp. 43, 47 ff.

prepared by Dr. Spurgeon Bell, its legal features being approved by members of the law department of the University.\* The writer's opinion is not favorable to the plan. It embodies many excellent features of the Raiffeisen system, but it embodies also some very doubtful modifications. (1) It undertakes to outline a general plan for the whole State. Such a plan should embody only general principles, leaving room for a great deal of modification according to local conditions. There is wide variation in the details of organization of the local unions of Europe. (2) The plan attempts to combine the principles of the land-mortgage association and the personal credit union. The two have some very fundamental differences, chief of which are a wide district of operation in land-mortgage associations and a narrow one in Raiffeisen unions. The combination makes necessary complication and technicalities, totally at variance with the simplicity demanded for the successful operation of personal credit unions. (3) The area of operation of the single union, a county, is far too large for the Raiffeisen plan. The members cannot know each other as they should. (4) The plan embodies some very powerful motives for entrance into profit-making schemes. To a large extent it permits members to vote in proportion to the number of shares held. It places no limit on the dividends to be distributed, beyond the building up of a reserve and a surplus capital. It is quite possible that such concessions are necessary to make the plan palatable to Texas farmers, but the advantage thereby gained is, to the mind of the writer, more than offset by the evils fostered.

Similar objections may be urged against the rural credit union bill passed by the last legislature. It permits incorporation, thereby dispensing with unlimited liability, a powerful motive for careful management on the part of all the members and a powerful appeal to the confidence of the business world. It is vague and indefinite, and leaves to the Commissioner of Banking work in the form of inspection and examination of charters which may easily prove far in excess of his powers,

\*This scheme was drawn up at the request of a farmer, but did not prove acceptable when submitted to him. It has not been taken up by others. (Ed.)

thus making the State supervision provided for practically worthless.

The introduction of credit unions into this State depends finally on the demand for them. On the one hand, the writer has been told by a leading Texas banker that any thrifty, honest farmer in Texas can get credit today. On the other hand, we are told that credit facilities of Texas are altogether inadequate for the needs of the farmer; that where the European farmer gets loans up to two-thirds of the value of his land, ours get loans only to one-fifth of the value of the land; that the terms are unfavorable as compared with those made to business men; and we are cited to the following statistics from United States government reports: In 1912, there was an average interest rate in Texas of 10.3 per cent. (This we regard as a little exaggerated.) The percentage of farms operated by tenants advanced from 49.7 per cent. in 1900 to 52.6 per cent. in 1910. (Economists do not regard this as necessarily a bad sign, since in a great many cases it registers a change from the position of laborer to that of tenant.) The information at hand is too indefinite to furnish a basis for conclusions, but it may be said with a reasonable degree of certainty that there are numbers of communities in Texas today which are in actual need of the assistance of coöperative unions, and numbers of others which would secure immense savings through them.

In conclusion, the leading features which should characterize personal credit unions in Texas may be stated as follows:

1. They should have but *one purpose*, that of getting cheap credit for their members. All other considerations should be subordinated to and correlated with that purpose.
2. The members should be *liable without limit* for the debts of the union, thereby promoting the credit of the institution, care in the selection of its members and managers, and care on the part of all members.
3. *The district of operation* for the single union should be small, so that the members may know each other's general reputation and may occasionally see each other. The ordinary Texas voting precinct, being the smallest district with a unity of interest in Texas, is suggested.
4. *The qualifications for membership* should be honesty,

thrift, and efficiency, residence and acquaintance in the district and actual occupation in agriculture. To meet the needs of the farmer the union must be managed by farmers. Careful methods should be adopted in the selection of members in order to attain the above ends.

5. The *shares* should be small—\$5 or \$10 is suggested—to preclude as far as possible a greed for high dividends and a motive for entrance into schemes of profit-making. *No dividends* should be paid, profits being distributed in the form of cheaper credit. Members should vote as individuals and not as shareholders.

6. *The organization* should include a chairman, a secretary-treasurer, two long-time committees, one for recommending members and one for making and granting loans, and one occasional committee for auditing accounts. The permanent officers should be placed under bond. They should be paid reasonable fees for services rendered.

7. *Loans* should be made to members only. The terms should be as nearly as possible adjusted to the needs of the borrower, taking into consideration the time in which he may reasonably be expected to pay, his honesty, thrift, and efficiency, and the resources of the credit union, expense incurred and the need of a reasonable reserve.

8. *Resources.* In lending, the funds should come, first, from the profits of the union; second, from savings deposited with it by members; third, from savings deposited with it by outsiders; fourth, from funds borrowed by the union. The amount raised by sale of shares should remain as a reserve, and from time to time should be added to from the profits, keeping pace with the financial operation of the union. The amount of funds borrowed from a single source should be limited (the amount of the reserve is suggested as a limit), so that the union may not be embarrassed by a sudden withdrawal of a large sum. In borrowing, the loan committee should incur no more obligations than they honestly believe the union will be able to pay from funds accrued in the treasury.

#### LAND MORTGAGE ASSOCIATIONS.

The oldest and best recommended type of land mortgage as-

sociations are those of Germany, and these will be considered first.

1. *Character and organization.* They are public corporations, under state supervision exercised by a commissioner appointed by the minister for Agriculture, Domains, and Forests. The officials are indirectly state officials, the higher officials being elected by the associations and their appointments ratified by the royal minister. The directors have the power to make out certificates of clear title. They may levy executions on mortgaged property without legal process. Executive authority is vested in the General Landschaft Board of Directors, with appeal to the General Landtag, which is formed of representatives of all the landowners. The syndics and subordinate officers alone receive salaries, the directors being merely compensated for loss of time.

2. *Making the loan.* Each member has a *right* to be granted the use of credit in the ways provided by the statute. The purpose of the loan is rarely inquired into. The borrower makes his request for the loan, offering mortgageable property as security. The property is then appraised by local deputies jointly responsible for the correctness of the appraisement. This is usually based on the income tax paid by the land, but the borrower may request a formal independent appraisement. In either case he pays the expense. Credit is granted by means of the issue of mortgage bonds of the association which the association or the borrower sells on the open market for what they bring. The loans to the borrowers are amortization loans running frequently for more than fifty years, though the debtor may repay the whole at any time within the statutory period of notice. The rate of interest paid on them covers the rate paid by the association on the bonds (from 3 to 4 1-2 per cent), plus 1-2 to 3-4 per cent for amortization of the debt, and, in a great many cases, also 1-10 of 1 per cent. for expenses of the association, the policy being to make the borrowers pay all expenses. In some cases, these amortization payments amount merely to a regularly incoming guaranty fund, since the borrower, on having discharged as much as 5 or 10 per cent of the debt may draw out the amount discharged or borrow its equivalent. In other cases, he may discontinue amortization pay-

ments upon having discharged 10 per cent. of the debt. The loans may be recalled by the *Landschaften* only on definite grounds (waste, etc.). Loans are now usually granted to two-thirds of the value of the property mortgaged.

3. *Bonds*. Strict account is kept of both bonds and mortgages. The statute prescribes that the mortgages shall be a security for the bonds. The funds of the association are additional security. In many cases, each bond is secured by all the property mortgaged, in the older *Landschaften* also by the property of all members. The amortization fund is another security. It is said that the public, however, depends chiefly on the integrity of valuations and loans.

Corresponding to the right of the debtor to repay his loan at any time, is the right of the association to recall the bond at any time, and the two are frequently resorted to for the purpose of converting a higher into a lower interest. It is pointed out, however, that a too frequent resort to this method has sometimes hurt the rating of the bonds. The bonds stand high in the estimation of the public and the statute recognizes them as a suitable medium for the investment of trust funds. In 1910 the outstanding bonds amounted to \$700,000,000.

Some seven banks in central cities of the country, largely endowed by these associations, do their banking business, which is very considerable. A Central *Landschaft*, formed by nine of these associations, for the purpose of gaining a wider market for bonds, proved comparatively unsuccessful. The limitations on the activity of the individual association involved in it proved an overwhelming disadvantage.

Only a few other countries, notably Austria-Hungary, seem to have copied the *Landschaften* in all their essential features. The *Credit Foncier* of France has been mentioned, and is in many respects a direct copy of them. It is to a large extent subject to governmental regulation. It lends to one-half of the value of the land. The essential differences between the *Landschaften* and the *Credit Foncier* are that the *Credit Foncier* has a capital stock, pays dividends and conducts its business to a large extent on a profit-making basis. One objectionable feature, moreover, is that there is a lottery connected with

it, and this feature has contributed very largely to its popularity.

*Application to Texas.*

The greatest obstacle to the introduction of institutions like the *Landschaften* into Texas, in such a way as to meet the needs of the State, seems to be the homestead exemption. The institutions could assist only farmers owning property not protected by the exemption, and these are, in a great many cases, not urgently in need of better credit facilities. The institutions should undoubtedly, however, secure to their members a lower rate of interest.

Mr. Chamberlain of San Antonio has presented to the Texas Farm Life Commission a tentative plan for a land credit association. It was to be tested with respect to legal difficulties, and the writer has not as yet been able to ascertain the results of the test. With due deference to the business experience and the knowledge of European credit institutions of Mr. Chamberlain, the writer is opposed to some of the leading features of the plan.

It is pointed out by Mr. Chamberlain and members of the Commission that the remotest suggestion of a change in the homestead law would stir up an immense outcry, and no doubt it would, particularly among the many indebted property owners. And yet the homestead exemption is regarded by them, and rightly so, as the leading obstacle to the plan. The way they intend to avoid this—and it is suggested by legal advisors—is that the debtor shall make to the society an absolute conveyance of his property when contracting the loan with the understanding that the conveyance is to be used only in case of default. We are reasonably certain that an agreement of that kind is void, and of no avail to the creditor, it being an attempt to evade the law. To uphold such agreements would surely be to divest ourselves of the good effects of the homestead law.

The deed of trust, very similar to the above agreements, though not amounting to an absolute conveyance, even by its written terms, is the best kind of security for such associations, but it cannot be made to take in property within the homestead exemption. It would seem the better plan to be frank and open and attack the homestead exemption directly. If re-

forms of this kind are to be blocked by the fear of superficial political outcry, it only shows that the need of them is not very great. The writer is, however, opposed to a change which would permit the husband to waive his homestead rights. This would destroy a great deal of the value of the law. The better plan would be to provide merely for a reasonable reduction of the amount of the exemption.

The proposed associations are to have a membership within the limits of twenty-five and fifty shares of \$100, and voting in respect to shares. Provision is made for district organization when a sufficient number of individual unions have been formed, and for a State organization. The writer can see no reason for nor advisability in such an absolute restriction on the number of members in the individual unions. This would seem a matter of local convenience and should be left to local conditions. Membership in such unions should be restricted in place rather than in number. The feature of shares and voting in respect of them suggests, to a large extent, the idea of State banks to be used exclusively for land credit. A not unlikely outcome would be that very soon the shares will be bought in by city financiers more familiar with general banking methods, and they will run the institution for the profit they can get out of it, and not in the interest of the farmer. The provision that shares may not be transferred without the consent of all members, is not a sufficient safeguard, for a scheming management may purposely "run the business into the ground," and the members will then be only too glad to sell out. Such has taken place among coöperative dairies, and we will do well to heed the warning.

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## CO-OPERATIVE PRODUCTION BY FARMERS.

BY C. E. LA MASTER.

Coöperation means a working together by a group for the mutual good of all the members. The members must be free and competent persons, acting under regulated control, and, so long as they are members, they must conduct themselves, in so far as their actions affect the organization, in a way to benefit the group as a whole. The basis of the union is not capitals, but individuals, though the aim is specifically a business one. This definition is designed to distinguish coöperation from Communism, religious societies, stock companies, and labor unions.

Coöperation is now in its most interesting stage, so far as its economic aspect is concerned. It has existed for over one hundred years in industries and stores; but for the purpose of this paper we need go no further back than 1847, at which date the short-lived Brook Farm Community was formed in Massachusetts. Several attempts have been made by communistic societies, most of which have failed. Only Amana Colony, in Iowa, is a marked exception. Its purpose, however, is primarily religious and not economic, and for that reason is not coöperation according to the preceding definition. Next may be mentioned the attempt of the Knights of Labor to form a coöperative company in Minnesota. Their plan was only partially coöperative, being in a considerable degree socialistic. The element of individual freedom was minimized, and for this reason, and on account of a lack of funds, the plan failed. Coming nearer home, we find in *Icaria*, a remarkable book by Albert Shaw, an interesting account of a company of French people who came to Northeast Texas in 1848. Despite their wonderful heroism in facing overwhelming obstacles, the movement was a complete failure. Since about thirty years ago, there have been several cases of real coöperation in the United States, including Wisconsin, Illinois, and Minnesota, and it is only the form of coöperation found here that is of interest in

this paper. To be a little more specific, in 1911 there were 21 coöperative dairies in Texas, 347 in Wisconsin, and 608 in Minnesota. In 1904 there were 1,101 in Denmark and over 600 in Belgium, which shows that Europe is ahead of the United States in coöperation. Generally there are from one-half to two-thirds as many coöperative cheese factories as coöperative dairies, and a still smaller percentage of cow-testing and cattle-breeding associations. The tendency now seems to be towards more of the latter. A fourth form of coöperative production, viz., coöperative grain elevators, is growing in popularity in our wheat-producing States, such as the Dakotas, Minnesota and Wisconsin.

While this is the day of many theories of social reform, including a minimum wage, profit-sharing, a single tax, socialism, and communism, economists are putting most emphasis upon the principle of coöperation. They believe it comes nearest to being the remedy for present conditions, taking men as they are. Competition alone, they say, is a failure; while if men are to retain their individualism, coöperation seems to be the only remedy. It is a law of nature, more subtle and more essential than competition, in the struggle of the race for survival. It is perhaps natural for one to aid himself by aiding others. One nation helps another; and later, when in distress, it receives help from the other, when the aid previously given may have made that other prosperous. So it is among individuals. It is the old and familiar question of team work: one's strength counts for more when one acts in accord with his fellows. Cities have succeeded where rural districts have failed, just by observing the principle of coöperation. It behooves us to find how the virtues of this principle may be determined and applied.

The experience of Denmark almost justifies the strongest enthusiasm for coöperative production. This little nation, only a fourth as big as Wisconsin, or a twentieth as big as Texas, was the most impoverished nation of Europe fifty years ago; now it is among the wealthiest of them all in proportion to its population. Eighty-nine per cent of the families own their farms and houses. In 1908, the Danes had \$208,000,000 in savings banks, or over \$100 apiece. The people are thrifty, in-

telligent, and educated. These conditions are necessary to coöperation on a large scale. It was through coöperation that Denmark has achieved her enviable position. Land can be bought and paid for in annual installments amounting to 4 per cent of the principal, the debt running for fifty years. Or a man who can pay one-tenth cash can borrow the other nine-tenths by giving a lien on the property purchased. Texas farmers pay about 10 per cent, but the Danes can borrow money at 4 per cent. With the new movement for coöperative credit comes the hope for cheap money in Texas, and then there will also be the opportunity for coöperative production.

Again, partly as a cause and partly as a result of coöperation, the average man in Denmark is far better educated than the people in Texas. What we need are agricultural, industrial, and technical education. Danish farmers read agricultural literature; too frequently Texas farmers do not. When the people are properly awakened to the importance of education, they will then also be able to bring about the other conditions necessary to coöperation.

The first essential in a coöperative group is the right kind of people. Too much of our present population is floating, restless, and untrustworthy. Men must trust each other and live long enough in one place to find each other to be wholly reliable. While the Danes are probably more thrifty than we, we have the advantage of possessing more and better land. We also have a larger per capita wealth. On the other hand, they have the advantage of an early start. Also their standards of living are lower than ours.

Another condition for successful coöperation is an appreciation of the need for it and faith in its efficacy; and to this end capable leadership is essential. Once the people in a single county take hold of the idea, like those in Jackson County, Minnesota, are at present doing, its success is assured. We need only a few leaders to put it up to the people in a clear and concise manner, and the latter will go into it at once. This statement can be verified in the county just referred to. Leaders, however, are very necessary. Somebody must go to the farmers and organize them.

In the matter of organization lies an important factor, and

on this point the experience of others must be known in order to avoid a repetition of their failures. There will be practically the same rules for each of the four kinds of societies which are to be described here, and for that reason the illustration of a coöperative dairy will be sufficient for all.

### *Coöperative Dairies.*

There are three main points for consideration:

(1) There must be a fixed rate of interest on capital, and, after payment to a reserve fund has been deducted, the remainder of profits should go to the members, *in proportion to the raw materials supplied by them*. The employees sometimes share in the profits also on the basis of their wages.

(2) The capital may be furnished by any persons who desire to furnish it, though *preferably farmers should hold all the shares*. The shares should be small—about \$5 each—with, say \$1.25 paid in cash, and the remainder subject to call at the discretion of the committee. Each member then should be required to subscribe for loan guarantee shares in order that the company may borrow money.<sup>1</sup> Let \$1.25 be paid in cash, as above, and the remainder at the discretion of the committee. This fund is in addition to the original cost of the \$5 share. The best plan is to have unlimited liability, that is, the bank making the loan can recover from any one individual in case the coöperative group fails.

(3) *The most important phase of the business organization is the control of the supply of raw material. Farmers must agree, for example, to furnish all or a definite part of their milk, except that needed for home uses; and unless this rule is enforced, the society will surely fail.* Farmers may be offered a higher price for their milk for the purpose of wrecking the society, such societies always having their bitter enemies. Accordingly, a fine may be imposed upon the number of gallons withheld.

(4) It should be further remarked that no man is entitled to more than one vote, and that each member should be required to hold shares.

The cost of an average sized dairy, according to Fay, varies

<sup>1</sup>See *Coöperation at Home and Abroad*, by C. R. Fay.

from \$3,500 to \$7,500. The minimum number of cows required is about 400, and a single dairy can cover a territory with a radius of about five miles. Clearly, the farmers must live near enough to deliver the milk fresh each morning. The smaller the farms and the more intensive the cultivation, the more profitable will be coöperative dairying. In general, in any radius of five miles, 400 to 500 cows should be found. Such is not the case in Texas, for cattle in many parts are becoming scarce. However, improved systems of agriculture will increase the number of farms, and, consequently, the number of cattle. An auxiliary, or small sized, dairy can be installed where there are fewer than 400 cows. The sum of \$2,500 is sufficient to equip one. The large dairies are more profitable, however, and should have over 1,000 cows if possible.

This does not mean that profits depend wholly upon the size of the plant: the fact is that good management is the most important factor. An honest man who will not "sell out" is needed at the head of the concern—a man who is industrious and efficient. There are books to keep, accounts to look after, and milk to inspect. The manager must also know that each cow is a profit to the owner, except in those cases where the magnitude of the business justifies a separate office of cow-inspector. The daily routine of work can soon be learned. The milk is brought to the dairy early each morning, placed in heating vats and separated, the cream being churned into butter, and the skim-milk (three-fourths of the whole) returned to the farmer to be used as additional cattle feed. The buttermilk is likewise returned to him after the butter has been extracted. The work is soon over for the day and each farmer may be back in his field.

Coöperative dairying is complete only when there is a system of coöperative marketing. This plan is worked out in a way so similar to that described in an accompanying article on Marketing that there is no need to go into details here. Statistics show that the price of butter advances wherever coöperation is effective.<sup>2</sup> In France it is observed that the annual increase per cow due to coöperation amounted to 57 francs, or about

<sup>2</sup>See Coöp. Bul. on Agriculture, Wis. State Board of Public Affairs.

\$10.75, which is something like a 20 per cent increase, estimating butter at 25 cents per pound, and the product per cow at 224 pounds.

Other advantages of the coöperative dairy are the superior organization and superior marketing power. There is subdivision of labor, which is economical, and also a superior relation between the various contributing factors. Each farmer gets high class service and bears only a small part of the expense.

Then, too, the use of a good dairy equipment provides a better quality of output and a better use of by-products. The Irish farmers grumbled when their buttermilk became less valuable through more thorough churning, not realizing that the loss was more than compensated for by an increased amount of butter. The machine usually gets a fourth more butter out of the milk than could be got by a hand churn. Factory butter is superior in quality to farm-made butter. In 1909, while farm-made butter was selling in Wisconsin at 22 cents a pound, factory-made butter was going at 28 cents. Now, only 8 out of 113 pounds of butter made in that State are made on farms.

The census report for 1909 showed that the average annual income from the dairy cows of Wisconsin, where coöperative dairies abound, was over \$42 per cow, in spite of the fact that there are yet thousands of cows there not "earning their salt," a fact due to careless breeding.

What has been said of the organization and management of dairies, or creameries, may practically be said also about cheese factories. Up to 1911 there were none in Texas, and there are nowhere as many cheese factories as dairies. There is more expense in a cheese factory, and, moreover, there is less consumption of cheese than of butter. In 1909 Wisconsin reported 1928 cheese factories which paid their owners over \$50 per cow net. There were others that failed through having too few cows, through mismanagement, or through improper organization, these being the three usual causes for all failures in coöperative enterprises. At least 200 cows must be available, the average for Wisconsin being 228. On an average, there are twenty-one farmers per factory. It is far better to have at least twice this great a force—say, 400 to 500 cows. It is economy to run a combination cheese factory and dairy, for in

this way there can be a better utilization of labor. On the whole, farmers do not coöperate in cheese-making so frequently as they do in dairying. Why this is so the writer is unable to explain.

### *Coöperative Breeding and Cow-Testing.*

Before either dairying or cow-testing associations succeed as they should, farmers must pay more attention to the improving of their cows. For this purpose there should be established coöperative cow-breeding associations, beginning on a small scale. A certain Texas dairyman, who is skeptical as to the merits of coöperative dairying, is a firm believer in the value of coöperative cattle-breeding. There may not be "more in breed than in pasture",—yet no one can question the superiority of some breeds over others. In each vicinity there should be a thoroughbred bull, bought by the association and kept as near the center of the group as possible. Each farmer should get a few first class cows at first and improve his herd as the business grows.

That a cow has a certain pedigree, however, no longer guarantees her milking qualities. Each cow must be proved individually. By agreement, the farmers can employ an expert to test their cows once or twice a month. He will go from place to place, charging about a dollar a head per year for testing, if enough farmers subscribe. There should be at least 400 cows for this plan to work. The farmers themselves must coöperate. No cow can be fairly tested in a month, or even six months. The owner must keep a year's record of her consumption and production, if he is to determine anything definitely. All deficient cows are soon recognized and can then be eliminated or sold for beef.

After one year of testing, according to C. R. Fay, the average for the cows in Denmark increased from 112 to 224 pounds of butter a year. It is estimated that a cow must give at least 150 pounds of butter fat per year to pay for her keep. It costs very little more to keep a cow that gives 300 pounds per year. There are eleven associations in Wisconsin, with 287 members owning 4,465 cows. The returns for each dollar spent for feed is \$2.14, or an annual profit of 114 per cent. One



particular association claims an average of 403 pounds of butter fat from each cow after testing three years.

### *Coöperative Bacon Curing.*

Bacon curing societies are run on the coöperative plan in Denmark, and with unusual success. The plan of organization is similar to that of dairies. Profits are distributed according to the amount of meat brought in. In 1910, the societies, comprising 93,000 farmers, shipped over \$1,500,000 worth of hogs, and received the best market prices for them.

Through coöperative marketing there would be good money in raising hogs in Texas, where stock is becoming scarce and where we have so much land adapted to hog ranches. The equipment for a bacon-curing factory would be very small. Each member agrees to furnish it with either his entire output, delivered, or a stated minimum amount per year. The factory cures and prepares the meat for shipping and turns it over to a Sales Department.<sup>3</sup>

### *Coöperative Grain Elevators.*

Lastly, farmers can build coöperative grain elevators. The plan will, in general, be similar to that of the dairy, the members subscribe a certain part of their annual product and receive dividends in proportion to the raw material furnished. There must be an expert grader employed to determine the value of each farmer's grain, and his advice can also be sought in improving grades of grain.

The best illustration of a coöperative grain elevator to be found is that of Lakefield, Minn., a town of 1,200 people. (See R. of R. for April, 1913.) Nearly every farmer in the county is a coöperator in some way. The elevator company earned a 12 per cent dividend the first year, 5 per cent the next, and 8 per cent ever since. The capital grew from \$7,900 to \$10,900, and a second elevator was built by the company. The surplus in 1908 was \$7,000. The capacity is 520,000 bushels per annum, and the grain sells for 3 cents more per bushel than is got anywhere else. The company also buys and sells other products for its members at wholesale. Individual shares are limited. Aside from financial benefits are those of a social character.

<sup>3</sup>See. *Rev. of Rev.*, April, 1913.

The farmers get acquainted and forget many of their church and political differences.

After years of unsatisfactory dealing with the line elevator companies, the farmers of Iowa rebelled and organized coöperative elevator companies. They had a bitter fight and found difficulties in securing sites for their elevators and the railroad facilities that the combines enjoyed. But they were so successful that Iowa is covered with farmers' elevators. In February, 1910, the first annual meeting of the Farmer's Grain Dealers' Association was held. There were 167 companies represented.

A constitutional amendment is now before the people of Texas which provides for the issuance of bonds by counties for the construction of warehouses and elevators.<sup>5</sup>

To sum up: (1) Coöperative production is profitable, and it can be adopted in Texas; experience elsewhere shows that the difficulties are not insurmountable. (2) These difficulties are educational, legislative, and personal—those of an individual character. The citizens of Texas need agricultural and industrial training. This we are now endeavoring to give them. We also need laws in regard to agriculture, credit facilities, and the adoption of the Warehouse Bill now pending. Finally, our citizenship is becoming more stable and tending towards the coöperative spirit; we are much more ready now for coöperation, it is believed, than we formerly were. But the people must first be convinced that coöperation is profitable, and even indispensable, before they will be ready to undertake it.

<sup>5</sup>See below, p. 55.

## CO-OPERATIVE MARKETING OF FRUIT, TRUCK, AND COTTON IN TEXAS.

BY GEORGE WYTHER.

Although coöperation is spreading in every field of industry, it is receiving greatest attention as applied to agricultural pursuits. Probably none are in greater need of its beneficial effects than the farmers, who have always furnished the extreme type of independent, uncombined workers.<sup>1</sup> Farmers are made individualistic by natural circumstances, which have made impossible the easy combinations of the manufacturing and trading world. In order to put themselves on an equal footing with other industries it is necessary for them at least to coöperate to some degree.

The most important turn that coöperation has taken in the United States is its application to marketing of the products of the soil. The securing of a market is the all-important question of the grower, for without a market large production represents only a loss to the extent of the cost. The Federal Government, through its agricultural bureaus, experimental farms, and demonstrators, has done much to teach the farmers better methods of production. And the Agricultural and Mechanical Colleges of the country have performed a valuable service in teaching scientific farming and showing "how to grow two blades of grass where only one grew before." But, as Peter Radford, President of the Farmers' Union, says: "Increasing production will never solve our agricultural problems. The problem in which the counsel and coöperation of the business interests is most needed is in selling our products." In fact, the large crops have often glutted the market and have harmed, rather than helped. It is important, of course, to teach the farmers how their efforts can bring the greatest yield, but just now it is more important that some plan be devised whereby the producers will be better paid for his efforts. Production without reasonable profits is poor encouragement in any calling. It is no wonder, then, that the most successful form of coöpera-

<sup>1</sup>G. Harold Powell, 1910 Yearbook of the Dept. of Agriculture.

tion has been in marketing, and that this phase of the question is receiving most attention today.

Although money returns are always the primary object of coöperation among farmers, other beneficial results always accrue when they get together. In the first place, by this application of business methods, farming is placed on a level with other industries and is made more attractive. It will also cultivate the farmer's knowledge of business and make him a more prominent figure in the community. In the second place, the social life of the farming class will be materially bettered. Their association in the coöperative organization will be beneficial and profitable, and besides, will make country life more pleasant and tend to check the steadily growing movement from the farm to the city. Lastly, coöperative associations organized for marketing, always have their educational side. At the meetings of the association, better methods of production and a finer quality of the product, as well as better prices, are discussed.

Considering all these advantages, it may be asked why coöperation is not the rule instead of the exception. Two reasons may be offered: (1) The farmers are not live to its benefits. They do not recognize its advantages, and it is difficult to overcome the individualistic tendencies of the farmer. (2) The farmers are suspicious and afraid that they will be deceived. It has been the experience of almost every community in the State, no doubt, that at some time an attempt was made to organize an association for the marketing of truck, but that it soon broke up because some of the members grew suspicious that someone else was getting too much benefit. It has been thought that the promoter was active only because he expected to be benefited in some way other than mutually, such as receiving the manager's profits. (3) Of course there is the third reason that the associations are improperly organized and badly conducted, but this will be discussed later.

At the present time all of these objections are passing away. The advantages of coöperation are becoming better known, and the farmers show a tendency to unite and join with their neighbors in a business proposition. With the better organization and improved methods, also, former suspicions are vanishing.

*Fruit and Truck Growers' Associations.*

Coöperative marketing finds its widest application in the selling of fruit and truck. Organizations in this branch of industry are widely scattered throughout the Union. California, however, ranks first among the States. Annually the orange and lemon crop of California amounts to some 50,000 carloads, or 20,000,000 boxes. This fruit is produced by from 10,000 or 12,000 growers. Four-fifths of these growers are members of coöperative selling organizations, and 60 per cent of these are federated in the California Fruit Growers' Exchange. This association acts as a clearing house for the crops of the 6,500 affiliated growers, providing the facilities for distribution and marketing the fruit.

"There are three foundation stones upon which the federation is based," says Frederic J. Haskin.\* "First of these is the local association, which corresponds to the county government in our political system. Several of these local associations form a district association, which corresponds to a State in our system of government. These district associations, in turn, form the Exchange, which corresponds to the Federal Government. Each district association has a right to control its own affairs so long as they do not conflict with the constitution and by-laws of the Exchange, and each local association can do as it pleases, within the bounds of the constitution and laws of the Exchange and of the district association of which it is a member."

The smallest unit of the California Fruit Growers' Exchange is the local association. There are 115 of these, each of which has from 40 to 200 members. Each local association maintains its packing house, where the fruit is graded packed, cooled, and prepared for shipment. Some of the associations also pick the fruit and prune and fumigate the trees of its members. All this work is done under the direction of the local manager, appointed by the directors, who are in turn elected by the members.

There are seventeen district exchanges whose function is to take charge of the fruit turned over by the local associations and watch after the shipping.

The central exchange has a capital of \$17,000 and is managed

\**Houston Post*, Feb. 27, 1913.

by seventeen directors, acting through a general manager. Each district elects one director.

The sales department of the Exchange maintains a bonded agent in each of the principal markets of the United States. These agents send daily telegraphic advices as to market conditions and carload sales. These reports are issued to the local associations in daily bulletins.<sup>1</sup>

The Exchange also has departments that take care of all litigation arising out of the marketing of the fruit, handle all claims, attempt to secure the best possible railroad service, and conduct an extensive citrus fruit advertising campaign and develop new markets.

Now, in spite of the fact that the Exchange endeavors to aid the growers in every particular, every shipper reserves the right to regulate and control his own shipments, to use his own judgment as to the time, place, and price at which he sells, to develop his own brands, and even compete with his fellow members.<sup>2</sup>

The California Walnut Growers' Association is a smaller organization than the Fruit Growers' Exchange, but it renders practically the same service to the walnut growers of Southern California as is rendered to the growers of citrus fruit by the Fruit Growers' Exchange.

The Grand Junction, Colo., Fruit Growers' Association is a marketing organization of a little different type. It is a stock company with a membership of 1,000. It furnishes its members with all the supplies necessary for the proper maintenance of their orchards, such as spraying machines, etc.

The Rocky Ford Melon Growers' Association markets cante-loupes only.

The Florida Citrus Fruit Exchange is similar to the California Fruit Growers' Exchange. It is a large, non-profit, coöperative association, with headquarters at Tampa. There is a local association to pick, grade, pack, and cool the fruit, and to load it on the cars; a sub-exchange to take charge of the loaded car and deliver it to the Exchange; and the Exchange,

<sup>1</sup>*Coöp. in Calif.*, by Ira B. Cross, in *Amer. Econ. Rev.*, Vol. I, No. 3, p. 542

<sup>2</sup>Article by F. J. Haskin, above cited.

which distributes, sells, and collects for the grower. The whole of the United States and Canada is divided into districts, and a district manager is employed to handle the territory, either on salary or brokerage. The expenses of the association are met by an assessment upon all citrus fruits handled and sold.<sup>4</sup>

The Eastern Shore Produce Exchange of Virginia each year handles some 5,000 carloads of potatoes, 230 carloads of strawberries, 150 carloads of cabbage, and other produce in proportion. Any farmer may secure the privileges of the Exchange by paying \$1 a year; and some 3,000 farmers are affiliated with it. The Exchange makes a careful study every day of the supply in sight, and of the markets in which it can be placed to best advantage. The commission charged is 5 per cent on the goods that measure up to the standard to command the Exchange's brand, and 3 per cent on the remainder.

The Southern Texas Truck Growers' Association, organized in 1906, is the largest and most prominent marketing organization in Texas. In 1911 it shipped 1,859 cars of onions, 804 cars of potatoes, 205 cars of cabbage, and 105 cars of other produce, or 2,973 cars in all.<sup>5</sup> The home office is at San Antonio, and there are branch offices under the direction of the general sales manager in New York, St. Louis, Kansas City, Fort Worth, and other leading cities. The Association purchased seed for the growers at a considerable saving. The claim department rendered assistance in making collections of overcharges, damages, etc., from the transportation companies. Grading, inspecting, and advertising also form a prominent part of the Association's work. A greater demand for the Texas product is expected from a campaign of newspaper advertising. The crop-growing activities of the Association are limited to a territory bounded on the north by Austin and taking in all the country south to the Rio Grande River.

One of the most successful examples of coöperation in Texas is the Alvin Fruit and Truck Growers' Association, which, while primarily an organization for marketing, has erected a two-story building for packing and crating, and a warehouse on the rail-

<sup>4</sup>Handbook published by the company.

<sup>5</sup>Annual report of the company.

way track—the latter paid for out of profits. It has bought fertilizer, seed, wood, cotton hulls, etc., in carload lots, making a saving of from 40 to 60 per cent on the seed. Formed in 1906, at the end of four years its capital stock was doubled, and its membership increased from 62 to 204.

The organizations outlined above are the most prominent coöperative concerns in the country. Smaller associations are scattered throughout the West, and several are to be found in the Middle States. For example, the Knox County Berry and Truck Growers' Association, of Knoxville, Tenn., shipped 105 cars of strawberries in 1912. In Texas, local exchanges have arisen, flourished, and waned, and in many counties they are still struggling for existence, producing considerable fruit or truck.

But in Texas no organization has made a very great success for any length of time. What is the trouble? In the first place, there are certain difficulties that must be overcome. All the producers must be shown the advantages of coöperation so that they will take part and not hold out on account of suspicions, fear of schemes on the part of the large producers, and enticing promises by dishonest brokers. The more men that can be persuaded to join the association, the better; for, obviously, a monopoly is an ideal selling agency. Furthermore, many independent shippers make the market bearish and uncertain, as well as continually disturb the association by making the members dissatisfied. And as long as there is internal friction in the concern, it has been repeatedly proved that the members will fail to reap the profits they hoped for.

The size of the association is also an important matter to consider. It should not be so large as to include territory not producing similar crops and not having common interests, nor should it cover so much ground that the members find difficulty in holding together and working in unison. On the other hand, up to a certain extent, the more extended the field can be made, without sacrificing compactness, the more profitable it will be. If the association is large, the market price can be better controlled: economies in packing, shipping, and selling can be made: a reputation can be built up for the association that will command attention; and the business of the concern may justify



the erection of warehouses for the handling of the products. For these reasons it would be profitable for some local Texas associations to form a joint organization among neighboring counties having similar interests.

There has been some difficulty in Texas in deciding upon the best form of organization. There have been two general types: those which allow a vote to each member and those in which the votes are allotted on the basis of the number of shares held.<sup>6</sup> There has been considerable dissatisfaction with the latter plan. It has yielded almost completely in favor of the first. The type in which the voting is by individuals, not by wealth, has been the most successful because the small growers have more confidence in it and because it is more nearly like a purely coöperative, rather than a money-making, concern. During hard years, the smallest producers grow dissatisfied with the vote-by-share plan, and suspect it of being a scheme on the part of the large stockholders to bankrupt the weak members. After considerable internal dissension, the Southern Texas Truck Growers' Association, which was originally formed with one vote per share, has been reorganized and incorporated for the sum of \$10,000, with 10,000 shares, only one share being given each member.

But even after getting organized with the right size and form, many associations are a failure because of the lack of business experience. The members are enthusiastic; crops are good; everyone is sanguine; but profits do not come in. Perhaps the sales manager is low-salaried and incompetent; perhaps the manager is without authority, and everyone is directing the affairs of the association—either event is sufficient to wreck the concern.

On the sales manager, in fact, depends the success or failure of the entire organization. The utmost care must be used in selecting him. He should be a man who is well acquainted with the needs and problems of the growers, and whose interests are bound up with the growers rather than the dealers. If the training of his life has been for the advantage of the growers, it will be natural for him to work for their benefit. It is impossible to procure the services of a man who has as many and

<sup>6</sup>G. Harold Powell in 1910 Yearbook.

as difficult services to perform as the manager without paying him a good salary. He should be as experienced as it is possible to get; he must be free to devote his time and energy to the affairs of the association; and it is better if he is so situated that it is to his advantage to build up the coöperative organization in every way possible. No doubt a large part of the attempts to build up creditable, efficient local organizations owes its failure to the fact that an incompetent man has been placed in charge, or else some busy person has been depended on to do the work for the love of the cause.

Furthermore, the manager should be given a considerable amount of authority, in order that his plans might not be interfered with, and he should be held strictly accountable to the board of directors.

There has been a great deal of loose talk about the function of the middleman under the present competitive conditions. Some enthusiasts are apt to lose sight of the fact that his duties are indispensable. In fact, the largest coöperative concerns, such as the California Fruit Growers' Exchange and the Florida Citrus Fruit Exchange, merely assume the functions of the brokers. The California Fruit Growers' Exchange maintains a bonded agent in each of the principal markets of the United States, and the Florida Citrus Fruit Exchange has district managers to handle the various divisions into which the United States and Canada are divided. The so-called "middleman" is only a hired agent of the producers' organization. The advantages of these coöperative organizations is not that they do away with the position occupied by the middleman, which is impossible, but that they remove the objectional features of speculation and insure honesty of dealing.

Unscrupulous methods employed by speculators sometimes make markets unstable, making it impossible for a grower to form an approximate judgment of his returns. Experience of onion growers in Southwest Texas proves that the profits depend largely on chance. One man may luckily get his produce on the market at exactly the right time and receive abundant profits. If a coöperative concern has sufficient control of the crop, it is usually able to keep the prices steadier and thus insure at least returns enough to prevent the heavy losses that the growers otherwise have to risk.

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Besides eliminating much of the risk now attendant on the business, the growers are able by coöperative methods of marketing to secure for themselves part of the profits that would otherwise go to the brokers. If the middleman's functions are performed by an agent of the company, all unusual returns will come to the shippers who are members.

### *Coöperative Cotton Warehouses.*

Cotton is still king in the South, and when one talks of getting a better price for the fleecy staple one interests the greater part of the Southern farmers. The fluctuations of the cotton market affect the prosperity of almost every business; hence it is no wonder that the marketing of this crop is the subject of continuous debate in Texas. All are pretty well agreed today that the present scheme, under which all the cotton raised during a year is dumped on the market within a comparatively brief period of time, forces down the price lower than is necessary or desirable. When the market is flooded the price naturally descends, with the result that the bigger the crop the less the total returns. This is shown by the statistics for 1910 and 1911. In 1910 the crop amounted to 11,965,962 bales, selling at an aggregate value of \$820,320,000, or \$68.55 per bale. In 1911 there were 16,109,349 bales raised, which sold for a total of \$732,420,000—or an average of 45.56 per bale. There was an increase of 4,143,387 bales in 1911 over the previous year. The result was not only a smaller price per bale, but even a smaller aggregate value. Such astonishing losses were chiefly due to the fact that most of the cotton was sold on a glutted market. How to avoid this glut is the problem that must be solved.

A practical warehouse plan whereby the cotton can be held and sold as needed seems to offer the only logical solution. What is needed is some aid that will enable the farmers of every community to erect a warehouse near their fields. Some theorists have advanced fantastic schemes for securing a monopoly of all the planter's products in a gigantic system of warehouses, in which the cotton could be held for a stated price. Such schemes, however, can not stand practical business tests. In order to be of use the warehouses should be near the

fields. The average farmer is going to sell his cotton as soon as it is gathered, because he needs the proceeds to pay his debts, and unless a scheme is devised whereby he can turn his cotton over to other parties conveniently and secure in return something that can be used as currency in paying debts and buying supplies, it will be of little value. Furthermore, the fact that the haul to market should not be of unreasonable length must be kept in mind.

An efficient warehouse plan will help the farmers all along the line, beginning with the planting of the seed and continuing until the crop is disposed of. In the first place, it will promote diversification where it is advantageous. At present, a large part of the cotton growers of Texas must place themselves under obligations to credit merchants at the first of the year in order to get supplies. The merchant always wants a lien on a crop that has a ready market, and the merchant forces the farmer to grow cotton almost entirely.<sup>7</sup>

In the next place, the present methods are wasteful and expensive. The Federal Department of Commerce estimates that the "city crop," which consists of the samples and pickings from the cuts made in the bale for the purpose of sampling, amounts to 100,000 bales a year. Estimated on a middling basis, Hon. Clarence Ousley figures that this represents a loss of \$6,000,000. Again, the cost of patching and the incident wastes in the yards will amount to fifty cents per bale; the exposure in open yards may be calculated at \$2 per bale on one-third of the crop. The present expensive system of buying the cotton on the streets would be eliminated by a warehouse system. Mr. Ousley estimates that all of these items will aggregate \$42,000,000, or \$3 a bale on the 1912 crop of 14,000,000 bales.

Most important of all, warehouses will mean a scientific system of selling. Having the bulk together, a better price can be obtained, especially since the present methods of marketing on the streets, where everyone tries to scalp all others, will be done away with. By selling in bulk, furthermore, the price can be stabilized. One of the causes of fluctuation at present is the hasty and scattered selling of the farmers. A system of

<sup>7</sup>See above, p. 7 f.

warehouses will accomplish regularity of supply to the manufacturers.

A proper plan will also reduce the present high insurance rates. Now, haphazard methods are usually followed. The cotton is piled up near the track, where it can be easily ignited by sparks from a passing locomotive. The hazards under such conditions is so great that the rates are enormous. Fireproof structures should be erected some distance from the main track on a switch.

In order to facilitate the erection of warehouses, a constitutional amendment has been proposed and will be voted on July 19, 1913, authorizing "any county, any political subdivision of a county, any number of adjoining counties, or any political subdivision of the State, or any defined district now or hereafter to be described and defined within the State of Texas, and which may or may not include towns, villages or municipal corporations" upon a majority vote of the resident taxpayers to issue bonds or otherwise lend its credit in any amount not to exceed one-fourth of the assessed valuation of the real property for the "construction, maintenance, and operation of public warehouses for storing, handling, classing, measuring, weighing, elevating and loading agricultural products. *After the warehouse has been constructed, it seems to the writer that the charges should be sufficient to cover not only running expenses, but also to discharge ultimately the expenses of erection.* Warehouses are of such importance that it is well to use the credit of the county in securing their erection, but the people as a whole should not have to pay for them outright.

This proposed amendment also provides that the Legislature shall provide for a Warehouse Commission with power to regulate and inspect the business.

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## FARMERS' EDUCATIONAL AND CO-OPERATIVE UNION IN TEXAS.

BY H. L. VOORHIES.

In American political history there was a general movement between the years 1867 and 1896, remarkable for the character and activity of its social propaganda. This general movement is divided into three periods: (1) that of the Grangers; (2) that of the Alliance; (3) and that of the Populists.

The Grangers began their movement in 1867. They had a head office located in Washington which supervised the "Granges" of the various States. The order was secret; and its purpose was to advance the social needs of the farmers, and combat the backwardness of farm life in general. The order advocated a reduction of the tariff, lower freight rates, and higher prices for grain products. Later, it took up the fight against the middle man, and advocated coöperation in various lines. Grange stores were established to buy almost everything. Grain elevators, warehouses, dairies, flour mills, and insurance companies were operated upon the coöperative basis. In advocating these measures, the Grange fell into disrepute over the policies to be pursued, and the national organization lost control of the State organizations. From 1874, it rapidly declined and by 1880 it had lost its national significance. However, in some of the New England rural districts and in Michigan, there are still a few surviving organizations.

The second movement was led by the Alliance, which was founded in 1889. The Alliance reached its greatest power in 1890, with a membership of five millions. Its purpose was to secure remedial legislation for agricultural ills, and it held lofty ideals. The order advocated the abolition of national banks, free coinage of silver, government issue of paper money, tariff revision, secret ballot, and the income tax. In 1890, the order developed astounding political strength and succeeded in capturing the legislatures of several Western States.

In 1892, there was a strong demand for a third party. Va-

rious industrial organizations had been preparing the way for this party, and the Alliance's members joined in the demand. The party was organized and called the Populist Party. Its purpose was to get ethical gains through legislation. It favored free silver, the income tax, eight hours a day for labor, the reclamation of land, government ownership of railways, telegraphs and telephones, popular election of senators, and the initiative and referendum. It gained enormous strength throughout the Middle West during the years following the panic of 1893. But the Democrats appropriated most of its doctrine in their platform of 1896, and 1900; and the Populist became fused with that party. Thus, the Populist organization passed into history as its two predecessors had done.

#### *Organization and Purposes of the Union.*

In the year 1902, Newt Gresham and nine other Raines County farmers met in a barn and organized the Farmers' Educational and Coöperative Union of Texas. It was incorporated as a Texas corporation, September 17th, 1902. From the beginning it grew very rapidly, and by the end of the first year its Texas membership was 50,000. In three years' time, the organization had established itself in Mississippi, Louisiana, and Arkansas, with a total membership of 200,000. Its original purpose was to control price through a central selling agency by disposing of produce in larger bulk, thereby cutting out the middleman's profits. At a convention in Dallas, in 1907, the Union (which up to this time had been a Texas corporation) was chartered as a national organization. But in 1907, the enormous over-production of cotton caused a drop in the price regardless of the efforts of the Union to market systematically and obtain a profitable price. This caused widespread dissatisfaction among the tenant cotton growers of every section, and for a time it seemed that the Union would follow in the footsteps of the Grangers and the Alliance.

But, fortunately, the Union had broadened out in its efforts for the welfare of the farmer and was advocating those things which would ultimately benefit him in production as well as in marketing. After the failure of 1907, the farsighted members



of the Union set themselves to the task of improving the condition which affect in general the profitability of farming. They sought: (1) to discourage the credit and mortgage system; (2) to teach the farmer domestic economy, and the process of marketing; (3) to educate the agricultural classes in scientific farming; (4) to systematize the methods of producing and distribution; (5) to eliminate gambling in farm products by "Boards of Trade," cotton exchanges, and other speculative organizations; (6) to secure and maintain profitable prices for cotton, grain, and other products; and (7) to strive for good will and brotherly love among all mankind. The promotion of these objects is the aim of the Union at present.

In drafting of the constitution and by-laws, the committee was careful to safeguard the interest of the Union against the disruption which had overtaken the Grangers and the Alliance. The Grangers, as is known, were disrupted in 1875, because they were unable to agree as to the policies that were to be pursued. Harmony of interests did not exist. Merchants, bankers, insurance men, and farmers were all in the same organization, and each had particular interests. With such a diversity of interests, disruption was inevitable as no policy could be formulated to the interest of all. Human nature was bound to assert itself in the end in favor of a particular class and not for the interest of all. Section 13, of the Union's Constitution declares that no person shall be admitted to membership who is engaged in the occupation of banking, merchandising, the practice of law, or who belongs to any trust or combine for the purpose of speculating either directly or indirectly in farm products or the necessities of life. In thus restricting the membership, a provision was made to safeguard the Union against disruption through a lack of harmony as to interests.

Again, the Alliance had lost its significance and power immediately because of its advent into the field of politics. Gain through legislation was its purpose, and the organization participated rather freely in the political campaigns of 1890, and 1892. Thus, it changed from an agricultural organization into a political faction. But the Constitution of the Farmers' Union states in the preamble that the Union is not a political organiza-

tion, and that it will abstain from even a discussion of politics. The Union may, however, through legislative committees, seek to secure the passage of pending measures favorable to the policies of the Union. It does not endorse candidates nor put them out; and it never formulates a platform.

A point of great importance for the purpose of this paper is the influence the Union has had upon production and consumption. The influence upon production will be discussed under the two divisions: (1) scientific crop growing; (2) and scientific marketing.

### *Scientific Cultivation and the Union.*

The prosperity of a farmer is said to depend primarily upon his producing capacity. Farming today is more a business than at any time in past history, owing to the facility of exchange, and to the division of labor, or specialization. With the principle that the farm is primarily a business producing commodities which are to command value in exchange, the Union has inaugurated such policies and is urging their adoption. It has advocated that the various sections of the States adapt through experimentation those crops to which each section is especially adapted. In south Texas, the boll weevil for years destroyed the cotton crop because that section is a moist country favorable for the existence of the weevil. The Union impressed upon the farmers the fact that they should experiment and find what other crop is suited to the soil and climate. Rice growing was tried, and rice is now the staple crop in a large section of the south Texas country. In the east Texas timber belt region, fruits and vegetables (especially canteloupes and melons) are now the chief products, whereas only a decade or two ago the red hills produced but a meager existence for the farmers who were trying to grow corn and cotton. The Union was instrumental in doing this. In the counties adjacent to the Red River Valley, wheat, oats, stock, and cotton are now the main crops; and only a few years ago corn and cotton were almost exclusively grown. The Union helped to secure the diversification. The Pan Handle country with free grass and large ranches was primarily a cattle country, but the last ten years have witnessed a change from that of a stock country to a stock farming and agricultural coun-

try. It was to some extent the policy of the Union that brought the change. Hence, north, south, east, and west, the Union has been influential in educating and encouraging the various sections of the State in the production of the crops especially adapted to each.

Again, the Union has advocated the diversification of crops in Texas. Diversification is undertaken with at least two views: (1) the conservation of the soil; (2) economies in use of labor and capital. A great drawback to profitable agriculture in this State has been the extensive growing of only one or two crops,—cotton and corn. In the “black land belt,” they made up about 95 per cent. of the total crop acreage, and the average acreage given to corn did not exceed 10 per cent. of the total acreage. Thus, the growing of cotton year after year was mining the soil of its fertility. And the labor and capital of the farmer were idle a large portion of the year, whereas under a system of diversified farming the labor and capital could be employed at much greater profit to the farmer. Through the Union, diversification and rotation have been strenuously urged until at present remarkable advance has been made, and wheat, oats, sorghum, and alfalfa make a considerable per cent of the crop.

Then, too, scientific cultivation has been one of the policies of the Union. The settlement and development of Texas has been very rapid for the last twenty five years. There is a change going on in the most highly developed sections of the State. It is the change from the extensive to the intensive systems of farming. Labor and capital are no longer to be economized as they were ten or fifteen years ago. Land is the factor that is to be economized, and scientific intensive farming is the means by which such an economy can be effected. Crop demonstration as to fertilization and cultivation are carefully worked out at experiment stations, and the Union takes up the results and urges their adoption: the results are understood and adopted more quickly through the efforts of the Union in connection with the various local lodges throughout the States. The local lodge lecturers are kept informed by the State officers of the Union concerning all recent experiments and their significance. If it has been demonstrated that the yield of corn per acre can be in-

creased by the deep breaking of the land in the early fall months instead of the winter months, the members learn the results at lodge meetings, County institutes, and State conventions. If it is demonstrated that the big boll cotton yields heavier in the black land belt than any other variety, the members are induced to plant that variety. Further, if it is demonstrated that the yield of cotton per acre can be increased by flat breaking the land instead of listing it according to the old system, the members are induced to abandon the old system.

### *Restriction of Acreage.*

It is often heard in Texas that land is too high in price and will not pay a return on the money invested in it. That is true in Texas under the old extensive system of cultivation. The Union, however, is rapidly educating the members in scientific and extensive methods of cultivation which if taken advantage of will enable the landlord to receive interest on his investment in the land. This is the work that the Union is rendering to its farmer members.

The Union has repeatedly expressed itself in favor of a reduction of the acreage planted to cotton, and a corresponding increase in the acreage planted to other crops. No direct and aggressive steps have been taken toward that end, although resolutions favoring such a policy have been adopted in mass meetings and conventions. In 1908, a convention at Memphis, Tenn., passed a resolution favoring a reduction of the cotton acreage. However, in the spring of 1908, it was evident that there was a large increase of the acreage planted to cotton. The officers of the Union recommended that the farmers plow up a per cent of the cotton already planted and plant in corn, peas, or some other crop for home consumption. President Barrett sent out a circular with this recommendation. From reports and statistics, it seems that this circular had very little effect; but it is certain that the recommendation of the officers of the Union and the resolution by the convention and mass meeting for the reduction of the cotton acreage has resulted in checking a more rapid increase in the cotton acreage.

*More scientific Marketing by the Union.*

The growing of a crop is said to be primary and its marketing secondary. But since farming is now more a business than a self sufficing industry, it seems that marketing is almost as important as the growing of the crop. The farmer is interested in what he can get for his crop. From 1850 up to 1900, the farmer grew his crops and marketed them without paying any attention to his system of marketing. He dumped his grain or cotton on the market just as fast as it was harvested or gathered, with no regard to crop reports, taking whatsoever price the buyers were willing to pay him. With the farmer marketing in ignorance or total disregard for the law of supply and demand and general crop conditions, considerable surplus profits have accrued to middlemen and buyers. Within the last few years, however, scientific marketing has been one of the needs of the farmer that is receiving considerable attention.

The Union's activity in behalf of scientific marketing are noteworthy. The members are informed as to the crop conditions in other States. The existence of the law of supply and demand are stressed. The Union sends out to the members the Government's monthly crop reports, and explains their significance and bearing upon prices.

Then, again, in securing a fair price for commodities grain-eries and warehouses will have to be built sufficiently commodious to store the grain and cotton until the price rises to a profitable level. Early in its beginning, the Union advocated the building of a system of warehouses for the storing of the cotton. Under supervision of the State officers, the local lodges in contiguous territory were grouped, and a joint warehouse erected by them. Also warehouses were built in Houston, the headquarters of the sales agency, for the reception of cotton preparatory to its shipment in greater lots to foreign markets. But the warehouses were not built according to the proper design. They were not sufficient to store all the cotton; rents and insurance were too burdensome for the farmers to realize a profit on the storing of the cotton. The attempt was almost a complete failure, and the Union was seriously discouraged and hampered for a time. An investigation of the warehouse system abroad as to design

and structure of the warehouses was made. The Union is now advocating the building of warehouses according to the European plan.

The plan of finance upon which they are to be built is that similar to a community bond issue for the construction of good roads or an irrigation system. A bill was introduced in the last legislature designed to give communities the privilege of issuing bonds for the construction of warehouses; but this has not yet been enacted into law. With the building of warehouses according to such a scheme, each district with its local lodges would have ample storage for the cotton of its members. Cotton could thus be stored and held for a profitable price.

In connection with the storage system, a Union sales agency is to be maintained for the handling and selling of the cotton. At the sales agency headquarters in Houston, gigantic warehouses are to be erected in addition to the one already there, and small shipments of cotton from the districts over the States will be received. The sales agency will sell only in large shipments of not less than five hundred bales. An expert grader will grade all of the cotton, and the agency will thus offer it for sale.

With the sales agency and the warehousing system, the Union recommends a minimum price for farm products. From 1904, Union has each year set a minimum price for cotton. It is impossible to estimate the influence it has had toward maintaining this minimum price from the fact that for several years the price actually received for cotton was substantially below that set by the Union. However, it is not to be doubted that the price actually received was higher than it would otherwise have been. Then, again, a study of the price movement during the years in which the Union has declared for a minimum price shows that the price has not only been somewhat higher than for the years preceeding, but has been better sustained throughout the crop moving period. This indicates that there is a pronounced improvement as to the maintaining of price, and certainly the Union is instrumental to a large degree in the maintaining of this price.

Very little has been done in Texas toward the marketing of grain as it is secondary to cotton in importance, but the Union

is urging the farmers to build graineries at home and store the grain at harvest time and market throughout the year without dumping during the few weeks and thus lowering the market.

*Farmers' consumption and the Union.*

The Union in Texas has also worked to improve consumption. It has been influential and effective in its efforts to get the farmers to consume their commodities wisely. Policies of saving have been advocated with a view to replacing the wear and tear of capital and the increase of its efficiency.

Furthermore, in the purchase of necessities and articles for household consumption, coöperative and wholesale buying has been advocated, but its success seems to be in the future for lack of experts to do the purchasing. This, however, can in time be made satisfactory. The method of buying has been more discussed than any other feature. The average farmer buys throughout the year upon the retail plan, and the seller is profiting at the expense of the farmer. The farmer goes into town once or twice a week, he buys a little of this for the time and a little of that for a time. It is obvious that many of the articles could be bought in bulk sufficient to last the household for six months or a year, and a lower price could be thus obtained.

In conclusion, it is fair to say that while the Union has only achieved partial success in its purposes yet it is in a fair way to realize them in the not distant future. Scientific tilling and marketing are in higher esteem with the general farming class than at any time in previous history. The farmer is rapidly learning wisely to adjust his capital in proportion to the land and labor that he has. The farming industry is being rapidly placed upon a scientific basis, and is managed by men who themselves have had training to fit them for that management. And in these ways farming is being raised from its one-time derided position among the industries to that of eminence and respectability.

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## SEASONAL INDUSTRIES AND THEIR LABOR SUPPLIES.

BY W. E. LEONARD.

The suggestion has been made that Texas should have a State Labor Exchange similar to those found in the Middle West agricultural States. The practical value of such an exchange turns upon two equally important considerations:

1. The seasonal character of Texas industries.
2. The immobile character of her labor force.

Industries which operate continuously during the whole year, affording constant employment, have a distinct advantage over those operating for only a few months. To the first, labor automatically flows; for steady employment is attractive.

On the other hand, the seasonal industries have no such power of attracting the necessary labor force. They must depend upon a chance "picking up" of temporarily unemployed labor. The general result is that in seasonal employments one region may be over-supplied with labor, while a shortage exists elsewhere, to the serious neglect of a perishable crop.

Now, the great industries of Texas are seasonal. Take, for instance, the great cotton industry: It is doubly seasonal. First, in the early springtime, there is the "cotton chopping" period—not long, but important to the growing crop. Then in the late summer, the second seasonal labor period begins with the picking.

Another seasonal industry of Texas,—one of growing importance to the State,—is that of fruit and truck growing, together with the canning business. The work of harvesting is necessarily pressed into a very short period. This, however, is not the only serious aspect. These industries are subject to great yearly variations. A series of "lean years" see the disorganization of the labor force, and methods of securing it; so that when the "fat years" at last come the producers find it impossible to muster the necessary help to care for the crop. Each grower in attempting to supply himself with labor outbids his fellow producers; wages rapidly rise and at a time

when prices for his products are very likely to be rapidly falling. These conditions, together with a faulty system of marketing, makes this industry one of great hazard.

The seasonal character of the general harvest of small grain and hay needs no emphasis. It is in the harvesting of these crops that such excellent work has been done by the State Labor Bureaus of the Middle West through a system of co-operation.

So much for the demand side of the problem. It remains to take account of the supply of Texas labor, without which we cannot successfully handle our seasonal industries. Had we to deal with intelligent, alert, and independent labor groups, their initiative might lead them to the most important labor markets, although at considerable waste of time and energy. But our unskilled labor cannot be so characterized. Texas farmers, aside from their own families, are almost wholly dependent upon Negro and Mexican labor. Both these labor groups are immobile. If they emigrate at all, it is through short distances, and always in groups, rarely as individuals. The Negro, for instance, will migrate from country to city,—a city perhaps of his own county,—but seldom does he venture to a remote part even of his own State. Industrial cities, employing much unskilled labor, stand ready to absorb much Negro labor; so also, do residential cities, which require many household servants. In these cities the Negro finds a tolerance not elsewhere granted.

For the above reasons, there appears a distinct tendency towards the localization of the Negro; first, in the large industrial cities of the State, and, secondly, in regions immediately adjacent to the cotton growing districts. In the small cities and towns, in the truck and fruit sections, in the range country, and in districts occupied by Europeans and northern people, the negro finds a less congenial home.

In support of the above statements attention is called to the following facts drawn from the Federal Census of 1900 and 1910:

|                                                                    | 1900      | 1910      | % increase |
|--------------------------------------------------------------------|-----------|-----------|------------|
| Total population of State.....                                     | 3,048,710 | 3,896,542 | 27.8       |
| Combined population of seven cities of East Texas.....             | 248,013   | 424,090   | 75.0       |
| Total negro population in the State....                            | 620,722   | 690,049   | 11.2       |
| Combined Negro Population in seven cities of East Texas.....       | 55,369    | 87,530    | 58.0       |
| Percentage of city Negro population to whole negro population..... | 8.9%      | 12.6-20%  |            |

The above tabulation has several points of significance bearing on the distribution of the unskilled labor force of the State:

1. The relatively low increase in the negro population,—11.2 per cent.—which corresponds to the increase for the whole nation; while, for the larger cities of the State, the negro population has increased 58 per cent. In this connection it should be noted that all cities do not show similar increases. In some, the increase is as low as 4 per cent, while in others it rises to something like 200 per cent.

2. In 1900 the negroes in the cities of East Texas constituted 8.9 per cent of the negro population of the State, but in 1910 they represented more than 12.6 per cent of the negroes of the State.

Another important fact concerning the negro as a part of the labor supply of Texas appears in the following statistics:

In 1880 the negro formed 24.7 per cent of the entire population of the State.

In 1890 the negro formed 21.8 per cent of the entire population of the State.

In 1900 the negro formed 20.4 per cent of the entire population of the State.

In 1910 the negro formed 17.7 per cent of the entire population of the State.

Here is shown a relative decline of 7 per cent. Thus, as a factor in our population, the negro is 7 per cent less important than he was thirty years ago. This question at once arises: Is there a corresponding decline in the need for him in the industries of the State. The presumption is in the opposite direction, and for the following reason: The work which he has continuously done, almost to the complete exclusion of other workers, has increased. The increased acreage of cotton;

the growing demand for him in domestic and personal services; his easy adaptation to the unskilled work in machine industries—these industries have all extended the demand for negro labor. If this be true, the negro has thus become relatively more important from the industrial point of view, while at the same time his numbers have relatively decreased. Undoubtedly connected with these significant changes in the negro labor force is the rapid influx of Mexican labor.

If it be accepted as a fact that we must deal with unskilled labor which is highly immobile; if there is going on a slow process of localization of the negro in and about the cities; and, if in these cities industries are developing which tend to absorb this labor more or less permanently, how are we to provide for the seasonal demand for labor in agriculture? Since we cannot modify the seasonal character of agriculture, the demand for labor in this industry must be regarded as constant, and quite beyond control. However, on the supply side, something may be done through a proper distribution of the available labor of the State.

The futility of our present system should be apparent to all. At present a cotton grower upon the approach of his harvest season goes off on the quest of labor. In the city to which he goes he meets scores of other growers who are also seeking labor. If the need is urgent, over-bidding takes place, and some must return to their neglected business only partly supplied. Or, again, some enterprising newspaper advertises for 5000 cotton pickers when only 2000 are wanted and can be employed. Possibly 3000 may come; 1000 are disappointed. The following year many more are actually needed, but much advertising will be fruitless, for even laborers resent being deceived. The private employment agencies are utterly unable to solve the problem. Private gain rather than public good must be their point of view, and if they aid in a proper distribution of the labor force, this happy result is accidental rather than scientifically determined.

The general result of these haphazard methods is to add to the already difficult problems of our farmers as producers, and to favor some agricultural localities over others equally good. This is shown in the case of the two counties of Ellis and

Williamson, reputed to be the banner cotton counties of the State. It is rather significant that both these counties lie near excellent labor markets, and thus the acreage of cotton is little restricted by the scarcity of labor. But in the counties west and north,—fine cotton lands,—the acreage must be limited, in some cases, to the farmers' own labor supply, and in every case modified to some extent by the uncertainty and difficulty of procuring sufficient help.

These labor difficulties in connection with agriculture can be largely remedied by the application of a systematic method to them. For there is probably no total scarcity of labor in Texas. All that is needed is a scientific distribution to the places where it is most needed. There is but one agency capable of such a task, and that is an efficient State Labor Exchange.

## THE FARM LABOR PROBLEM.

### *Its Nature, and Some Suggestions for Remedies.*

BY S. M. LEFTWICH.

How to meet the demand for farm labor is one of the most serious questions of the day in Texas agriculture. The existing scarcity is the result of several causes: (1) the movement of population from the farm to the city; and (2) rapidly decreasing labor of woman; (3) increase of tenancy; (4) irregularity of employment.

The city movement, which became serious about 1875, and reached enormous proportions by 1897, was due primarily, to the rapid growth of manufacture and commerce, but this movement was accelerated by a long period of agricultural depression, which followed shortly after the Civil War, and which has continued almost to the present time. Only within recent years have we sought to check this movement by a counter-movement from the city to the farm.

With the advance of civilization, the position of woman in the labor force has been elevated. The farmer is following this advance, and is taking his wife and daughters out of field labor. In the old days she worked beside man in the fields, doing a man's work; then, gradually she left this for the work around the house, milking, tending poultry, truck-garden work, and housekeeping. And now there is a tendency to relieve her of even this work. Thus, by her withdrawal from the field industry she has reduced considerably the available labor force, and this causes an additional demand for adult male labor.

It has always been the case in America that an industrious man could rent or buy a small plot of ground and make a good independent living from it. Our best laborers take advantage of this opportunity, become tenants, and finally farm owners. Thus a great drain on the labor supply is made, and a new demand is created.

The seasonal character of much of the agricultural labor makes employment irregular. This is not an attractive feature to any sturdy industrious man. City labor, as a rule, is more regular and permanent. There is little chance of farm work attracting desirable city labor. Thus, again, irregularity of farm labor reacts to make the labor supply scarce.

It is obvious, then, that the problem falls into two distinct parts, namely: (1) that of the permanent laborer, tenant, or farm owner; (2) and that of the seasonal laborer.

Taking up the first of these, that of the permanent laborer or farm owner, we find his chief problem is to hold his descendants on the soil. There is a tendency for his children to move to the city. Some are attracted by the call of ambition or special genius which the farm cannot satisfy. They should not be deterred, but should be encouraged in every possible way. But it is the others who are in the great majority, and these we will consider:—those who are drawn to the city because of its seemingly high wages; easy hours; its gay life; its seemingly easy ways to fortune.

On first appearance wages in the city are far more attractive to the young man than wages in agricultural occupations. But if he were to look closer and study them, he would see that not 2 per cent of the men who leave the farm for city life ever rise above day laborers or clerks. As a day laborer, a man receives from \$1.50 to \$6.00 per day. As a clerk he may draw from \$40 to \$75 or \$100 per month,—very rarely over that. Board and room of the poorest character, those which are barely sufficient for subsistence, cost at least \$18 per month. Clothing requisite for city life costs far more than that for the farm. Then, too, there are the thousand and one attractions that form well-nigh irresistible temptations to consume the little which remains of a month's earnings. The average city man lives right up to his earnings and has nothing saved at the end of the year.

On the other hand, the income or earnings of a farmer working for himself depend largely on his own industry and thrift. Barring bad weather conditions, the average farmer earns a good living and at the end of the year has several hundred dollars saved.

The general work day of the city is from 8 to 10 hours. That

of the farm is more. But it is a fact that eight hours per day in city work is in the long run more than equivalent to ten hours per day on farm work.

Perhaps the best and most successful means of holding the farmer's descendants on the soil, is education. Agricultural courses in colleges and universities offer a cheap but scientific education. They cover every field of agricultural industry—general farming, stock raising, ranching, etc. Thus, the farmer's sons can profit by the knowledge gained by intensive study, government experiments, and actual practice. They can make farming a paying industry. It will cease to be a mere desultory means of livelihood, and will become a high profession.

Now, taking up the second division, that of meeting the demand for seasonal labor, it will be well to review the general status of transient laborers.

The wages of the farm hand vary with different kinds of work and in different sections of the country. In the grain-growing belt the hands are paid by the day. They receive from \$1.25 and keep per day up to \$2 per day and a noon meal. In the western fruit growing States the hands are paid, some by the day, some by the hour, and others on the piece-work plan. In the cotton growing region the hands are paid variously. If cotton pickers, they are paid per hundred pounds picked, the average rate being between 50 cents and 70 cents per hundred, depending on the crop and the scarcity of labor. In Texas, cotton pickers usually receive about 65 cents per hundred pounds. The grain and hay harvest hands in the cotton belt receive about \$1.25 and keep.

The hours also vary in different sections of the country. In the Middle-West grain belt, the average day is eight hours. In the South the average day is ten hours, and where negroes, Mexicans, and other unskilled classes are employed, the day is usually from sun-rise to sun-set.

It may be suggested that immigration can supply the needed hands. Originally our stream of immigration was composed mostly of Northern Europeans who are a thrifty class of people. A large part of these became either farmers or farm laborers. Our farmers depended on immigrants for labor. But gradually



the Southern Europeans have become the dominant type of immigrant. They are frequently a shiftless, slovenly set, who love their own companionship and the light and glamour of the crowded city too much to make successful farmers. About 1 per cent. of the annual immigration goes to the farm now. Immigration can therefore be looked upon only as a very meager aid in meeting the demand.

The most successful means yet employed to solve the farm labor problem is establishment throughout the country of State Bureaus of Employment. Experiments along this line have been made by several States. In most cases this scheme has proved fairly successful. In nearly every State where it has been tried, however, the Bureau has been made subordinate to the Department of Labor, and in most cases has been crippled in its work because of insufficient funds.

In 1901, the State of Kansas established a Bureau of Employment under the Department of Labor. It secured, along with other kinds of labor, positions for 1,698 farm hands. In 1903, it secured work for 2,045 farm hands.

The State of Missouri created a Bureau of Employment under the Department of Labor. The main office was located at Kansas City, with branch offices at St. Louis and St. Joseph. In the year 1905, out of a total of 655 farm hands seeking employment, it secured work for 326, and out of 572 applicants for farm help 297 were supplied. This is a very large percentage when one considers that many of these applications at the end of thirty days may have been refiled by the same applicant, for the law requires a man to file a new application every thirty days until he has secured the desired work. In 1905, St. Joseph received 107 applications for farm employment, and supplied all with work.

The State of Nebraska, through its bureau, sent (in the same year) 3,645 harvest hands to 72 towns in 36 counties.

The Bureaus of the grain belt States,—Kansas, Nebraska, Oklahoma, Dakota, and Missouri,—all coöperate. They have formed an Association of Bureaus, with the central office at Kansas City. The grain season in these States moves northward at fairly regular intervals. When the harvest opens in

Oklahoma, in June, the Bureaus of all the other States send all available labor down to the Oklahoma Bureau, which distributes it in that State. As the harvest closes in Oklahoma and moves northward, the Oklahoma office gathers up all the agricultural labor available and under the directions of the Kansas City office sends it to the places where it is needed. The railways coöperate with the Association, giving a low rate to harvest hands in groups of not less than five. Thus the seasonal demand for labor in all these States is met by the bureaus collectively. Ordinarily it would require 95,000 hands, but by this systematic work the harvest has been adequately handled by 45,000 men.

In all, fifteen States have had these bureaus. They are California, Connecticut, Illinois, Kansas, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, New York, Ohio, South Dakota, Washington, West Virginia, and Wisconsin. The experiments in these States have on the whole proved successful, even though handicapped.\*

To relieve the stringency of labor supply in Texas, a Bureau of Employment should be established. Texas should profit by the experiments of other States and at the outset remedy the defects found in their organizations. The Bureau of Employment should be entirely separate from the Department of Labor.† Its work should not be forced on unwilling city officials, and it should be given an annual appropriation. The cost to the South of such a Bureau would be approximately \$8,000 per year. It would save the people of the States three times that much if it were only fairly successful.

The detailed workings of the system should be left to a capable superintendent specifying the following conditions: (1) that offices coöperate with each other and with other State Employment Bureaus. (2) Offices be at El Paso, Galveston, Dallas, and Houston, with the Houston office as headquarters, the others being subordinate and under its direction. (3) All kinds and classes of labor be handled. (4) Sufficient advertisement be

\*In States other than those mentioned above the main work of the bureaus is in the field of city labor and domestic service. The bureaus are mostly established by the larger municipalities.—(Ed.)

†This conclusion, based upon the danger that the employment bureau may not receive the *special* attention it needs, is perhaps open to question.—(Ed.)

made to keep the offices in touch and familiar with conditions throughout the State. (5) Records be kept of all transactions and be published or given before the Legislature annually. (6) That no loafing be permitted about any of the offices.<sup>2</sup>

By this Bureau the farmers and laborers could be brought in touch with each other, and every atom of our available supply of labor could be utilized.

<sup>2</sup>These suggestions are made tentatively by the writer as the basis for discussion, rather than as final conclusions.

# A STUDY IN HIGHWAY ADMINISTRATION WITH SPECIAL REFERENCE TO TEXAS' NEEDS.

BY M. H. GRIFFIN.

## *Importance of good roads.*

The importance of public roads arises from the fact that about ninety per cent. of the freight carried on railways and steamships must first be hauled over them. The railways are the main arteries of travel, and the public roads are the veins. To mention one illustration, Rome owed her sway over the known world as much to her excellent system of trunk-line roads as to her legions.

The permanent improvement of a road may be regarded as an investment of public funds. In the form of a ledger account, it might then be summed up as follows:<sup>1</sup>

### PERMANENT ROADS.

#### *Debtor.*

"To interest on investment."  
"To increased cost of maintenance."

#### *Creditor.*

"By saving in heavy hauling."  
"Increase in land values."  
"More easy access to market, church, school, and social advantages."

There are 2,210,857 miles of public roads in the United States, of which only 10.1 per cent. are improved.<sup>2</sup> The United States spends annually \$80,000,000 on road improvement through the agency of States, counties, and towns, yet England spends \$90,000,000 on only 150,000 miles of roads.<sup>3</sup> Six hundred dollars per mile is spent in England, as compared with \$37.20 in this country.

Two hundred and fifty million tons of freight are annually hauled to the railway station in our country, with an average of \$.24 per ton per mile, and an average haul of nine miles. Over a half billion dollars is spent annually in the United States in transporting freight over the highways to the railroads. In

<sup>1</sup>Hotchkiss, *Rural Highways in Wisconsin*, p. 1.

<sup>2</sup>Bul. of U. S. Dept. of Agr., 1912.

<sup>3</sup>Putnam's Mag., Vol. VII, pp. 780-792.

France the cost of transporting freight to the railway stations is only \$.12 per ton per mile—just half the cost in this country. Would not the \$250,000,000 saved in freight charges under a system of good roads justify the building of such roads?

The 2,000,000 miles of unimproved roads in the United States are as heavy a burden to the consumer as an excessive tariff, for every pound of produce brought from the farm to market bears a higher price because of the excessive cost of transportation from the farm to the point of shipment.

Although many portions of the country are thickly settled enough to make the improvement of the roads an economic necessity, particularly along the more travelled routes, yet in a State like Texas, where the population averages 16 inhabitants to the square mile, dirt roads must continue to preponderate, especially in the more thinly settled counties. Here, therefore, the problem is not so much the construction of permanent roads as the construction of earth roads in the best and cheapest manner.<sup>4</sup> A good road, whether permanent or not, should at any rate be properly located, well constructed, and maintained in good condition, if the fullest possible use is to be made of it.

### *Resumé of Foreign Road Administration.*

All of the most advanced foreign countries, except German and Canada, grant some form of national aid to the construction or care of roads.<sup>5</sup> England has a system which seems to be very slightly centralized. The aid granted by the general government is, first, an annual appropriation, or subsidy, to help defray local expenses, the proportion of this fund to be expended on roads being largely discretionary with the local authorities. Second, within the past few years a government road board has been established, through which direct grants or loans are made for the construction of new or improved roads.

The French system, on the other hand, is highly centralized, as the national roads (some 24,000 miles in extent) are entirely under the direction of the general government, while the remainder of the road system (some 340,000 miles in extent) is

<sup>4</sup>Wis. Geolog. and Nat. Survey, Bul. No. 18, Econ. Series, No. 11.

<sup>5</sup>U. S. Bul., "Public Road Systems of Foreign Countries," by Bourne (April 24, 1913), p. 84.

under the direction of the departments. The fact that the prefect, or governor, of each department is appointed by the general government, and that the engineers of the government corps of roads and bridges are constantly consulted and their services utilized in connection with the roads in about half the departments, and the further fact that all public engineering works involving an expenditure of \$20,000 or more must be submitted to a board of engineers at Paris, emphasize the marked degree to which centralization has been carried in the French system. The French organization, from the inspector general down through the various grades to the patrolmen in charge of short sections of road, appears to be compact, highly trained, and with lines of responsibility clearly defined. As at present constituted, it requires a very large force of officials and employes.

Germany, prior to the general introduction of railways, maintained a system of national roads; but later these were turned over to the various kingdoms and states comprising the German Empire, and have since been maintained as state roads. Italy, Spain, Belgium, Austria, and Russia all have administrative road systems which might be classed as centralized in character. The Scandinavian countries,—Norway, Sweden, and Denmark,—appear to have composite systems in which the general direction and approval rests with the central government, while the direct supervision rests with the local units.

As an example of conditions and policies in the sparsely settled countries, the government of New Zealand has adopted the policy of making loans at very low rates of interest for the construction of roads, and has provided for the liquidation of these loans by "benefit districts" in which the lands benefited are assessed in proportion to the benefits derived.<sup>6</sup> In Canada the administration of the roads is left with the various provinces.

Some details of the various administrative systems are worthy of special mention. The first of these is the *patrol system of maintenance*, which seems to be general throughout the European countries and is being constantly extended. The main differences between the patrol system of maintenance and the methods in general use in this country are (1) that the patrol system provides continuous maintenance as compared with the

<sup>6</sup>Bourne, "Pub. Road Systems," above cited, p. 85.

intermittent or occasional maintenance in this country; (2) that it provides a systematic maintenance in that each section of road is a part of the system, and the work done is in line with a general plan worked out by higher officials and correlated with all other sections; (3) that it provides skilled service, due to the fact that the patrolmen are constantly employed and make the care of the roads practically their life work. In the United States the patrol system would be quite expensive, however, on account of the higher rate of wages which must be paid here as compared with European countries.

A distinctive feature of the French system is the *school of roads and bridges* to which are admitted the graduates of polytechnic school after competitive examination, and in which the course of instruction is designed to fit the young engineers for service as members of the French corps of roads and bridges. The students of the school are paid a sufficient salary to cover their expenses, and upon graduation, are made under-engineers. This system results in a very high standard of efficiency on the part of French highway engineers.

Another feature of the French system of granting aid to the different communes for the construction of roads is that the *aid is made proportionate to the needs* of the commune and so ranges from ten per cent. to eighty-five per cent. of the cost of the proposed improvement. In the case of the wealthier communes it is ten per cent., and in the case of the poorest it is eighty-five per cent. The basis for arriving at the proportion of aid to be granted is ascertained by dividing the wealth of the commune by its area.

The following chart illustrates the administrative system of some of the more progressive European nations:

| Country                                                | Austria.                                                                                                      | England and Wales.                                                                                                | France                                                                                                                                                                                                             | Switzerland                                                                                                                                                | United States                                            |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Population per sq. mile.                               | 246.5                                                                                                         | 615.88                                                                                                            | 189.5                                                                                                                                                                                                              | 234.2                                                                                                                                                      | 30.9                                                     |
| Miles of road to sq. mile of area.                     | .641                                                                                                          | 2.46                                                                                                              | 2.5                                                                                                                                                                                                                | .465                                                                                                                                                       | .726                                                     |
| Population per mile of road.                           | 385                                                                                                           | 226                                                                                                               | 75                                                                                                                                                                                                                 | 504                                                                                                                                                        | 44                                                       |
| Administrative classes of road.                        | Government, provincial, district, and town roads.                                                             | Main roads.<br>Other roads.                                                                                       | National roads<br>Department roads.<br>Vicinal roads<br>4 classes.                                                                                                                                                 | Federal aid canton roads.<br>Canton roads.<br>City roads.                                                                                                  | State roads<br>State aid roads<br>Local roads.           |
| Proportion of construction cost pd. by each gov. unit. | Gov. roads 100%<br>Prov. & Dist. all<br>Town Parish pays.                                                     | Two sources: Nat'l. gov. pays indeterminate amount. Local taxes pay part of cost.                                 | Nat'l. roads const. and maintained at gov. exp. Dept. roads maintained by depts. except vicinal roads which shared in gov. subsidy to amt. of \$1,544,000 in 1910.                                                 | Fed. aid roads built and maintained by cantons with fed. aid. Canton R. maint. by cantons. City roads built by city aid by cant., & \$102,000 Federal aid. | Varies among the States.                                 |
| Extent and character of government supervision.        | Nat'l. gov. has complete supervision over construction and maintenance of gov. road. Constructed by contract. | No gov. supervision where work is done with current revenues, but when done on borrowed money, gov. must approve. | Gov. has complete jurisdiction over all nat'l. roads, and general jurisdiction over all roads by minister of interior on public works.                                                                             | Canton has supervision over construction and maintenance of all roads.                                                                                     | None.                                                    |
| Gov. highway administrative organization.              | Minister of interior, district engineers, road masters, 4000 workmen.                                         | Government road board. Local supervision. County councils. City authorities.                                      | Minister of pub. works, Corps of roads & bridges, Bu. of Dept., roads, auto traffic, patrolmen, Bur. of nat'l roads, 28 inspect., 720 engineers, 1,715 cond., 1595 clerks, 8500 patrolmen, dep't. & dist. wardens. | Dept. of pub. works in each canton. Cant. Bu. of accounts. Fed. dept. of interior, engineers, surveyors, etc., of canton.                                  | Gov. maintains investigative and educational dept. only. |



|                                                 |                                                                                                   |                                                                                                      |                                                                                                       |                                                                                                       |                                                        |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Annual expenditure for roads by each gov. unit. | Nat. gov.: \$5,568,290 in 1910.                                                                   | 1909-10<br>By local authorities---\$32,498,000<br>From loans--- 7,916,964<br>Gov. grants-- 8,230,675 | \$48,000,000—total ann. expenditure.<br>Total cost of entire French system of roads, \$1,083,000,000. | From 1873 to 1911, the Federal gov. contributed to cantons for construction of roads, \$1,323,720.00. | Total expenses for road const. in 1911, \$145,000,000. |
| Method of apportioning gov. aid.                | National roads included in budget.<br>Provincial roads, by taxes.                                 | By grants and loans at discretion of gov. road board.                                                | The road system of France is practically complete.                                                    | Canton officials determine on construction of roads and cantons appropriate bids asked for.           | -----                                                  |
| Sources of revenue.                             | No convict or pauper labor, cost defrayed from current gov. revenues, no special taxes, no tolls. |                                                                                                      | An appropriation from budgets both gen. & dept. gov's.<br>Statute labor required but may be commuted. | No tolls, revenue raised by general taxation. Statute labor used to great extent.                     | -----                                                  |

See Bourne, Good Roads, prelim. report to joint committee on Fed. Aid in Const. of post roads of Cong. of U. S., Jan. 14, 1913.

*Road Administration in the United States.*

Space forbids a discussion of the crude beginning made before the Civil War. During the period between 1860 and 1890, local revenues, mostly in the form of statute labor, were depended upon entirely for the construction and maintenance of roads. The old system of extreme localization was revived, with the administration of road affairs left to the towns in the North and East, and to the counties in the South and West. Many roads were built, but there was little improvement of roads.<sup>9</sup> This localized system of building roads accomplished little; for it failed to secure skilled supervision, provided an inadequate revenue, and depended upon a purely unskilled and unreliable class of labor. Construction of a permanent nature was practically precluded.

*State Aid.*

Though public sentiment favored reform in the road system, the movement for State control was not started until 1891, when New Jersey passed a law for an appropriation of \$75,000 from the State treasury.<sup>10</sup> This law provided for local initiative, surveys, estimates, and supervision, while the State was given the right to accept or reject the petition for State aid and to accept or reject contracts for construction. Also, upon petition of two-thirds of the property holders along at least one mile of road, pledging to pay ten per cent. of the cost of improving such road and requesting State aid, such aid would be granted to the extent of 33 1-3 per cent. of the total cost, while the county would bear 56 2-3 per cent. An amendment to the New Jersey law in 1894 took the work from the hands of the State board of agriculture and placed it with a commission of public roads to be appointed by the Governor for a period of three years. The power of the State to accept or reject petitions and contracts prevents useless construction and causes the work to be done by proper methods. The appropriation by the State in 1910 amounted to \$500,000, and this was derived partially from a tax on automobiles.

<sup>9</sup>Yearbook of the Dept. of Agr., 1910, p. 269.

<sup>10</sup>*Ibid.*, p. 270.

Massachusetts in 1892, Connecticut in 1895, and New York in 1898, established State highway departments with State aid.<sup>12</sup>

New York has a highly centralized system. The "Fuller Plank Act" provided that towns providing a system of cash road taxes in lieu of the old labor tax could receive from the State twenty-five cents on the dollar of taxes levied and collected. The law was amended in 1902 so that fifty cents on the dollar collected was allowed. This practically abolished the old statute labor, for in 1899 New York paid out \$34,557, while in 1908 she paid \$1,057,605.

The Higbie-Armstrong act of the same year contemplated a system of stone-surfaced roads throughout the State connecting county-seats and the chief cities. The State was to pay fifty per cent.; the county thirty-five per cent., and the town fifteen per cent. of the cost of stone-surfaced roads to be built in accordance with State provisions. Petition for this aid originated with the county board of supervisors. State engineers and surveyors were required then to prepare plans, cost, estimates, etc. If these were approved by the county board, construction was to be undertaken by contractors under the supervision of the State engineer. Roads were then to be maintained by the towns.

In 1905 the New York Constitution was amended so as to allow a fifty million dollar bond issue for road purposes. In 1907 the New York legislature passed a law providing that the county roads are to be improved jointly by the State, counties, and towns. The county pays two per cent. of the total cost for each \$1,000 of assessed real and personal property liable to taxation in such county for each mile of public highway therein. The town pays one per cent., but not exceeding thirty-five per cent. of the cost shall be paid by the county, and not exceeding fifteen per cent. shall be paid by the town. Town highways are to be improved and maintained by the towns with funds locally raised together with the supplement from the State aid apportionment. This apportionment is to amount to from one-third to one-half of the entire cost, according to the assessed valuation of real and personal property for each mile of highways in the town, the proportion paid by the State to vary inversely with the assessed value.

<sup>12</sup>*Ibid.*, p. 271.

In the same year the road law of New York was amended and consolidated, and provided for 2,800 miles of State roads. Under this law, the State Highway Commission of three members has supervision over every mile of highways in the State. The State is divided into six districts with an engineer in charge of each. His duties are confined to improving and maintaining the State and county roads therein which have no connection with the town highways. Improvement of State and county highways is carried on wholly by contract. Plans, specifications and estimates are prepared by the State highway commissioners, and, in the case of county roads, are submitted to the board of supervisors of each county for final approval. The State Highway Commission is given the right to accept or reject the improvement when finally completed.

The following States have adopted the plan of State aid and State supervision in some form:<sup>13</sup> Arizona, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Iowa, Illinois, Kansas, Louisiana, Maine, Massachusetts, Maryland, Michigan, Minnesota, Missouri, New Hampshire, New Mexico, North Carolina, North Dakota, Ohio, Pennsylvania, Rhode Island, Utah, Vermont, Virginia, Washington, West Virginia, and Wisconsin—thirty-one States in all. Some few of these have only State departments for investigation and supervision; others furnish State aid only in the form of convict labor; while most furnish State money aid with State supervision.

Those States having only State highway departments for investigation and supervision are Iowa, Kansas, Missouri, North Carolina, and Wisconsin. In these States the State highway commissioner gives advice to local officials upon any phase of the road question, but no money aid is extended in the actual work of improvements. When the counties or other local communities undertake improvements, the State highway departments furnish an engineer to supervise the work.

The State of Illinois, in addition to the above, extends its aid to road improvement by maintaining a crushing plant. This plant operates by means of State convicts, and furnishes rock for road purposes to the counties on application by the county

<sup>13</sup>Yearbook of the Dept. of Agr., 1910, p. 272.

officials. No charge is made, and freight rates are made as low as possible.

In 1909, West Virginia appropriated money for the construction of certain roads, and placed State and county convicts at work on the roads.<sup>14</sup> Virginia also authorizes convict labor and appropriates annually \$250,000. Arizona, Colorado, and New Mexico extend aid by the use of convict labor, and also appropriate from the State treasury for the construction of certain specific roads. The States furnishing only convict labor are: Florida, Georgia, Louisiana, and North Dakota.

Some of the States which have taken the lead in the work of road improvement are also constructing trunk line roads, to be used in a connected system of State roads. Among the States adopting this plan of improvement are Maryland, New Hampshire, New York, and Washington. California leads all the States with her \$18,000,000 bond issue for the construction of a system of trunk line roads throughout that State.

In ten of the Southern States there are 502,050 miles of public roads of which only 17,700 are improved, or .35 per cent.<sup>15</sup> This percentage is far below the general average for the whole country. This is probably due to the slow recovery of the South from the effects of the Civil War. The old labor tax is largely relied upon for the construction and maintenance of roads, but the counties in most of the States are now allowed to levy a direct tax for this purpose. The bond issue is more popular than a high tax as a means of raising revenue for road construction. Good roads associations exist in most of the Southern States, these being principally organized with the county as a unit. They are very important in educating the people to the necessity of a bond issue for road improvement in local districts.

### *Federal Aid.*

After the construction of the Cumberland Road in the Twenties, the Federal Government did not again aid Public Highways until 1893.<sup>16</sup> On account of a petition to Congress in 1893, signed by the governors of many States, Chambers of Commerce

<sup>14</sup>*Ibid.*, p. 273.

<sup>15</sup>*Annals of Amer. Acad. of Pol. and Soc. Sci.*, Vol. XXXV, pp. 105-110.

<sup>16</sup>*Putnam's Mag.*, Vol. VII, pp. 780-792.

in cities, and State Legislatures, Congress established the Office of Public Roads in the Department of Agriculture. This office was to make enquiries regarding the systems of road management, to make investigations as to the best methods of road-making, and to issue publications in coöperation with experiment stations and agricultural colleges for the dissemination of such information. It also constructs object-lesson roads, tests road materials in the laboratory, and provides expert engineers free of charge to plan and supervise local road improvement.

### *General Tendencies.*

The present trend of road affairs throughout the various States is toward a reform in administration and the adoption of a more progressive policy.<sup>17</sup> Highway departments have been created in the different States, and the services of skilled engineers have been provided in connection therewith. The departments assist the local road authorities, prepare plans and specifications for highway improvement, aid in the selection of highways to be improved, superintend the expenditure of State aid money, and give advice and instruction to overseers generally.

There are four types of organization in highway departments. (1) The department may consist of one salaried commissioner, or engineer, appointed by the governor or elected by the people for a definite term.<sup>18</sup> (2) In other cases, it consists of three salaried commissioners appointed by the governor for a given term.<sup>19</sup> (3) Sometimes these commissioners have only a general supervision of the work, which is done by a secretary, who is a civil engineer.<sup>20</sup> (4) A number of States have an ex-officio board, sometimes, but not always, comprising the heads of engineering schools or departments of a non-political nature,—as in California, Idaho, New Mexico, Virginia, and Washington. The powers and duties of the efficient State highway departments generally include the right to prepare and improve the plans and specifications of highways to be improved by the aid of the State. They supervise the work of construction in all

<sup>17</sup>N. Dak. Pub. Lib. Com., Legis. Ref. Dept., Bul. No. 2, p. 7.

<sup>18</sup>As in Conn., Del., Me., Mich., N. Hamp., N. J., Ohio, Vt., and W. Va.

<sup>19</sup>As in Col., Md., Mass., and N. Y.

<sup>20</sup>As in Ill., Minn., R. I., and Tenn.

States granting State aid. They pass upon contracts for highway improvement by the aid of State funds before the same are finally let, or themselves let the same.<sup>21</sup> In a considerable proportion of the States the highway departments select or approve the selection made by the local authorities of roads to be permanently improved wholly by State funds or by State aid.<sup>22</sup>

The membership of the highway commission is limited to qualified electors in Rhode Island. In New York, at least one member must be a civil engineer, and the board be non-partisan. No more than two members may belong to the same political party in Illinois, Minnesota, and New York. The United States Office of Public Roads approves the plan whereby the highway commission is composed of the professors of civil engineering in the different State colleges as ex-officio members. This type of board continues in office regardless of changes in politics. It can thus attain the highest efficiency.

As to local supervision, most advanced States have uniformly provided for a county, district, or local official, qualified by training and experience, to direct highway improvement. He is variously called county engineer, superintendent, inspector, or commissioner of highways. This skilled supervision is provided also by many non-State-aid commonwealths which provide for the election or appointment of county engineers who are expert in the art of civil engineering.

The majority of the States give the counties or townships the right to issue bonds, under proper safeguards, for highway construction.<sup>23</sup> Where State aid is granted, funds thus provided very conveniently supplement the shares of the State. The raising of money for permanent road improvement by the ordinary process of taxation, without imposing heavy burdens on the tax-payer is so slow as to be impracticable.

No State has accomplished permanent State improvements of its highways that has not given the localities the power to issue bonds for this purpose.

Another aspect that is noticeable in the movement for better

<sup>21</sup>As in Col., Cal., Conn., Me., Md., Mass., Minn., N. Hamp., N. J., N. Y., Ohio, Pa., R. I., Vt., and Wash.

<sup>22</sup>As in Col., Cal., Me., Md., Conn., Mass., Mich., Minn., N. J., N. Y., Ohio, Pa., R. I., and Wash.

<sup>23</sup>See N. Dak. Pub. Lib. Com., Legis. Ref. Dept., Bul. No. 2, p. 9.

roads is the gradual disappearance of statute labor. This inefficient system is being rapidly discarded for the better plan of paying all road taxes in cash. Pennsylvania offers a tempting money reward to all townships that abolish statute labor on their roads.

The present trend shows that the State will ultimately be the unit of administration, and will largely direct and control the road work in the counties and townships.<sup>24</sup> A reduction in the number of road officials is inevitable, and knowledge and skill in road building will be required of every official. In a word, the trend is strongly toward centralization of administration.

As a résumé of the present status of the movement for State control of highways the following table is given:

<sup>24</sup>Yearbook, above cited, p. 273.



| State   | Payment of prop. tax for | Ann. State Approp. | Per cent paid by State. | The county.   | Township, town or resident district. | No. of commissioners. | Salary per year.       | Salary State engineer. | Bonds.                      |
|---------|--------------------------|--------------------|-------------------------|---------------|--------------------------------------|-----------------------|------------------------|------------------------|-----------------------------|
| Cal.    | Money                    |                    | 100%                    |               |                                      | 4                     | Ex-officio.            | \$4,800                | \$18,000,000 bonds          |
| Col.    | "                        | \$50,000           | *                       |               |                                      | 3                     | amt. \$600             |                        |                             |
| Conn.   | "                        | \$750,000          | 75 to 87½%              |               | 12½ to 25%                           | 1                     | \$5,000                |                        |                             |
| Del.    | "                        |                    | 50%                     | 50%           |                                      | 1                     | \$1,000                |                        |                             |
| Idaho   | Money or labor           |                    |                         |               |                                      | 3                     | Ex-officio.            |                        |                             |
| Ill.    | In ½ twps.               | \$25,000           | †                       |               |                                      | 3                     | Expenses.              | \$1,800                |                             |
| Me.     | Money                    |                    | 33⅓%                    | Reward system |                                      | 1                     | \$2,500                |                        |                             |
| Md.     | "                        |                    | 50%                     | 50%           |                                      | 6                     | \$2,000—<br>\$2,500    |                        | Bond issue of \$5,000,000   |
| Mass.   | "                        | \$500,000          | ‡                       |               |                                      | 3                     | \$2,500—ch.<br>\$3,500 |                        |                             |
| Mich.   | "                        | \$150,000          | §                       |               |                                      | 1                     | \$2,500                |                        |                             |
| Minn.   | Money in ¼ twps.         | \$300,000          | 33½%                    | 66⅔%          |                                      | 3                     | Expenses.              |                        |                             |
| N.Hamp. | Money                    | \$125,000          | 25 to 75%               | Reward system |                                      | Govs. council         |                        | \$6,500                | Bonds to sum of \$1,000,000 |
| N. Mex. | Money or labor           | ¶                  |                         |               |                                      | 3                     | Expenses.              |                        |                             |
| N. Y.   | Money                    | \$3,500,000        | 100%                    |               |                                      | 3                     | \$5,000—ch.<br>\$6,000 |                        |                             |
| N. J.   | "                        | \$300,000          | 33⅓%                    | 56⅔%          | 10                                   | 1                     | \$5,000                |                        |                             |
| Ohio    | "                        | \$158,000          | 50%                     | 25%           | 25                                   | 1                     | \$2,500                |                        |                             |
| Pa.     | In some twps.            | \$1,500,000        | 75%                     | 12½%          | 12½%                                 | 1                     | \$6,500                |                        | ***                         |

| R. I.  | Money |           | 100% |      |    | 5 | Expenses. |         | Bonds issued to<br>\$6,000,000 |
|--------|-------|-----------|------|------|----|---|-----------|---------|--------------------------------|
| Vt.    | "     | \$75,000  | 50%  |      | 50 | 1 | \$1,800   | \$3,000 |                                |
| Va.    | "     | \$250,000 | 50%  |      | 50 | 4 | \$3,000   |         |                                |
| Wash.  | "     | \$650,000 | **   |      |    | 3 | Expenses. | \$2,500 |                                |
| W. Va. | "     |           | 33½% | 66½% |    | 1 | \$3,000   |         |                                |

See Johnson; Good Roads: N. Dak. Pub. Lib. Com. Legis. Ref. Dept., Bul. No. 2.91-2; Hotchkiss; Rural Highways in Wis., p. 122.

\*Each county must raise double amount appropriated to it by Com.

†State furnishes crushed rock to Counties and Cities.

‡100 per cent by State but 25% must be returned by Counties in installments.

§50% reward system.

¶May pay entire cost or only a part thereof.

\*\*Reward of 50% to townships for cash road taxes.

\*\*\*100% on State roads, 50% on State aid roads, 15% charged local roads.

Having reviewed the system of road administration in foreign countries, and in the States of the Union, we shall now examine the road system prevalent in Texas, with a view of suggesting reforms where needed.

### *The Situation in Texas.*

Of the 128,991 miles of public roads in Texas, 4,896 miles are improved, or 3.8 per cent. of the total. Sand-clay,<sup>25</sup> gravel, and stone are the chief materials for surfacing the roads. The average cost of sand-clay roads is \$593 per mile, that of gravel is three times as much, while for stone surfaced roads the cost is still higher.

One hundred and forty counties report no improved roads; eighty-one report less than ten per cent., and thirteen report ten to twenty per cent. improved. The counties that have made the greatest progress in road building are Bexar, Dallas, Harris, Tarrant, Ellis, Travis, Webb, Montgomery, Jack, Guadalupe, Liberty, Jackson Comal, Mason, and Aransas.

Great progress is being made in road construction in Texas. Large amounts of bonds are being issued by the various counties and districts for road improvement. The importance of local bond issues for road construction and improvement is shown by the fact that over \$5,500,000 was expended during the fiscal year ending August 31, 1912.<sup>26</sup> Up to date, the State has done nothing to aid or encourage the building of good roads, and has taken no steps to see that the vast sums being raised for this purpose are being wisely spent.

The Texas road law gives the county commissioners general oversight and supervision of highways.<sup>27</sup> Each commissioner is supervisor of roads within his precinct. The commissioners' court divides the county into precincts and appoints overseers to supervise the road work therein. For the maintenance and construction of roads, and for other purposes, taxes are levied and collected. The commissioners may issue bonds for road and bridge purposes, provided a majority of the voters of the county favor such issue. Statute labor is provided for. All persons

<sup>25</sup>U. S. Dept. of Agr. Bul., Jan. 26, 1912.

<sup>26</sup>Annual Rept. of Compt. of Pub. Accts., 1912, p. 70.

<sup>27</sup>Revised Civil Statutes of 1911, Art. 6859, *et seq.*

not exempt by law are required to work on the public roads for a period not exceeding five days each year, or in lieu thereof to pay one dollar per day. In addition to this labor, county convicts must be put to work upon the public highways if they can not be utilized in the workhouse or on the county poor farm.

### *The Reforms Needed.*

The foregoing investigation of the road laws of other States shows the necessity of substituting a cash tax for the old compulsory labor service demanded by Art. 6919 of the Revised Statutes. (1) The cash tax makes possible the securing of labor just when it is needed without regard to whether any particular farmer is able to come out. (2) It gives the overseer complete authority over his men. (3) And it improves the character of the service, for the simple reason that the workers know that they can be discharged. Article 6970 of the Civil Statutes gives the commissioners' court, in counties levying a special tax, the right to exempt persons from working the roads. Either all counties should be required to levy a special tax within the Constitutional limit of fifteen cents on the hundred dollars valuation of property, or a premium system such as Pennsylvania has should be adopted. In Pennsylvania, when taxes are collected in cash, the State awards the townships a sum equal to fifty per cent. of the amount so collected. Would not the increased taxes collected because of the higher land values made possible by good roads soon pay for the roads? The convenience in marketing crops and the ease of travel would justify such aid to counties. Almost half of the States of the Union defray from one-third to three-fourth of the cost of construction of all highways. Texas should fall in line.

To carry out a program of State aid in road construction and improvement, the experience of other States shows that a highway commission or a State highway engineer, or both, are needed.<sup>28</sup> The State highway department should be headed by a non-partisan, non-political commission, which should elect the State Highway Engineer, supervise the work of the highway department, and provide permanence and continuity of policy and organization for the working force of the department.

<sup>28</sup>Texas Welfare Com. Rept. of 1912.

The State engineer should not only have power to construct demonstration or model roads, as the recently proposed highway commission law for Texas provided, but he should have the power to compel uniformity in road construction by preparing plans, and to accept or reject contracts for construction, with the further provision that all construction should be under his supervision. This would apply to cases where State aid is granted. In the case of county or district aid to highways, exclusive of State aid, the work should be placed in the hands of a competent and experienced road engineer or supervisor, who should be subject only to the orders of the county commissioners' court and not subject to the orders of any single county commissioner. Article 6953 of the Civil Statutes gives the commissioners' court the right to employ a road superintendent for the county. This should be amended so as to *require* a road superintendent, or engineer, for each county. Where the population of a county is small and the road expenditures are too light to justify the employment of such a road engineer, the State highway department should have the authority to combine two or more counties to form a district which should then employ a road engineer for such district. The county or district engineer should work in harmony with the State department. He should furnish reports on the roads, and be subject to the regulations of the State highway department. By employing a good highway engineer, the county will save more money than if the whole matter of road construction and maintenance is left, as at present, to foremen who know nothing about road construction.

Convict labor should be used on the public roads and in rock quarries owned and operated by the State for the benefit of public roads, as in Illinois. Georgia illustrates what can be done for highway improvement by the aid of convicts under an efficient system of administration.

Instead of the two-thirds majority at present required for a bond issue for road purposes in subdivisions of a county, a mere majority should be sufficient.

# RAILWAY RATES AND SERVICES AS AFFECTING THE TEXAS FARMER.

BY F. L. VAUGHAN.

No other factor is more important in the promotion of farming than the railway. This influence may show itself in the form either of rates or of services. The general effect of these two factors upon the Texas farmer will be considered.

In 1906, the average rate from all points in Texas to Galveston, taking into account the quantity of cotton affected by each rate quoted, was 52.9 cents per 100 pounds.<sup>1</sup> For the other Southern States, the average freight charge was 32 cents per 100 pounds, or 20.9 cents less than the Texas rate. This, combined with the fact that the cost of hauling cotton from the farms of Texas to the market is about 3 cents greater than elsewhere,<sup>2</sup> shows the disadvantageous position of the Texas farmer from the standpoint of the expenses of transportation. For example, suppose that the price of cotton is 10 cents. Then the expense of transportation for the Texas farmer is 7 per cent. of the value of his cotton at the seaboard, while that for the agriculturists of the older Southern States is only 4.5 per cent., a difference of 2 1-2 per cent. The cotton buyers make allowance for this disparity, offering about 1-4 of a cent less per pound or \$1.25 less per bale than is paid in other parts of the South. Thus it is proved that railway rates materially affect the prices of the farm products in this State.

Moreover, since the value of land is measured by the price of its products, it is evident that this cost of transportation affects indirectly the price of farms. Assuming a yield of two-fifths of a bale per acre, the Texas farmer receives two-fifths of \$1.25 or \$.50 less per acre for his cotton than the cotton grower east of the Mississippi. This amount capitalized at an 8 per cent. interest rate equals \$6.25, the difference in the value of cotton lands in Texas as compared with other Southern States, due to the higher cost of transportation in the former.

<sup>1</sup>1906 Yearbook of Dept. of Agri., p. 372.

<sup>2</sup>*Ibid*, p. 373.

However, the past forty years have witnessed a steady decline in the expense of transportation. The average receipts by the railways of Texas for freight traffic, per short ton per mile, was about 1.303 cents in 1890 and 1.056 cents in 1910; the rates for the United States were .941 cents and .753 cents respectively.<sup>3</sup> This shows that during this period the average receipts decreased 3 per cent faster in this State than in the whole country. It is natural to expect that this decrease in freight charges will continue in the future. Improved methods of loading and unloading freight, economies in the disposition of cars so as to lessen the number of empty cars hauled, a larger quantity of valuable freight paying higher rates per unit of freight,—all would tend to lower the cost of transporting farm products.

#### *The Farmer's Share of Retail Price.*

A general complaint of the farmer now concerns the decrease of his share in the distribution of prices. He is realizing slowly but surely that a more economical distribution of his products, and not a greater output per acre, is at present the main problem to solve. The question, why does not the farmer receive a larger percentage of the price paid by the ultimate consumer, is continually arising. The relation of the railways to this problem will now be considered.

An investigation into the increase of prices in the process of distribution was made in 1910, the main object being to discover what fraction of the consumer's price was received by the farmer.<sup>4</sup> Milk was one of the commodities under investigation. It was found that the dairyman receives only one-half the price paid by the consumer, the other half going to the railway company for carriage, to the wholesale milk dealer, if there be one in the chain of distribution, and to the retailer. The freight charges approximate about 7 per cent. of the consumer's price, leaving 43 per cent. for the dealers. Owing to the cheapness in the distribution of butter, the creamery receives 86.3 per cent. and the railway .6 per cent. of the consumer's price for that commodity.

<sup>3</sup>"Statistics of Railways in the U. S.", 1910, p. 59.

<sup>4</sup>Yearbook of Dept. of Agri., 1910, p. 20.

A similar investigation was made by the Industrial Commission in 1900. Although the information is thirteen years old, it is thought that the ratios between producer's and consumer's prices are approximately the same now as they were then. Poultry was found almost to double in price between the farmer and the consumer. Of the price paid by the consumer, the farmer receives 69 per cent. in the case of eggs, when bought by the dozen; cabbage, 48.1 per cent., by the head and 64.9 per cent., by the pound; blackberries, 83.3 per cent, by the crate; melons, 50 per cent., by the pound. The farmer received 93 per cent of the price paid by cotton manufacturers for the raw cotton; 91 per cent. of the price of cattle offered by the packers; and 73 per cent of the price of wheat when bought by millers.

With approximate accuracy it has been determined that when the farmer receives 50 per cent. of the consumer's price, the freight charge on eggs is about .6 per cent.; beans, 2.4 per cent.; potatoes, 7.4 per cent.; grain of all sorts, 3.8 per cent.; hay, 7.9 per cent; cattle and hogs, 1.2 per cent.; live poultry, 2.2 per cent.; wool, .3 per cent. These allowances for freight are to be increased by one-half in the cases in which the farmer gets about three-fourths of the consumer's price. Thus, it does not appear that railway rates make a serious burden in the case of most agricultural products.

One general fact shown was that the farmer's percentage of the consumer's price diminished as the quantities in which the produce was retailed were smaller. Onions afford a convincing illustration. When purchased by the peck the farmer received 27.8 per cent. of the retail price; by the barrel, 58.3 per cent.; and by the 100 pounds, 69 per cent. The explanation of this variation is of course that the freight rate per unit decreases as the quantity shipped increases. Also the cost of retailing is increased.

### *The Railway and the Fruit and Truck Industry.*

Perhaps no other industry is so inseparably dependent upon an efficient system of safe and rapid distribution as fruit-growing. The network of railways has converted unproductive land into highly specialized fruit growing regions being able to distribute the products of the orchard and vineyard to remote markets. There has been a gradual evolution of special transporta-



tion facilities, until today the fast refrigerator car lines and the cold storage warehouses have better brought together the producer and consumer. Yet the distribution of the fruit crop from remote areas is one of the most difficult problems of transportation.

Few commodities are more likely to deteriorate in transit than fruit. The ripening and the rots continue to develop in the cars during hot, moist seasons, unless they are checked soon after picking by a cold temperature. Of course, fall and winter fruits are less subject to this danger, but on long trips the ripening process or rots may cause serious loss. Other causes of injury to fruit are due to too loose packing, to severe pressing, and to careless handling. The successful transportation of fruits in refrigeration depends primarily on the sound condition of the fruit itself; on cooling it soon after picking; on shipping it in packages which cool quickly throughout; on a dry, pure, cold air uniformly distributed in the car; and on a free circulation of air throughout the packages.

The modern refrigerator car is generally capable of maintaining a uniform degree of cold under ordinary icing, after the fruit is cooled. The most needed improvement is a practical method of reducing quickly the temperature of the fruit during hot weather to prevent further ripening and the development of rots during the early part of the trip. This improvement might be made either by increasing the refrigerating power and equalizing the distribution of cold dry air in the car, or by cooling the fruit before loading (pre-cooling) and merely maintaining refrigeration in transit, as in the present methods of meat shipment.

One of the most live and important questions at present, when complaint of the high cost of living is heard on every side, concerns the means by which the producer and consumer may be brought closer together. An effort leading to this goal was made last March by the truck growers before the Texas railroad commission. Their appeal included a demand for both better service and cheaper rates.

First, a maximum of five stops at \$3 each, instead of three stopovers costing \$5 each, was asked for. Also additional rights in selling products from the car were demanded. Although no

tremendous advantage could be derived from such changes, they would nevertheless aid a better distribution of farm produce.

First, the fruit and truck growers would be benefited in that their market would become wider and more varied. The result would be that the supply of fruit and truck could supply the demand of many markets, thus making possible higher average prices for these articles, and preventing the overstocking of any one market.

On the other hand, the consumer could be brought into direct contact with the producer, sales from cars meaning at least a partial elimination of the middleman. Lower prices for the consumers would be the result, since the consumer could be in a position to enjoy, not only the usual profit of the commission man, but also cheaper freight rates due to carload shipments. Every dollar thus saved in the chain of distribution by the privilege of selling products at more numerous and inexpensive stopovers, would lower the cost of the living to that extent.

Two changes in the freight tariff were advocated: The first changing the minimum weight on a car of strawberries or blackberries from 20,000 to 17,000 pounds; the second permitting products in mixed cars to bear their proportionate car rate. The latter can be easily defended, the chief argument in its favor being that it would encourage diversified farming. The small truck grower would no longer be compelled to raise only one or two commodities so as to ship in car load lots; instead he could raise a greater variety of products and then ship in mixed cars without paying the highest rate prescribed for any one commodity in the car. Moreover, the new tariff would tend to discourage the waste of small quantities of fruit and truck, since they could be cheaply shipped together to the market.

Furthermore, these two alterations in freights, and the consequent diversified farming, would give a stimulus to the development of uncultivated and isolated parts of the State. The individual farmer, knowing that he could better compete with the large producer, would not hesitate so much in utilizing land especially adapted to fruit and truck growing.

Of course, every measure considered by the railway commission involves two sides: first, the welfare of the people; second, the right of the railway to a fair return on its capital. Although

the freight rate would be appreciably lowered, it is believed that ultimately the railways would profit by the proposed change. The encouragement of more shipments and the development of the country would naturally cause a greater tonnage of freight, thus benefiting the railways by increasing the amount of their traffic.

*The Railway and the Marketing of Live Stock.*

The advent of modern facilities for transporting live animals marked a turning point in the growth of the live stock industry. Only within recent years have more cattle been sent to market by rail than by trail. The history of live stock transportation in the United States may be divided into two parts. Two marked characteristics of the first period were: first, the injury to stock due to inferior accommodations and faulty management of traffic; second, complaint of the shipper. The extension of railways throughout the range country of the West, and changes in roadbed, cars, and traffic methods, making the transportation of live stock more humane and economical, distinguish the second or present period.

In comparison with water transportation, the transportation by rail is steadily becoming of more importance to the stock raiser. During the later sixties, for example, the railways carried more than three times as many cattle into St. Louis as the established river service, but today the cattle traffic by rail is over eighty times that on the river.<sup>5</sup>

The importance of local shipments of cattle within this State is illustrated by figures covering practically all the railways of the State for the six months ending May 31, 1908.<sup>6</sup> The total number of cattle shipped during this time was about 350,000 head, more than two-fifths being consigned to points within the State, and less than three-fifths, to points outside. This serves to illustrate the tremendous influence for good or evil which may be exercised by the Texas railway commission, this body having almost exclusive control of intra-state transportation.

The chief expense in marketing live stock is made up of transportation, including not only charges for freight, feed, attend-

<sup>5</sup>Yearbook of Dept. of Agri., 1908, pp. 231, 234.

<sup>6</sup>*Ibid*, p. 239.

ance, yardage, and other expenses of the road, but also losses in transit. The steady decline of all these expenses, together with a marked diminution of free pasturage and inaccessibility of water along the old cattle trail, has caused a decided increase in the shipment of live stock by rail.

Next, attention may be directed to some of the facilities and future economies in transporting live stock. The total number of live stock cars owned by railways in the United States in 1907 was 69,997, representing a carrying capacity of 2,013,170 tons.<sup>7</sup> This capacity, however, represents the weight of dead freight that the car is permitted to carry and not the weight of the live stock that can be comfortably carried.

Allowing as an average twenty-five cattle per car, the 57,000 single-deck cars owned by railways in 1907 would carry at one time 1,425,000 head, and the total weight of these cattle, at 995 pounds per head, would be 680,000 tons, or 41 per cent of the total dead-weight carrying capacity of the cars.<sup>8</sup> In the shipment of sheep, only about 25 per cent of the dead-weight carrying capacity of the car is utilized; in the transportation of hogs, about 33 per cent.

Therefore, the question is, how may more of the weight-carrying capacity of the car be used. In other words, can more animals be loaded on the same car, thus lowering the cost of transportation? This leads to a consideration of double-deck cars, which were first employed about 1860. In 1907 there were about 13,000 double-deck cars, out of a total of some 70,000 stock cars. One of the former can carry twice as many hogs or sheep as one of the latter, thus virtually doubling the supply of hog and sheep cars. If the freight charge is a certain amount per car, this means that the cost of transportation can be reduced almost one-half to the shipper. On the other hand, if the freight charge depends upon the weight of the live-stock shipped, there would probably be a reduction in freight; for the railways can carry the same amount of stock in fewer cars, thus lowering the expenses and therefore the rates. A further utilization of carrying capacity is one of the chief means for lowering the cost of transportation to the live-

<sup>8</sup>*Ibid*, p. 239.

stock shipper. Certainly the interests of the stockmen and the public are sufficient reasons for compelling the railways to provide such cars.

The first railway freight rates on live stock were quoted in dollars per car, regardless of the weight or number of the animals carried. This method of charge is responsible for much of the trouble due to crowded cars, but with the establishment of charges depending upon weight, dealers have little inducement to load too many animals in one car. In 1908 the rates over most of the leading routes east of the Rocky Mountains were quoted in cents per 100 pounds. West of the Rocky Mountains and over routes from the Southwestern ranges, rates were still expressed in dollars per car. Over these railways one finds the maximum loss in transit.<sup>9</sup> On the other hand, over those railways basing their freight charges upon the weight of the live stock shipped, there is a minimum loss in transit, because here the stock shippers no longer have an incentive to overcrowd the cars. This method of computing the freight charges has advantages so tremendous that it should be employed exclusively in Texas.

It costs the carrier less to transport a given amount of meat than to transfer the live animals necessary to produce that meat. Seven carloads of live cattle yield on an average five minimum carloads, 20,000 pounds each, of fresh beef. Packing-house products other than fresh meat are carried in still larger loads and the saving to the carrier as compared with live stock transportation is correspondingly greater. From Kansas City to New York the transportation charge is about twice greater for live animals than for the meat which they produce.<sup>10</sup>

These facts account for the recent establishment of large packing houses in Texas and other Southwestern States. Nearness to the source of the live stock supply causes a decrease in the ultimate cost of transportation by an amount equal to the difference between the freight charge for the live animals and for the meat which they produce. Ordinarily this cheapening of the transportation charges benefits the stock-raiser also, for

<sup>9</sup>*Ibid.*, p. 240.

<sup>10</sup>*Ibid.*, p. 243.

the packer can then afford to pay him higher prices for his live stock.

The growth of economy in the transportation of meat animals has taken place along three general lines: First, a saving to the railways due to an increase in size and efficiency of cars, and to cheaper methods of handling traffic in stock yards; second, a reduction of loss in transit owing to mechanical improvements, to legal regulations and to the determination of the freight charge according to the weight of the live stock shipped rather than according to the number of cars used; third, the transportation of meat instead of live animals.

To the extent that the preceding have not been employed in Texas, rates in this State are too high for meat animals. Before a reasonable reduction of rates can occur, new transportation economies, some of which have been described above, must be found.

#### *Parcels Post and Express.*

Prior to 1913, the chief barrier obstructing a closer relationship between the producer and consumer in the sale of small quantities of commodities was the exorbitant rates charged by the express companies of this country. Shipment in large bulk and the intervention of distributive agencies were absolutely imperative.

But since January 1, 1913, this transportation difficulty is being swiftly removed by the operation of the parcel post, which will enable the people to order by mail general merchandise or farm produce in shipments weighing as much as eleven pounds. Within the first zone, the rates are very regressive from the standpoint of weight, i. e., they do not increase in proportion to weight. For illustration, the local rate for one pound is 5 cents, for eleven pounds only 15 cents; the first zone rate for eleven pounds carried fifty miles is 35 cents, for one pound 5 cents. This regressivity gradually disappears until finally in the eighth zone, including all distances over 1,800 miles, the rate is in exact proportion to weight. These figures indicate the reasonableness of the charges.

In addition to the foregoing rates, an improvement in the service of the parcel post is anticipated July 1, 1913, when the

feature of collection deliveries will be commenced: that is, the proceeds derived from the article shipped will be collected by the government and then remitted to the shipper, the only previous requirement being, of course, the payment of the transportation charges. When this is practiced the last great step in making the parcel post a sharp competitor of the express companies will have been taken.

Especially are these rates and services described very advantageous to the farmer. This, together with the service offered by the rural free delivery, will enable him to furnish people in the nearby town or city with fruit, truck, milk and butter, and other farm products. The elimination of a separate middleman's profits follows inevitably. That the farmer will receive the prices paid by the consumer, minus the charge of the parcel post, tersely expresses the importance to him of this new phase of governmental activity.

#### *Railways and Agricultural Education.*

One very interesting and effective means of disseminating information among the farmers is fairs and stock shows. The extent to which farm produce and live stock are carried to such places largely depends upon the rates and services of the railways. Every reasonable means should be employed to further the success of these gatherings. A recognition of this fact was recently made by the Texas Railroad Commission, when the return of the same number of registered cattle shipped to fairs or stock shows for exhibition, though the stock were different, was allowed.

It is believed that demonstration trains offer the most practical and attractive way for spreading knowledge among the farmers. Many of the Texas railways, realizing this fact, and realizing the importance of their own interests of educating farmers, have reserved no effort in securing demonstration trains along their lines. About 60 per cent. of the railways of this State are now engaged in promoting agricultural education, a percentage equal only to about four-fifths of that for the whole nation. Since Texas' chief industry is agriculture, an extension of this sort of work by the railways would ultimately benefit them by increasing their traffic. In addition to instruction

trains, agricultural experts, demonstration plats, and prizes for farm products are often provided for by the railways, further showing the tremendous good which they may do for the farmers along their lines and for themselves.

Only a few months ago, for example, in this State a certain train carried a comprehensive exhibition of eight road models. In addition there were hog, poultry, and agricultural cars, all of which were designed to disseminate needed information to the farmers. A good-housekeeping car under the control of the College of Industrial Arts furnished the chief attraction for the women. Moreover, lecturers, ready to answer questions, accompanied the train.

The foregoing, it is hoped, has served to indicate some of the important effects of railway rates and services upon the Texas farmer. The progress of both the railway and the farmer must ever be interrelated. The welfare of the two demands their coöperation.



# THE THEORY AND PRACTICE OF SPECULATION ON PRODUCE EXCHANGES.

BY RALPH RANDOLPH.

Speculation is buying or selling with the idea of profiting by anticipated price changes. It is an activity which is by no means confined to the "exchanges," but is practically synonymous with all business undertaking. It is on the exchanges, however, that it is found in its typical and most highly developed form.

## *Speculation vs. Gambling.*

One of the most common, but at the same time one of the most unjust, of views is that speculation is the same as gambling. Superficial points of resemblance have obscured the essential points of difference. It is true that both hinge upon uncertainties, and that both require the undertaking of present risk for the possibility of future gain. But there is an essential difference *in the kind of risk* incurred. The risk of gambling is artificial, unnecessary, and non-economic. Purely a chance event—a shake of the dice or a turn of the card—decides how much one gains or loses. What one gains in gambling another must necessarily lose. Not so in speculation. *The risk of speculation is necessary, economic, and inherent in all business.* It is the assumption of the inevitable risk of a rise or fall in the economic value of property as determined by the forces of supply and demand. The risks assumed on the exchanges are no more artificial than risks assumed by business men in all forms of industry. The merchant buys when he thinks that he can sell at a higher price, but he always runs the risk that, before a sale can be effected, the price of the commodity may fall. The exchange is not, like the bucket shop, a place for betting on the course of prices: but it is a place for trading where the machinery is at hand for learning with promptness changes in value, and for discounting in advance the corresponding changes in price with the greatest accuracy possible.

Buying and selling on exchanges are largely determined by industrial conditions outside of the exchanges while the buying

and selling in turn makes prices which react on the industrial situation.

The history of business organization reveals the fact that speculation on the exchanges is of natural growth, arising out of a real demand. The primitive man produced only enough to satisfy his own wants, and his risks were those of production solely. But, as soon as he produced more than he wanted and began to barter, he incurred, in addition, the risks of trade. With the transition from barter to a wide system of exchanges, the risks became too great for the producer,<sup>1</sup> and a trading class arose to assume the risks of trade. As the markets were largely local, this class was sufficient to assume the risks and became the speculators of the community. But with the introduction of steam transportation and telegraphs, the markets, especially in the staple agricultural products, were transformed into well nigh one world market. The risk of changing values dependent upon world-wide conditions became too great a burden for the merchant. The merchant body was not prepared to assume these additional risks, and to satisfy this new economic want, there arose the body of organized speculators with the means of obtaining the most accurate knowledge possible of future demand and supply in every locality.

### *Speculation and Prices.*

However natural its growth, speculation is still commonly looked upon with suspicion as an artificial device for lowering prices, or for deflecting prices in some way from their normal course as determined by the law of supply and demand. But the law of supply and demand is merely a statement of what tends to happen in competitive industries, and nowhere do we normally find competition in a keener, or in a more heightened form than on the exchanges. Indeed, the very success of the speculator depends upon the accuracy of his estimates of supply and demand. That this is true is evidenced by the fact that he uses special agents, private wires, and every other possible means to hear of any unusual event or change in crop condition that might have an effect on values. It is sometimes said that speculators do not count upon real supply and demand, but upon

<sup>1</sup>This word is here used in its popular sense, rather than the strictest economic sense.

artificial supply and demand, because they are concerned primarily with future supply and demand. They merely estimate, however, what the spot prices of some future month are going to be, and the forces controlling those prices are just as real, though less certain, as the forces controlling the spot prices of the present month.

### *Does Speculation Tend to Lower Prices?*

Closely akin to the belief that the speculator estimates artificial forces controlling prices, is the belief that he creates artificial forces that have a bad effect upon prices from the point of view of the farmer. It is a familiar argument that speculation, by means of "short selling," tends to lower prices. A short seller, of course, is one who sells a commodity which he is short of, or in other words, which he does not own, but which he expects to buy later at a lower price. The common opinion is that the short seller creates a speculative over-supply by which prices are lowered as much as if there were a real over-supply. Were this the case, a man would have a sure means of getting rich, for he would only have to become a short seller, and proceed to force prices down by offering unlimited quantities of "artificial" or "fictitious" commodities. No one can really understand the working of the exchanges and at the same time suppose that short selling has such an effect on prices. For every speculative sale, must there not also be a speculative purchase? Must there not be a speculative demand proportional to the speculative supply? And do the purchasers not buy for a rise? Even if the purchaser is not a speculator who is moved by a speculative demand, but is one who actually wants the commodity, the effect of the sale of the short seller is merely to lower the price temporarily. The price will not be permanently lowered, because, sooner or later, the seller must make a covering purchase, neutralizing the effect of the previous sale. The farmer, moreover, cannot suffer from a temporary lowering of the price of the "futures," for he is ordinarily concerned only with the spot prices of the month designated by the "future." The sale in July of an October "future" could in no wise effect the spot prices of July, and the covering purchase, if made before October, would have little effect on the spot prices of that month. If

made in that month, it would not, in that case, decrease, but rather increase, the spot prices. The short seller, therefore, does not tend to lower prices, and does not harm the farmer; but, as will be shown later, really does him a valuable service.

### *The Real Effect of Speculation on Prices*

Of course, speculation may temporarily lower or raise prices; but "so long as there is strong speculation on both sides of the market (and there always will be), there is no necessary tendency for it to do either."<sup>2</sup> What then are the real effects of speculation on prices?

(1) It tends to level the difference in prices in different markets. The price of the New York market is affected by the forces of supply and demand not only in the United States but also all over the world; and the same can be said for the Liverpool market. Hence, the two markets being affected to a greater extent by the same forces, the difference in prices of the two markets is largely a question of distance from the field of production. There is really a marked tendency for a uniform price to be fixed for the whole world.

(2) The main effect of speculation on prices, however, is that it tends to make them more steady. It is a historical fact that since the introduction of organized speculation, there have been less violent fluctuations; that is, the limits between which prices fluctuate have been materially narrowed. The statistics presented in the report of the United States Industrial Commission make this point very clear.<sup>3</sup> The reason is that under a non-speculative system, conditions change and events happen without a warning that may allow gradual adjustment of prices; while under the speculative system, with ample machinery for discovering and foretelling such conditions and events, their effect is discounted in advance. For this reason, also, there are more frequent fluctuations within the narrowed limits. Every little change being recorded on the barometers of the speculators, as it were, the price is minutely sensitive to the forces of supply and demand.

It is in connection with the steadying of prices that the short seller performs a valuable service. An analysis of his opera-

<sup>2</sup>Emery, *Speculation on Stock and Produce Exchanges*, p. 120.

<sup>3</sup>U. S. Industrial Commission Rept., Vol. VI, p. 189 ff.

tions will make this service clear. The price of cotton, say, is going up steadily. Soon the short seller will think that he has a good opportunity to sell, because he knows that the price cannot keep going up indefinitely, but must, sooner or later, decline. Accordingly, he sells "short" for future delivery. The immediate effect of his sale is to check the rise in price, and to precipitate a fall. Then, when the price of cotton has fallen, the short seller must make purchases to cover his contracts, and the effect of his purchases is to check the fall in the price of cotton. Thus, it is seen that the short seller keeps prices from going too low as well as from going too high, the whole effect being to steady the market.

This function of a short seller is a valuable asset in times of a panic. Consider the conditions of speculation in some other field than on a produce exchange—some field in which short selling is absent. Take speculation in land, and, for example, speculation in land in Oklahoma City. A few years ago that city was on a big boom. The price of land steadily rose until it attained an enormous height. Then a turn in the tide came, and what was the result? After a flow of prosperity in Oklahoma City, there has come an ebb of depression, however temporary it may be. The cause, in part, is over-speculation without the possibility of short selling to steady the market. Both the extreme of boom and depression would have been prevented by organized speculation.

### *The Advantages.*

The way in which speculation makes markets more responsive, more stable, and more uniform has already been indicated.

One of the least appreciated services of organized speculation is its social utility—its directive influence. The individual can hardly be depended upon to adjust consumption to production voluntarily, but the speculator rather unconsciously brings about this adjustment for society. Suppose there is to be a shortage of crops. Reasoning that, as the supply is to be small, the price is to be high, the "bulls" become active. The price rises, and consumption tends to decrease. On the other hand, suppose there is to be an unusually large supply. Since the

present price is higher than the anticipated price, the "bears" are active. The price falls, and consumption tends to increase. Hence, in their efforts to forecast actual conditions of demand and supply, speculators help to conserve the crop over the longest time when economy is most socially desirable, and to encourage consumption when there is not the necessity of such economy. Moreover, by responsive prices, they tend to direct the supply from the place where it is least in demand to the place where it is most in demand, bringing about a maximum of social efficiency.

With perfect competition there is no reason why speculation should not also exert some influence on the direction of production, but as it works out in practice, it is of little or no importance in agriculture. Farmers, especially in the South, are often too prone to follow custom, and too indifferent to market quotations, in the planting of their crops.

The great function of speculation, however, is the assumption of risks. Not only does the class of professional speculators minimize risks by maintaining stability of prices, but also affords an invaluable insurance against existing risks by means of "hedging" transactions. To hedge, of course, is to make two equal and opposite transactions, one by trade and the other on the speculative market, the object being to insure a fixed profit. For example, the cotton merchant agrees to handle one hundred bales at 10 cents per pound or \$5.00 per bale, less commission charges of say 50 cents per bale. He sells through the exchange an equal amount for future delivery. When he finds a purchaser for the actual cotton, the price may have gone down to 9 cents. In this case he covers his "short" sale on the exchange with a purchase, and, though he loses \$500.00 on the trade transaction, he gains it back on the speculative transaction. At the same time, he has the profit of his commission. Similarly, if the price had gone up, he would have made on the trade transaction what he lost on the speculative transaction, but would still have had a fixed profit. In this way, buyers, millers, manufacturers, etc., are largely freed of the risks of speculative fluctuations, and the man who does not take advantage of hedging is really the speculator.

For the reason that hedging tends to eliminate the risks of

trade, the middlemen can afford to trade on a narrow margin. By this is meant that the profits of the middlemen are small, or, in other words, that the difference between what the producer gets and the consumer pays, is materially decreased. No product is handled on such a small margin of profit by the middlemen as is cotton. The cotton dealer is now satisfied with a margin of about 50 cents per bale, whereas formerly he demanded a margin of about \$3.00. This fact works to the advantage of both producer and consumer. Since formerly the producer bore such a risk until the trading class arose to relieve him of it, and since now the speculative class has come to the assistance of the trading class, it would seem that the producer is the primary beneficiary of the reduction of the middlemen's margin.

### *Evils and Remedies.*

But is not all this purely theoretical? is the question apt to be asked by one who is familiar with some of the evil practices of the exchanges. Do not the actual disadvantages of speculation offset its theoretically beneficent services? Probably in theory the speculator is guided by forces of actual supply and demand, but does not the machinery of the exchange in operation deflect these forces?

It cannot be denied for a moment that some of the operations on exchanges divert prices from their normal course, but it must be remembered that such operations are the exception rather than the rule. A manipulator is one who tries to make a profit by forcing a difference in prices either through his own trading or through the trading of those whom he induces to enter the market. Equipped with an abundance of capital and courage, and favored by fortune, he may be able to bring about a desired change in price. His sales may start other sales, and everyone may become so excited that he unloads on the market, causing a sharp decline. Then, if the manipulator succeeds in making his covering purchases so quietly that he does not cause a corresponding upward trend in the market, he is amply rewarded for his trouble at the expense of the honest speculator.

The successful manipulation, however, is a really remarkable feat, and perhaps the most potent influence in preventing ma-

manipulation is the large percentage of failures. The original movement is difficult, because any attempt to force the price in a direction favorable to one side of the market will be strongly resisted by those who believe that they are acting in accordance with the real conditions of the crop. The covering movement is difficult because it can hardly be performed without starting a corresponding movement among the other speculators. Manipulation, moreover, is less prevalent on the produce exchanges than on the stock exchanges, because false rumors cannot be as easily detected where there is the possibility of inside management as where the facts of crop conditions are generally known to all.

A special form of manipulation is the "corner." It is the result of an "oversold" market for a given month. The manipulators will buy all the offerings made by short sellers until the amount sold is in excess of the actual supply available for delivery for that month. The short sellers must make deliveries, however, according to their contracts, and, hence, they are at the mercy of the manipulators, who are in a position to demand almost any price for the liquidation of the contracts.

Nothing, perhaps, is so potent in preventing corners as the disastrous experience of those who attempt them, but certain means can be consciously adopted to discourage them. A corner on cotton is more difficult than a corner on wheat because of the greater number of grades deliverable on a short contract. It has been suggested that, if commercial differences were recognized and substituted for arbitrarily fixed differences, and if there were a description of the specific bales certified and not just the number given, much would be done to prevent corners. But, in any case, it might be well to rob corners of their profitability by adopting the device now used on the Chicago Board of Trade. "When the market has been squeezed above a legitimate basis, the true commercial value will be ascertained, and settlement will be had on that basis, plus not less than five per cent nor more than ten per cent penalty as liquidated damages." A special committee of three members of the exchange appointed by its officers ascertains for the basis of valuation the average price prevailing in the great world markets.

An evil which has been called "one of the unreasonable



features'' of the machinery of exchanges is the arbitrariness of the monthly deliveries.<sup>4</sup> It is complained that, ''at three o'clock on the last day of the month as the contract now operates, cotton may sell one, two, and even three and four cents higher than a minute after that time of the same day, or at ten o'clock the day following.'' The condition complained of is undesirable, but no remedy occurs to the writer as expedient. It would hardly be practicable to quote futures for less than a month, and, as long as this must be done, there may be an abnormal market the last day of each month.

An evil commonly complained of is a lack of uniformity of grades among the different exchanges. The government has set a standard of grades of cotton which the New Orleans Cotton Exchange has recently adopted, but which the New York Cotton Exchange has not as yet adopted, because, as it claims, the government standard does not provide for upland cotton. It has expressed its willingness, however, to adopt the standard as soon as the government remedies the omission complained of.

The evil which the exchanges have probably done least to remedy is the evil of speculation by those who have no business speculating. Because of margin trading, almost anyone with a little money can take a chance in the market. The result is that the ''lambs'' are usually fleeced. While most of the brokers on the exchange do not encourage such business, they do not take the trouble to prevent it. If the margins were made higher, the situation would be helped, but at the expense of those who wish to hedge. The suggestion is ventured that it might be practical to limit the privilege of margin trading to bona fide buyers, manufacturers, etc., who are actually engaged in the cotton business, or similar business, and who really wish to hedge.

### *Conclusion.*

The broad view of speculation takes account of both its advantages and disadvantages. While there are many evils justly complained of, the services which organized speculation performs are far more important. It may be remembered that the evils

<sup>4</sup>Burkett, C. W., *Cotton*, p. 246.

are by no means inherent in the exchanges, but are found in all forms of business organization. The exchanges have done much to remedy them, and there is every reason to believe that conditions in the future will continue to improve. It must be remembered that the most satisfactory market is the one in which the buyer may trade without assuming risks, and one which is always responsive. It must be remembered that no product is handled on such a small margin of profit by the middlemen as cotton. If the farmer does not always get his due price, it is really not the fault of the exchanges. It remains for better credit, diversification, coöperation, and better warehouses to achieve that result.

But Texas laws, while they have very wisely cut out bucket shops, have also eliminated legitimate exchanges in which trading in "futures" takes place. The present law is both the cause and the result of a false public sentiment. Its repeal would be of educational value, but can hardly be hoped for except as the result of education. It is with this idea in view that the present paper is written.

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## FARM TENURE IN TEXAS.

BY W. T. DONALDSON.

Texas ranks seventh in the percentage of tenant farms, only Mississippi, Georgia, South Carolina, Alabama, Louisiana, and Oklahoma surpassing her. The Census Bureau first gathered information concerning farm tenancy in 1880. At that time, 37.6 per cent. of the farmers of Texas were tenants, but the tenants have continually increased, both absolutely and relatively until they comprise at present 52.6 per cent. of the total number of farmers. The tendency is shown by the following statistics:

|                          | 1880  | 1890 | 1900 | 1910 |
|--------------------------|-------|------|------|------|
| Owners and Managers..... | 62.4% | 58.1 | 50.3 | 47.4 |
| Tenants .....            | 37.6% | 41.9 | 49.7 | 52.6 |

During the last 20 years the population of the State increased 74 per cent., the number of farms increased 83 per cent., the average value of all farm property per farm increased 119 per cent., while the number of tenants increased 130 per cent.

On the percentage basis the increase in tenancy does not appear to be so great as it does absolutely. The relative increase in tenancy has not kept pace with the increase in population nor with the advance in value of farm property, nor with the increase in the number of farms. The greatest increase in tenancy, it will be observed, occurred between 1890 and 1900, and during that decade occurred also the greatest increase in land area in farms.

Although most of the farmers of Texas are tenants, the owned farms are generally larger than the rented farms, and consequently we find that the owners, comprising less than one-half of the total number of farmers, operate 62 per cent., or nearly two-thirds of all the farm land. The tenant farms constitute but 21 per cent., or slightly over one-fifth of the total farm acreage. The farms operated by managers have the greatest acreage in proportion to their number. Although they embrace but 0.6 per cent. of the number of farms, they operate 16.5 per cent. of the total farm acreage. If we consider, however, the improved farm land only, that is, farm land actually in cultivation and in use for farm purposes, we find the figures make more

of a showing for the tenants and also considerably less for the managers. The owners operate 52.6 per cent. of the improved farm land, the tenants 44.5 per cent., and the managers only 2.9 per cent. Comparing the value of the owned farms with the value of the tenant farms and with the farms under managers, we find that three-fifths of the total value is under ownership, about one-third under tenant control, and the remainder, only about one-eleventh, under managers.

|                | Number of farms. |      | All land in farms. |      | Improved land in farms. |      | Value of land and buildings. |      |
|----------------|------------------|------|--------------------|------|-------------------------|------|------------------------------|------|
|                | 1910             | 1900 | 1910               | 1900 | 1910                    | 1900 | 1910                         | 1900 |
| Owners -----   | 46.9             | 49.6 | 61.6               | 51.8 | 50.7                    | 55.6 | 56.1                         | 57.5 |
| Managers ----- | 0.6              | 0.7  | 16.0               | 33.4 | 2.6                     | 2.9  | 8.5                          | 13.2 |
| Tenants -----  | 52.6             | 49.7 | 22.5               | 14.8 | 46.9                    | 41.6 | 35.4                         | 29.4 |

Over 75 per cent of the farmers of Texas are native born white, about 8 per cent. are foreign born white, and about 16 per cent. are negroes. Of all white farmers, 49 per cent are tenants; of the negro farmers 69.5 per cent. are tenants. The percentage of tenancy for both white and negro farmers increased during the last decade, but the *increase* in tenancy among white farmers was greater than among negro farmers. Of all land in farms operated by white farmers, over 60 per cent was in farms operated by owners, and about 20 per cent. was in tenant farms. Of the land operated by negroes slightly over 40 per cent. was under ownership, while over 50 per cent. was under tenancy. The percentage of land operated by owners increased among white farmers from 1900 to 1910 while among negroes it decreased.

| Farms operated by | Number of farms, % |       | All land in farms, % |       | Improved land in farms, % |       | Value of land & buildings, % |       |
|-------------------|--------------------|-------|----------------------|-------|---------------------------|-------|------------------------------|-------|
|                   | 1910               | 1900  | 1910                 | 1900  | 1910                      | 1900  | 1910                         | 1900  |
| WHITE -----       | 100.0              | 100.0 | 100.0                | 100.0 | 100.0                     | 100.0 | 100.0                        | 100.0 |
| Owners -----      | 50.2               | 53.9  | 62.3                 | 52.0  | 52.6                      | 58.5  | 57.3                         | 59.0  |
| Managers -----    | 0.6                | 0.9   | 16.5                 | 34.4  | 2.9                       | 3.2   | 8.8                          | 14.0  |
| Tenants -----     | 49.2               | 45.2  | 21.2                 | 13.6  | 45.5                      | 38.3  | 33.9                         | 27.0  |
| COLORED -----     | 100.0              | 100.0 | 100.0                | 100.0 | 100.0                     | 100.0 | 100.0                        | 100.0 |
| Owners -----      | 30.4               | 30.7  | 43.6                 | 45.8  | 34.1                      | 34.8  | 33.5                         | 35.6  |
| Managers -----    | 0.1                | 0.1   | 2.2                  | 1.0   | 0.3                       | 0.4   | 1.2                          | 1.1   |
| Tenants -----     | 69.5               | 69.1  | 54.2                 | 53.2  | 65.6                      | 64.9  | 65.3                         | 63.2  |

Of the native born whites 49.5 per cent. are owners and of the foreign born nearly 58 per cent. are owners. It thus appears that land owning is more prevalent among foreign born farmers than among native born.

The presence of the negro does not seem to be such a prominent feature of tenancy as in most parts of the South, where it has been found that a large percentage of negro population is almost invariably accompanied by a high percentage of tenancy. Moreover, the negro population generally tends to congregate in the cotton regions, so that in the South generally negroes are most numerous in the cotton sections, and in these sections is found a high percentage of tenancy. But in Texas this does not seem to be the case. It is true, as already pointed out, that tenancy is more frequent among negroes than among whites; but we have only to glance at the following table of the principal negro counties of the State to see that the mere presence of a large percentage of negro population does not cause a high percentage of tenancy, as it appears to do in other sections of the South:

| County      | NEGROES         |           | County        | NEGROES         |           |
|-------------|-----------------|-----------|---------------|-----------------|-----------|
|             | % of population | % tenancy |               | % of population | % tenancy |
| Marion      | 64.2            | 38.6      | Bowie         | 36.6            | 57.3      |
| Harrison    | 63.6            | 51.7      | Cass          | 36.1            | 45.7      |
| Fort Bend   | 62.9            | 61.0      | Newton        | 35.6            | 14.6      |
| Waller      | 55.3            | 56.2      | Morris        | 35.5            | 56.0      |
| Gregg       | 55.0            | 52.7      | Falls         | 35.4            | 66.1      |
| San Jacinto | 54.4            | 46.4      | Jasper        | 33.8            | 22.5      |
| Robertson   | 53.1            | 69.7      | Matagorda     | 32.8            | 54.8      |
| Walker      | 52.1            | 57.0      | Jackson       | 32.7            | 49.8      |
| Brazoria    | 46.9            | 37.4      | Liberty       | 31.8            | 38.9      |
| Brazos      | 46.7            | 60.0      | Lee           | 30.8            | 49.4      |
| Grimes      | 46.5            | 61.2      | San Augustine | 30.7            | 54.2      |
| Camp        | 46.2            | 49.4      | Red River     | 30.4            | 62.7      |
| Burleson    | 46.0            | 60.8      | Gonzales      | 29.3            | 60.4      |
| Montgomery  | 45.3            | 48.4      | Austin        | 28.4            | 44.7      |
| Panola      | 43.3            | 47.8      | Upshur        | 28.3            | 48.8      |
| Freestone   | 42.7            | 55.5      | Jefferson     | 28.0            | 43.2      |
| Houston     | 42.4            | 51.5      | Travis        | 27.8            | 60.4      |
| Wharton     | 42.1            | 59.6      | Harris        | 26.8            | 25.7      |
| Rusk        | 42.0            | 48.0      | Limestone     | 26.7            | 63.3      |
| Leon        | 41.5            | 52.4      | Madison       | 26.7            | 52.0      |
| Smith       | 41.3            | 54.0      | Cheerokee     | 26.3            | 48.7      |
| Polk        | 37.8            | 40.0      | Milam         | 25.8            | 64.3      |
| Anderson    | 38.2            | 50.6      | Nacogdoches   | 25.7            | 48.0      |
| Colorado    | 37.4            | 46.7      | Trinity       | 25.0            | 40.5      |
| Bastrop     | 37.2            | 58.7      |               |                 |           |

It will be observed that in this list of counties having a negro population of 25 per cent. or more, only ten have a percentage

of tenancy above 60 per cent., that is, only ten have a percentage of tenancy, which as compared with the average for the State can be considered high. Moreover, over half of the counties in the list have a percentage of tenancy below the average for the State. There is Marion County, 64 per cent. of whose population is composed of negroes; Harrison County, with a negro population of 63 per cent., and San Jacinto, with 54 per cent., and each of these counties have a percentage of tenancy below the average for the State.

A glance at the map will show that these counties having a large percentage of negro population lie in the main in the extreme eastern part of the State and just to the eastward of the section of the State having the greatest production and acreage of cotton. Most of the counties in the leading cotton region have a comparatively low percentage of negro population and a high percentage of tenancy. The following counties lying in this region, and which are among the leading cotton counties of the State, have less than 10 per cent of negro farmers, and yet each has over 60 per cent of tenants except Williamson County, which has 59.1 per cent: Grayson, Fannin, Lamar, Denton, Collin, Hunt, Rockwall, Dallas, Kaufman, Ellis, Navarro, Hill, McLennan, Bell, Caldwell, Karnes, Williamson.

The percentage of tenancy varies considerably in different sections of the State. In general, a low percentage is found in the Panhandle region and in all the western and southwestern portions, and in several counties in the southeast corner. The highest percentages of tenancy are found in the main in a solid block of counties, which, starting from the Red River, extend southward through the east central portion of the State. This region is also the great cotton belt of the State. In these, and in a few other scattered counties, the percentage of tenancy is 60 per cent. and over. This close correspondence of the leading cotton counties with the leading tenant counties is the most striking fact which the writer has observed in regard to farm tenure in Texas. The following is a list of the 30 leading tenant and 30 leading cotton counties; and a glance over the list will show that, generally speaking, the leading cotton counties are also the leading tenant counties:

| Leading<br>Cotton Counties. <sup>1</sup> | Leading<br>Tenant Counties. | Per cent<br>Tenancy. |
|------------------------------------------|-----------------------------|----------------------|
| 1. Ellis.                                | Robertson . . . . .         | 69.7                 |
| 2. McLennan.                             | Ellis . . . . .             | 69.0                 |
| 3. <i>Williamson.</i>                    | Collin . . . . .            | 68.8                 |
| 4. Hill.                                 | Hunt . . . . .              | 67.5                 |
| 5. Navarro.                              | Fannin . . . . .            | 67.0                 |
| 6. Limestone.                            | Kaufman . . . . .           | 66.7                 |
| 7. <i>Bell.</i>                          | Delta . . . . .             | 66.6                 |
| 8. Collin.                               | Hall . . . . .              | 66.6                 |
| 9. Hunt.                                 | Caldwell . . . . .          | 66.2                 |
| 10. <i>Travis.</i>                       | Falls . . . . .             | 66.1                 |
| 11. Falls.                               | Lamar . . . . .             | 65.7                 |
| 12. Fannin.                              | Navarro . . . . .           | 65.5                 |
| 13. Milam.                               | Rockwall . . . . .          | 65.3                 |
| 14. Lamar.                               | Hill . . . . .              | 64.4                 |
| 15. Kaufman.                             | Milam . . . . .             | 64.3                 |
| 16. Dallas.                              | McLennan . . . . .          | 64.1                 |
| 17. Caldwell.                            | Limestone . . . . .         | 63.3                 |
| 18. <i>Guadalupe.</i>                    | Red River . . . . .         | 62.7                 |
| 19. Robertson.                           | Grayson . . . . .           | 62.6                 |
| 20. Grayson.                             | Mitchell . . . . .          | 62.1                 |
| 21. <i>Gonzales.</i>                     | Frio . . . . .              | 61.8                 |
| 22. <i>Coleman.</i>                      | Grimes . . . . .            | 61.2                 |
| 23. <i>DeWitt.</i>                       | Wilbarger . . . . .         | 61.2                 |
| 24. <i>Comanche.</i>                     | Denton . . . . .            | 61.0                 |
| 25. Denton.                              | Fort Bend . . . . .         | 61.0                 |
| 26. <i>Smith.</i>                        | Dallas . . . . .            | 61.0                 |

This section of the State comprising the leading cotton counties and leading tenant counties is also the section which has been most fully developed agriculturally, having the greatest percentage of improved farm land. Of the first 17 counties, only one, Jefferson County, is not in this great cotton and tenant section.

This block of counties, moreover, have been among the leading cotton and tenant counties for the last 20 years. The following table shows the 30 leading tenant counties for the years, 1890, 1900 and 1910, respectively:

<sup>1</sup>Arranged in order of amount of cotton produced. Counties in italics do not appear among leading tenant counties.

## LEADING COUNTIES IN TENANCY.

| 1890       |      | 1900       |      | 1910      |      |
|------------|------|------------|------|-----------|------|
| Hemphill   | 76.2 | Ward       | 80.8 | Robertson | 69.7 |
| Cameron    | 69.7 | Falls      | 67.8 | Ellis     | 69.0 |
| Washington | 64.4 | Ellis      | 65.7 | Collin    | 68.8 |
| Brazos     | 61.7 | Fannin     | 64.8 | Hunt      | 67.5 |
| Ellis      | 61.4 | Rockwall   | 64.8 | Fannin    | 67.0 |
| Rockwall   | 60.5 | Robertson  | 64.6 | Kaufman   | 66.7 |
| Grimes     | 59.7 | Navarro    | 63.9 | Delta     | 66.6 |
| Falls      | 58.4 | Washington | 63.9 | Hall      | 66.6 |
| Robertson  | 57.4 | Fort Bend  | 63.2 | Caldwell  | 66.2 |
| Fort Bend  | 57.1 | Grimes     | 62.9 | Falls     | 66.1 |
| Navarro    | 57.1 | Lamar      | 62.6 | Lamar     | 65.7 |
| Williamson | 57.0 | McLennan   | 62.1 | Navarro   | 65.5 |
| McLennan   | 56.9 | Cameron    | 62.0 | Rockwall  | 65.3 |
| Freestone  | 56.6 | Limestone  | 61.9 | Hill      | 64.4 |
| Collin     | 55.4 | Collin     | 60.9 | Milam     | 64.3 |
| Fannin     | 54.1 | Milam      | 60.8 | McLennan  | 64.1 |
| Hill       | 54.1 | Bell       | 60.3 | Limestone | 63.3 |
| Bell       | 53.1 | Brazos     | 60.3 | Red River | 62.7 |
| Harrison   | 53.1 | Hill       | 60.2 | Grayson   | 62.6 |
| Burleson   | 52.8 | Red River  | 60.1 | Mitchell  | 62.1 |
| Maverick   | 52.8 | Williamson | 60.0 | Frio      | 61.8 |
| Red River  | 52.7 | Kaufman    | 59.7 | Grimes    | 61.2 |
| Marion     | 51.1 | Delta      | 59.6 | Wilbarger | 61.2 |
| Val Verde  | 51.1 | Grayson    | 58.8 | Denton    | 61.0 |
| Refugio    | 49.7 | Hunt       | 58.7 | Fort Bend | 61.0 |
| Waller     | 49.7 | Gonzales   | 58.4 | Haskell   | 61.0 |
| Hays       | 49.5 | Dallas     | 57.7 | Jones     | 61.0 |
| Fayette    | 49.4 | Bastrop    | 56.9 | Karnes    | 61.0 |
| Lamar      | 49.3 | Travis     | 56.8 | Dallas    | 60.9 |
| Victoria   | 48.8 | Freestone  | 56.5 | Burleson  | 60.8 |

It will be observed that 13 of these counties appear in the table for each of the three periods. The following table shows the movement in tenancy in these counties for each of the two decades since 1890, and for the entire 20 year period also:

|           | Per cent, increase or decrease* |           |           |
|-----------|---------------------------------|-----------|-----------|
|           | 1890-1900                       | 1900-1910 | 1890-1910 |
| Ellis     | + 4.3                           | + 3.3     | + 7.6     |
| Rockwall  | + 4.3                           | + 0.5     | + 4.8     |
| Grimes    | + 3.2                           | - 1.7     | + 1.5     |
| Falls     | + 9.4                           | - 1.7     | + 7.7     |
| Robertson | + 7.2                           | + 5.1     | +12.3     |
| Fort Bend | + 6.1                           | - 2.2     | + 3.9     |
| Navarro   | + 6.8                           | + 1.6     | + 8.4     |
| McLennan  | + 5.2                           | + 2.0     | + 7.2     |
| Collin    | + 5.5                           | + 7.9     | +13.4     |
| Fannin    | +10.7                           | + 2.2     | +12.9     |
| Hill      | + 6.1                           | + 4.2     | +10.3     |
| Red River | + 7.4                           | + 2.6     | +10.0     |
| Lamar     | +13.3                           | + 3.1     | +16.4     |

\* + Increase — Decrease.

It will be noted that in every county the percentage of tenancy increased during the whole period from 1890 to 1910. From 1900 to 1910 the percentage of tenancy declined in three counties,—Grimes, Falls, and Fort Bend; and in every other



county, except Collin County, the per cent. of increase during the decade from 1900 to 1910 was less than the per cent. of increase from 1890 to 1900.

In most sections of the State, the percentage of tenancy increased from 1900 to 1910. In 38 counties, however, the percentage declined, and a remarkable fact in regard to this decline in tenancy is that in every county, except two, Aransas and Washington, the decline was in the face of an advance in the price of farm land.\*

### COUNTIES IN WHICH PER CENT. OF TENANCY DECREASED FROM 1900 TO 1910.

| County.     | 1910 | 1900 | % decrease. |
|-------------|------|------|-------------|
| Andrews     | 5.6  | 25.0 | 19.4        |
| Aransas     | 21.5 | 23.4 | 1.9         |
| Austin      | 44.7 | 47.0 | 2.3         |
| Brazoria    | 37.4 | 48.6 | 11.2        |
| Brazos      | 60.0 | 60.3 | 0.3         |
| Brewster    | 3.2  | 14.3 | 11.1        |
| Burnet      | 45.3 | 47.0 | 1.7         |
| Cameron     | 45.4 | 62.0 | 16.6        |
| Colorado    | 46.7 | 54.5 | 7.8         |
| Ector       | 13.1 | 56.0 | 42.9        |
| El Paso     | 22.6 | 25.2 | 2.6         |
| Fayette     | 49.9 | 53.1 | 3.2         |
| Fort Bend   | 61.0 | 63.2 | 2.2         |
| Freestone   | 55.5 | 56.5 | 1.0         |
| Gaines      | 17.5 | 50.0 | 32.5        |
| Galveston   | 18.4 | 28.8 | 10.4        |
| Garza       | 21.0 | 23.7 | 2.7         |
| Grimes      | 61.2 | 62.9 | 1.7         |
| Harrison    | 51.7 | 53.6 | 1.9         |
| Hidalgo     | 35.0 | 50.6 | 15.6        |
| Jasper      | 22.5 | 31.0 | 8.5         |
| Johnson     | 52.1 | 53.9 | 1.8         |
| Lavaca      | 47.6 | 49.9 | 2.3         |
| Leon        | 52.4 | 52.7 | 0.3         |
| Montague    | 48.4 | 52.6 | 4.2         |
| Newton      | 14.6 | 27.8 | 13.2        |
| Panola      | 47.8 | 50.4 | 2.6         |
| Pecos       | 3.6  | 16.8 | 13.2        |
| Polk        | 40.0 | 41.5 | 1.5         |
| Reeves      | 9.3  | 25.4 | 16.1        |
| San Jacinto | 46.4 | 49.6 | 3.2         |
| Upton       | 2.9  | 22.2 | 19.3        |
| Val Verde   | 20.4 | 50.0 | 29.6        |
| Washington  | 57.2 | 63.9 | 6.7         |
| Webb        | 9.5  | 40.0 | 30.5        |
| Williamson  | 59.1 | 60.0 | 0.9         |
| Winkler     | 0.8  | 33.3 | 32.3        |
| Wise        | 47.6 | 48.4 | 0.8         |

We should probably expect to find the highest percentages of

\*It is also a notable fact that in the list but few of the leading cotton countries appear,—a fact which serves further to emphasize the connection between cotton and tenancy. May we not infer that diversification would tend to check the trend toward tenancy?—(Editor.)

tenancy in those sections of the State having the highest priced farm land. This we find to be generally true, but there are many exceptions which indicate that high priced land is by no means incompatible with a high percentage of ownership and that sections having cheap land may have a comparatively high percentage of tenancy. Galveston County has the highest average price for farm land in the State, and yet has only 18.4 per cent. of tenants. In King County the average price per acre of farm land is \$4.41, and yet the county has 58.9 per cent. of tenants. In Robertson County the price per acre is only \$15.62, but the county has the highest percentage of tenancy of any in the State. Many other instances of cheap land accompanied with high percentages of tenancy and of high priced land with low percentages of tenancy might be given, which shows that the price of land is by no means the only determining factor influencing the tenure under which farm land is held in Texas.\*

| Counties having highest priced farm land. |                 |            | Counties having lowest priced farm land. |                 |            |
|-------------------------------------------|-----------------|------------|------------------------------------------|-----------------|------------|
| County                                    | Value per acre. | % tenancy. | County                                   | Value per acre. | % tenancy. |
| Galveston                                 | \$78.37         | 18.4       | Pecos                                    | \$2.21          | 3.6        |
| Ellis                                     | 59.91           | 69.0       | Presidio                                 | 2.22            | 30.1       |
| Dallas                                    | 59.28           | 60.9       | Terrell                                  | 2.40            | 23.3       |
| Rockwall                                  | 55.50           | 65.3       | Jeff Davis                               | 2.55            | 2.2        |
| Williamson                                | 51.35           | 59.1       | Val Verde                                | 2.68            | 20.4       |
| Collin                                    | 50.76           | 68.8       | Edwards                                  | 2.90            | 24.0       |
| Bell                                      | 50.02           | 60.5       | Brewster                                 | 3.10            | 3.2        |
| Hill                                      | 48.76           | 64.4       | Crockett                                 | 3.30            | 12.7       |
| McLennan                                  | 47.49           | 64.1       | Maverick                                 | 4.07            | 24.5       |
| Falls                                     | 45.15           | 66.1       | El Paso                                  | 4.30            | 22.6       |
| Tarrant                                   | 43.12           | 49.8       | Sutton                                   | 4.38            | 11.5       |
| Caldwell                                  | 40.87           | 66.2       | King                                     | 4.41            | 58.9       |
| Guadalupe                                 | 40.13           | 51.3       | Duval                                    | 4.42            | 39.3       |
| Travis                                    | 38.75           | 60.4       | Upton                                    | 4.43            | 2.9        |
| Johnson                                   | 36.72           | 52.1       | Starr                                    | 4.62            | 28.4       |
| Grayson                                   | 36.15           | 62.6       | Kinney                                   | 4.66            | 20.0       |
| Wharton                                   | 35.81           | 59.6       | Zapata                                   | 4.75            | 10.1       |
| Delta                                     | 33.92           | 66.6       | Webb                                     | 4.98            | 9.5        |
| Hunt                                      | 33.68           | 67.5       | Crane                                    | 5.22            | None       |
| Denton                                    | 33.62           | 61.0       | Winkler                                  | 5.22            | 0.8        |
| Navarro                                   | 33.33           | 65.5       | Oldham                                   | 5.24            | 32.2       |
| Harris                                    | 32.97           | 25.7       | Reagan                                   | 5.51            | 17.6       |
| Fannin                                    | 32.42           | 67.0       | Bandera                                  | 5.52            | 25.2       |
| Limestone                                 | 30.98           | 63.3       | Loving                                   | 5.55            | None       |
| Fort Bend                                 | 29.86           | 61.0       |                                          |                 |            |
| Bexar                                     | 29.71           | 43.1       |                                          |                 |            |

The character of farm tenancy in the State is predominantly

\*It will be observed that of the high value counties only 2 have a low percentage of tenancy; and of the low value counties only 1 has a high percentage.—(Ed.)

share tenancy. The small proportion of cash tenancy which does exist appears to be on the decline:

Per cent. of farms under cash tenancy:

1880, 6.9 per cent.; 1890, 8.8 per cent.; 1900, 7.3 per cent.; 1910, 6.3 per cent.

In 1890 nearly 95 per cent. of the owned farms of Texas were free from mortgage, in 1900 76 per cent., and in 1910 but 66 per cent. Thus, not only is land owning declining among the farmers of Texas, but the decline in ownership is accompanied by an increase in the number of farms mortgaged. In 1910, less than half of the farms of the State were operated by owners, and of these owned farms two-thirds were free from mortgage. Thus, of the total number of farms,—including those operated by managers and tenants as well as those operated by owners,—less than one-third were owned free and unencumbered.

# OUR SYSTEM OF TAXATION AND ITS EFFECT ON THE FARMER.

BY B. E. DAILEY.

Taxation is the means that every State employs to raise revenue for carrying on the government. Before adopting any system of taxation, however, the State should consider the following questions: How will it affect the various industries? Will it discourage thrift? Is any useful industry forced to contribute more than its just share to the State budget? It is with such questions in mind that the following study of the system of taxation in Texas is taken up.

Texas levies the poll, corporation, special occupation, general occupation, general property, and inheritance taxes. The first is levied for political rather than fiscal reasons, and falls on all alike, regardless of occupation. The inheritance tax is unimportant, because it applies only to collateral heirs and is rarely collected. The corporation tax is so light as to have no appreciable effect on industry. The general occupation tax is chiefly used to tax out of existence the small businesses engaged in harmful occupations, as, for example, the heavy liquor license makes it unprofitable for a small saloon to stay in business. The special occupation tax is more important. It is levied on certain businesses that are monopolistic in character. It is a certain per cent. of the gross receipts of the business. The principal companies taxed in this way are the telephone, telegraph, street railway, and gas companies.

Last of all comes the general property tax. It is from this source that we raise almost all of our local revenue and more than one-half of the State revenue.

This tax is supposed to be paid by each person according to the property that he has under the jurisdiction of the State. In the administration of the tax, each taxpayer under oath is supposed to render to the assessor the full amount and true value of his property. If the assessor believes that a taxpayer has not complied with the law in this respect, it is his duty to

report such a taxpayer to the board of equalization, whose duty it is to investigate the matter.

Regardless of the purpose of the tax, the oath of a taxpayer, and the duty of the tax officials, under-valuation and evasion are universal. In 1911, the valuation of six counties was less than 20 per cent. of the true value of the property. The total values rendered for taxes in this State in 1910 were \$2,388,000,-000.00, while according to the census report, farm values alone amounted to \$2,218,000,000.00. The amount of mortgaged debt on the farm property this same year was \$76,000,000.00, while the amount of all kinds of credits rendered for taxes was only \$42,000,000.00. These facts show that there has been a general evasion of the general property tax.

The effect of this evasion has been that the farming class is taxed out of proportion to all other classes. This is not necessarily due to a superior honesty, but to the nature of the farmer's property. The farmer's property is not in an intangible form like stocks, bonds, mortgages, and other securities that are dealt in by such business men as merchants and bankers. Nor is it property that is hard to value, such as complex machinery, merchandise, and fine paintings. But the farmers, more nearly than any other class of taxpayers, have their property invested in visible things, in stock, herds, implements, land, and improvements, all of which are easy for the assessor to find and to value. This makes it relatively difficult for the farmer to get out of paying taxes, because, if he fails to render his property according to the true value and full amount as he is required to do by law, the assessor is likely to know it.

Under such conditions the law requires the assessor to have the board of equalization investigate the situation. If this were done, it would be fairly easy to prove that the taxpayer had perjured himself. In order, therefore, to protect himself from the law, the farmer must guard against under-valuation to a greater extent than those taxpayers that have intangible property and property that is hard to value.

How can the State remedy the system so as to do away with under-valuation, which varies both with the ability and zeal of the assessor and with the honesty of the taxpayer? A State

board of equalization would do much more than our present decentralized system of county boards have done in removing this evil. This State board, if it were to be established, should collect data in regard to the valuation of all Texas property. This and other data should be furnished every assessor and county board in order that a uniform basis of assessment might be established. This board should have power to inspect, investigate, and revise the work of the local tax officials and to prosecute them in court in case they violate the present full rendition law. Such a board would secure a uniform basis of valuation for all property in the State.

Another serious defect in our system, which affects the farmer, is that of double taxation. This is caused by the taxation of credit instruments, which are not goods but representatives of goods. For example, a capitalist loans \$1,000 and gets a mortgage on \$1,000 worth of property as security. Now the tax assessor not only assesses this \$1,000 worth of property, but the mortgage upon that property also. Both the owner of the mortgage and the owner of the property pay the same amount of taxes to the State. If the tax is 1 per cent., which is about the average rate, the capitalist will have to pay 1 per cent. out of his investment to the State. This will lower the return on his capital unless he can shift the tax to the mortgagor. This he will likely do. His property is in a mobile form which he can invest in any field of industry or any country. He might invest it in securities in another State which exempts securities, or in an industry that brings larger returns because it is more productive or because it escapes taxation. No doubt some classes of borrowers, such as the speculators, will refuse to pay the tax. But the large class of borrowers that borrow money to keep up their business or to buy necessities will get it at almost any cost. Such borrowers will pay the tax rather than forego the loan.

The farmer is a prominent member of the group that is forced to borrow regardless of the interest rate. He is the prince of mortgagors. In 1910, 33 per cent. of the farm owners in this State had given mortgages on their farms. (This does not include the tenants who give mortgages on their live stock from year to year. The per cent. of the mortgagors in this class would

not be less than 90 per cent.) Another striking fact about farm mortgaging is that there has been a steady increase in the per cent. of land owners that mortgage their farms. In 1890 the per cent was 5.7; in 1900, it rose to 23 per cent. And by 1910 it had increased to 33 per cent. These facts show to what extent the farmer is a mortgagor. He must borrow money in order to be independent of the landlord and the merchant. He does not draw his wage at the end of each day, week, or month, but must labor for nine months before he gets his return. During these months, he must have food, clothing, and other necessary supplies. There are two ways of getting them. One is to get a merchant to supply him. The other is to borrow money and give a mortgage on his farm and live stock. If he does the former, he has to trade with a certain merchant regardless of the quality and price of his goods. But if he has money, he is able to take advantage of the lower cash prices and to buy his goods from any merchant he pleases.

Not only does the farmer have to give a mortgage to get supplies; but, when buying a farm, he often pays a third or fourth down and gives a mortgage on the farm for the rest. This is the transition from the tenant to the land-owning class. If he waited until he saved up enough money to buy the farm at one payment, it would be late in life before he could be a land owner. The farmer, then, gives a mortgage on his property in order to be independent of the merchant and in order to become a land-owner. Every State should help its farmers in this attempt, for independence and land-ownership are both a stimulus to thrift. Texas, however, instead of encouraging the farmer in his efforts to free himself from the merchant and landlord, discourages him by putting a tax on the mortgage, which is his most effective means in getting this independence and freedom.

What steps should the State take to remedy this evil of double taxation, which works a special hardship on her farmers? The best remedy is to exempt securities from taxation.

What step can the State take toward the adoption of a certain State board in order to prevent under-valuation, and the exemption of credit instruments in order to prevent double tax-

ation? The legislature is powerless, because the constitution has provided that the boards of equalization shall be county boards, the membership of which shall be the county commissioners. It further provides that all property, whether tangible or intangible, personal or real, shall be taxed according to its value. This makes it impossible for the Legislature to exempt credit instruments. These reforms in our system can come only by a constitutional amendment, which will not be obtained until the farmer demands it. The time has come when the thoughtful Texas farmers should realize that only by State administration of our tax system can justice be done to all citizens of the State.



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