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THE SETTLEMENT OF IRRIGATED LANDS.

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INTRODUCTION.

The utilization of arid lands by means of irrigation has gone on in this country during the last half century with greatly increasing rapidity. The earlier efforts in this direction were but sporadic attempts to produce a few of the necessities of life in remote desert spots which had been invaded by hardy pioneers engaged in mining or other nonagricultural pursuits. Later came the discovery that large areas in our western deserts possessed a combination of soil, climate, and water supply well suited to the production of abundant and profitable crops and the maintenance of comfortable homes. This has resulted in extensive investments of capital, both private and public, in the construction of storage and diversion works for irrigation.

Many of the earlier irrigation enterprises were hazardous, not only because of the cheapness and inadequacy of the dams and ditches, but also because the State laws relating to the use of water were not satisfactory or were not well enforced. The quarrels and litigation that arose in times of water scarcity were conspicuous features of irrigation farming. During the early period, irrigation followed the pioneer instead of being provided in advance. More recently, with the improvement of State laws and of the administration of regulations governing the allotment and use of water, irrigation has been undertaken on a larger scale, and lands have become available somewhat faster than they have been effectively occupied. The lack of a sufficient number of settlers of the right kind has led to efforts on the part of those interested to promote the settlement of the irrigated land. These activities have taken many directions, and numerous agencies have been enlisted in them.

The need of rapid settlement is more acute on irrigated than on unirrigated land, because when an irrigation project is completed and ready for settlement it represents a large investment of capital on which interest charges must be paid. Any unutilized land within

the limits of such a project not contributing its share to the payment of this and other fixed charges throws added burdens on the land that is occupied. It is therefore much to the advantage of all concerned to promote rapid settlement in order to distribute these charges more equitably.

Various motives are involved in the different movements looking to the settling of new areas. Some of these motives appear to be so selfish and shortsighted as to be almost piratical, while others are entirely beneficent and patriotic. The motive is not always clear, but this may not be important, since the motive and the result may be quite independent of each other. In other words, an enterprise started with the best of intentions may prove unfortunate, while another which owes its impetus to purely selfish interests may in the end prove very advantageous to settler and promoter alike.

The aim of the present paper is not so much to discuss the motives of land promotion and colonization schemes as to present some of the agricultural and sociological features of such undertakings for the consideration both of those who are engaged in promoting settlement and of the larger number who contemplate settlement in newly irrigated regions.

Probably the most important point to be made in this connection is that the proper development of a new region requires more than the mere occupation of the land by people engaged in crop production. In many of these new regions the conditions are so conspicuously favorable for the production of crops that other and equally important needs and opportunities are sometimes overlooked. The production of crops for profit should not be the sole aim of the settler. Nor is the ultimate best interest of the promoter served when this aim is given too large a share of attention. This is particularly true when interest is focused on the production of some one crop.

TWO CLASSES OF LAND SEEKERS.

A better understanding of the problems of settlement is to be had through an appreciation of the needs and desires of the settlers. From this standpoint land seekers may be divided into two classes. The first class includes those who are interested chiefly in opportunities to speculate in land and who are attracted to new projects on this account. The second class includes those who seriously desire to make homes on the land and engage in agriculture or kindred pursuits as their chief means of livelihood. When a new project is opened for settlement the first rush is made by those who have no fixed interests elsewhere, who are foot-loose and dissatisfied with their previous conditions. Those who are dissatisfied in one place are not unlikely to be dissatisfied in another and to move again on the slightest inducement. But where rapid colonization is

imperative it may be necessary to draw largely from this nomadic class. It should be kept in mind that such settlers may serve a useful purpose during the early period of settlement, since they are generally reconciled to the hardships of pioneering and do much to prepare the way for the permanent settlers who follow. But in the long run the slower moving and more conservative settler must be secured, and where it is desired to establish a permanent and prosperous community every effort should be directed to securing colonists of this class.

THE PROFESSIONAL PIONEER.

A certain proportion of our people are ill at ease among the comforts and restrictions of advanced social conditions. For some of these there is a strong appeal in the hazards, rigors, and stimulations of pioneer existence. A new region also offers the chance of large profits through increases in land values. There are many people to whom the rigors of pioneering are merely stimulating, while to others they are hardships. Some enjoy the risks involved in speculation; others prefer the safer, if slower, profits of crop production.

The professional pioneer has been a real factor in the development of irrigated lands. Essentially he is a gambler, ready to stake all his means, his labor for a brief period, and his share of the creature comforts of civilization on the prospective profits in land values as the new region develops. Whether he wins or loses, he is ready after a time to go to another place and try again. The professional pioneer is as old as our American civilization. He has preceded every wave of settlement, and in some cases the same individual has helped to break ground successively in four or five places.

While the professional pioneer is an important and conspicuous factor in the early development of a new region, he takes but little part in its ultimate prosperity. He is gradually replaced by the more conservative settler whose ambitions lie in the direction of home making, crop production, and the other varied industries of an established community. Many of the discouragements experienced by those who have fostered colonization enterprises have been due to misconceptions regarding the motives and inclinations of the first comers. It is not to be expected that a large proportion of them will long remain or that they will share with enthusiasm in the larger plans for permanent community improvements. They bear the brunt of the conflict with new conditions and unexpected difficulties. The rewards they get for their risks and their services are none too large, all things considered. But it is a mistake to frame a policy based on the supposition that all new settlers intend to remain and to become permanent members of the new community. During the early stages it is to be expected that many readjustments will take place, and

attempts to restrict such readjustments are likely to hinder rather than to promote ultimate prosperity.

Under the methods of settlement now generally practiced the best that can be expected is to sift out from the stream of land seekers the small percentage who really desire permanent homes and gradually to replace those who wish to move on to newer fields.

THE INFLATION OF LAND VALUES.

One of the most serious difficulties encountered in the settlement of our irrigated lands lies in the inflation of land values on new projects. Desert land is usually very cheap. The development of irrigation, of course, gives occasion for a large increase in value. Then, as agricultural and industrial development begins and the demand for land becomes acute the future prospects are immediately capitalized. Not infrequently in the first exuberant optimism hopes run too high. There is something infectious about rapidly increasing land values, and in the midst of a boom it seems easy to forget that in the final analysis agricultural land is worth no more than it can be made to produce.

The larger profits of the first settlers are derived from increased land values rather than from crop production. As a result each newcomer seeks to obtain his share of the unearned increment by investing all his available capital in land instead of looking for industrial opportunities. In fact, a large majority of the first settlers in a new region are more interested in prospective profits to be obtained from increased land values than in all other opportunities combined. Land can not be expected to be bought and sold indefinitely at a profit to each successive owner. Yet it would appear that each new purchaser has faith that he will be able to sell again before the crisis comes.

In view of the instability of conditions in our irrigated sections and of the rapid evolution now going on, it is not possible to determine an exact standard of values for irrigated land. It seems hardly fair to make comparisons with equally productive sections in the humid regions, because of the differences in the classes of crops produced and of other important economic factors. It would also be unwise to make comparisons with irrigated lands in the Old World for similar reasons. It might be safe to assume that, in general, the values of irrigated land should range somewhat higher than similar unirrigated lands, and in some few cases very much higher. There can be no doubt, however, that generally the prices of newly irrigated land in private ownership range rather higher than their producing capacity and the prevailing economic conditions warrant.

One of the chief arguments in favor of a colonization policy, under which irrigated land must be occupied for a long term of years by

the first settler, lies in the resulting discouragement to this speculative inflation of values; but it is hard to devise a system of land settlement involving ownership which is at the same time proof against speculative purchase and sale. With a view to avoiding still further certain undesirable features of the present systems, it might be worth the experiment to try opening new irrigated land on some system of leasing with ultimate options for purchase.

It is quite true that the increase of land values is one of the most attractive features in a new country and one of the most powerful incentives in securing the first settlers. Without this prospect settlement would be a much slower and probably a more difficult task. Yet this might be less disadvantageous than it seems. There can be no question that the quick overinflation of land values, with its consequent disturbance of economic conditions, is one of the most serious deterrents to the permanent settlement and development of a new region.

THE DIVERSIFICATION OF INDUSTRIES.

It has been pointed out in an earlier paper¹ that the proper diversification of industries on each farm, as well as in the community, should be one of the most important aims in a newly settled region. It can not be doubted that the sooner in the life of a community this diversification can be started the better for all concerned. The diversification of industries should not be confined to the farms. Very soon after a new community gets started there is an overproduction of one crop or of a few crops, and a period of depression is experienced until satisfactory markets are found and trade relations established. This period of depression will be shortened in proportion to the people in the community who are engaged in industries other than crop production.

It is not always possible to start very many industrial enterprises at once, nor would this be wholly desirable, but it is often possible to do much more in this direction than is done at present. If more attention were to be given to establishing in a new region a larger proportion of people engaged in the working up of farm products and in other forms of industry, the relation between production and consumption of the products of the farm would be much better maintained and the general prosperity would be much more quickly realized. Many of the new settlers have previously followed vocations other than farming, and if at least a few of them would continue in the new region the work to which they are accustomed a much better balance of economic conditions would result.

¹ The present outlook for irrigation farming. Yearbook, U. S. Department of Agriculture, for 1911, pp. 371-382.

There is much that may be done by those who promote the occupation of land in the way of encouraging diversification from the first. Almost everything done in this direction tends toward lessening the hardships of pioneering, as well as toward hastening the prosperity of the community.

Very often the settlers in a new region do not grow their own garden vegetables or provide themselves with chickens or cows. Through the early stages they will do without some of these necessities or import them at high prices because they are devoting their own attention to the production of the so-called money crops.

ASSISTING NEW SETTLERS.

The question as to what extent the agency which brings water to the land on a new project shall engage in fostering the best use of that land is one about which there is much difference of opinion. There is always a strong inducement for the agency which has put money into the development of water for a tract of land to follow the matter up and protect its investment by promoting rapid settlement and quick and effective utilization. These efforts if properly directed may result in no bad after effects, but it is always possible that when not so directed more harm than good may result.

Each new irrigation enterprise means the establishment of a new community the members of which are usually not acquainted with one another and are often unfamiliar with the problems they have to meet. In attacking these problems they may greatly desire advice and guidance, but it should be kept in mind that ultimate success is to be realized only through individual initiative and community action.

It is to be assumed that the promoter is more familiar with conditions in the region than is the new settler and that he has fully as keen an interest in the ultimate success of the project.

There is a great variety of practice in regard to the aid given by colonization agencies to new settlers. In some instances the promoter goes no further than to place the settler on the land and take such precautions as he may to guard himself against loss in case the settler fails to make good. In other cases the promoter takes elaborate pains to aid the settler with advice, encouragement, and assistance. Each of these methods has its advantages and its drawbacks, and the final test of each is to be found in the results accomplished, and these in turn are largely influenced by the local conditions.

Paternalistic methods which involve close supervision of the individual may result in a larger proportion of successes with a given number of settlers, and the ultimate prosperity may be hastened if

the advice, encouragement, and assistance are of the right sort. But there are real dangers in this direction which should not be overlooked. At best, such methods must be regarded as a sort of artificial stimulation. It is easy to get people to shift their own responsibilities to other shoulders. If these responsibilities are accepted too readily, it becomes increasingly difficult to shift them back again or even to place new ones where they belong, that is, with the individual. Then, too, the conditions of a new region may not be well understood, even by those who have given the most time to the study of them, and the advice given to new settlers may not be of the best. There are always many things to learn in a new region, and it is much better if a large number of people are engaged in the learning and in the practical application of the results to their own work.

The alternative extreme of permitting the new settler to shift for himself is sometimes less heartless than it seems; also it is not wholly unprofitable from the purely financial standpoint of the promoter. The settler who starts and fails may be replaced quickly with another, bringing in additional capital and fresh enthusiasm. There is seldom a lack of occupants for land which is properly exploited, and even in the face of repeated failures new people will come in to try again. But it is not to be understood that those who begin without advice always fail. Indeed, it is frequently the case that people thrown thus on their own resources respond with extra efforts and with greater ingenuity to meet and overcome the new conditions. It is certainly true that once success is attained by the independent community, it is better prepared to go on and to overcome any new obstacles that may arise later.

On the whole it is very doubtful whether the settlement of our irrigated lands requires that the promoting or developing agencies go much further than to give the new settler a fair chance to make good through his own effort and initiative. If aid is to be given him it is better that it take the direction of helping him to inform himself about conditions, of helping him to get information for himself rather than to force upon him information for which he feels but little need, even though it may be important for him to have.

EARLY PHYSICAL IMPROVEMENTS.

The physical hardships that accompany the life of the pioneer are often severe at the best and constitute the chief deterrent to securing the best class of settlers. Many of these hardships could be much lessened or avoided entirely were such a course accepted by the promoter as his best policy. Telephone lines, good roads, good schools, and churches are important and tangible assets to a new community and both directly and indirectly react in beneficial ways.

It is, of course, a question of financial policy with those who are establishing a new project as to whether or not they shall provide at first certain of these improvements. There can be no doubt that the improvement of roads alone would often result in the conservation of much effort otherwise wasted in hauling supplies and farm products over new and often nearly impassable roads. On projects where the initial expense of irrigation construction is high and where prompt settlement and development are desired, it might be well worth while for the promoting agency to go to the relatively small expense required for the construction and maintenance of roads for the first few years, in order to aid the new settlers in their first struggles.

Expenditure of money in these early improvements not only makes success easier for those who come, but aids very greatly in securing at the outset the most desirable class of settlers, for there are good farmers and home makers who do not care to go through a long period of hardship for themselves or their families.

The need for attention to such details is greater than it was a generation or more ago. Throughout our older agricultural regions the physical conditions of life have been much improved. Families moving into new regions feel keenly the lack of the facilities to which they have become accustomed. This is particularly true of those who come from cities and towns. The possibility of providing such advantages as those enumerated is much better on irrigated land than it is where the farms are larger and more scattered. It is also easier to start trees and shrubs in public grounds, and along the roads than is usually the case in the unirrigated land now open for settlement in the West. Such improvements if wisely made are likely to be among the most highly appreciated features of a new community and the cost should not be large in comparison with the engineering features of the modern irrigation project.

COMMUNITY ACTION AND RELATIONSHIPS.

The colonization of unirrigated lands usually proceeds peripherally by scattered outposts from already established communities. Irrigated lands, on the other hand, are usually isolated from other settlements and are relatively thickly settled from the first. This results in conditions wholly different from those with which the American people are generally familiar in pioneering. A newly settled irrigated region presents a complex sociological problem, because people from many different places and of many different kinds are suddenly thrown closely together and confronted with problems which can be solved only by united action. An isolated community is comparable to an organism rather than to a mere aggregation of indi-

viduals, and in an organism the relationships and functions of the parts must be such as to conduce to the well-being of the whole. The sooner the members of a new community come to realize this the sooner they are able to make real progress.

Problems of this class are not to be solved merely by efforts toward cooperative buying, selling, and manufacturing on the part of those who are engaged chiefly in agricultural production. It is true that such efforts are helpful, not only in themselves, but in the training they afford to meet other problems. But there is need for other forms of community action. There is need in each community for men who specialize for the common good in directions other than agricultural production and who can devote their whole time and energy to such work.

The chief objection that is urged against specialization in non-productive enterprises in any community is the tendency toward parasitism, toward activities that are not really beneficial to the community. This is a real danger, but one that may be minimized, if not wholly avoided, by a certain degree of cooperative relationship and supervision.

There is much that may be done by the promoters of a new project in the way of leading the organization of effort in a new community and of encouraging both intelligent cooperation and specialization. The success of a new region may depend quite as much upon the right sort of cooperative work and upon the right sort of people to lead it as upon the right sort of crops or of methods of production.

The chief difficulty with such cooperative effort is usually found to be a lack of expert knowledge in the business and of substantial continuity in its administration. In other words, it is hard for people to learn to work together effectively and unselfishly. It should be realized that the successful management and operation of a business enterprise often requires special talent. Such talent commands good wages and is not always easy to find. It requires a high degree of community confidence to accomplish good results in the cooperative management of manufacturing or commercial enterprises. In new regions the best results are to be had through providing the fullest publicity concerning enterprises in which all the people are interested, and the private management of these is likely to be advantageous rather than otherwise.

EXTRAVAGANT EXPLOITATION.

One of the conspicuous features of the settlement of irrigated land is the campaign of advertising carried on by the various agencies interested. Probably no other class of land is made the subject of such extravagant claims or of such highly colored literature. The natural result of such exploitation is to arouse hopes in the minds of

the ignorant and suspicions in the minds of the well informed, and both the hopes and the suspicions may be without full justification. Most of our irrigated lands offer fair opportunities for farming and kindred occupations. Considering the initial cost and the risks involved, irrigation opportunities do not differ much from many others open to our people. It should not be necessary to make such extraordinary efforts to attract settlers, and the fact that this is done tends to discredit the motives of the promoters. The aggregate area of available irrigated land is so small in proportion to the unirrigated land available for settlement that were the opportunities offered by the former really much superior it would be impossible to supply the demand. Our people are accustomed to the settlement of new areas. No other country on the globe has witnessed such a vast movement as has gone on in the United States during the last half century and is still going on.

The real need of our irrigated lands is to secure settlers who have some means with which to make a start and who will be content with a fair interest on their investment and a fair livelihood from farming. As long as the great bulk of the advertising literature on irrigation opportunities is so extravagant it will be difficult to secure this class of settlers. It is not aimed at them and does not interest them. It appeals instead to a class who know little or nothing about farming, but who are dissatisfied where they are and who hope to find in some new project a veritable Eldorado. A few of these may by chance become successful farmers, but the proportion is likely to be small.

Irrigated lands possess real advantages over unirrigated areas. And when an irrigated section is ready for settlers it is to the interest of all concerned that it be settled quickly, for, as already stated, the investment for the irrigation works and the expenses of operation and upkeep must be carried whether all the land is in production or not. For this reason it may be desirable to devote some attention to methods of securing quickly the necessary settlers. There are, of course, a great variety of methods to be followed in encouraging the right kind of colonization, but it seems clear that in general the best success will follow the use of methods which do not require extravagant overstatement and which will give a large share of attention to the proper selection of the settlers.

STATE RELATIONS TO SETTLEMENT.

In recent years there has come to be a recognition of the fact that the State has a vital interest in new land activities within its borders. Certain of our Western and Southern States have recognized this to the extent of making appropriations and creating commissions to supervise efforts in this direction. In other cases the States

make requirements of those who would engage in exploitation and settlement enterprises. Usually these requirements in the Western States have had to do with some form of registration or guaranty on the part of the promoters with regard to the water supply alleged to be available for irrigation. Such supervision on the part of the State, if efficiently and wisely exercised, must have a beneficial effect.

Still further progress is needed in this direction. There is a large demand for impartial and reliable information concerning new irrigation enterprises, and in most cases no recognized source for such information exists. The present widespread distrust concerning these enterprises is likely to increase unless some means is found for supplying reliable information.

CONCLUSIONS.

The settlement of irrigated lands has become a serious problem in recent years because these lands have been opened for settlement rather faster than they have been effectively occupied. It is important that irrigated land be settled promptly, since the investments made in the construction and operation of irrigation works constitute a charge against the land whether it is used or not.

Land seekers are of two kinds—those who are chiefly concerned in land speculation and those who desire to make homes on the land and engage in agricultural production. The majority of new settlers belong to the first class.

Many of the first settlers on new projects are professional pioneers. They are accustomed to the hardships and privations of new conditions and play an important part in opening new regions. Under our present methods of colonization the establishment of a permanent community must take place slowly by the gradual replacement of many of the early settlers by others who are slower to move.

The rapid rise of land values in newly irrigated regions is one of the chief deterrents to permanent settlement. Very often land is held by speculators who do not intend to develop it, and their prices are so high that those who would improve it and bring it into production can not afford to do so.

There is need for greater diversification of crops and of industries on newly irrigated lands. The exclusive production of a few special crops results in abnormal economic conditions and often seriously retards the development of the region. The first aim of new settlers should be to produce the bulk of their own food and later to encourage the establishment of manufacturing enterprises to better utilize their products.

Efforts to foster the development of a new community by aiding and advising the settlers should be made cautiously. The problems

of a new region are often not well understood, and it is usually more profitable to help the settlers learn for themselves and work together than merely to teach them methods that have been successful elsewhere but which may not apply locally.

In the establishment of irrigation projects it might be practicable to provide good roads and certain other physical improvements of which the cost would be relatively small. Such improvements would make it much easier to attract a better class of settlers.

Irrigated lands are usually isolated from other settlements and relatively thickly settled from the first. These conditions result in the need for community action in many matters. Cooperative activities are valuable in the direct results they give, and still more so in the training they afford in community action.

The extravagant exploitation of irrigated lands has tended to react unfavorably. People who are not familiar with agricultural matters are often inspired with hopes destined to be disappointed, while those who are acquainted with such matters are likely to regard with suspicion any project about which it seems necessary to make extraordinary claims. Irrigation opportunities are not, as a rule, much better than opportunities elsewhere, but they are usually good enough to justify interest without such highly colored advertising as is generally resorted to.

There is a tendency on the part of some of the States to provide impartial information as to their irrigation opportunities. Such information is much needed and greatly benefits all the interests concerned.