

The Agricultural Revolution

By CARL VROOMAN

Assistant Secretary of Agriculture

AGRICULTURE, though one of the oldest of the arts, is the youngest of the sciences. Less than two years ago, for the first time, the American Academy for the Advancement of Science admitted agriculture into the family circle by giving it a place on its program and in its organization. Thus agriculture has become a sort of modern Cinderella. For thousands of years the servant and drudge of civilization, at last she has found the magic slipper and is making her debut as a veritable and acknowledged princess, a royal dispenser of bounty and happiness.

As a result of recent scientific and economic developments along agricultural lines, we are to-day in the midst of an agricultural revolution that seems destined to be as significant and as far-reaching in its effects upon civilization as was the industrial revolution of the eighteenth and nineteenth centuries. In the light of these developments, agriculture appears not only as the youngest of the sciences, but also as the most important.

What this new science will do for the world ultimately it would be inexpedient to attempt to prophesy. Therefore I shall endeavor to confine myself to a discussion of what the new agriculture may confidently be expected to do for this country in the near future; that is, when our farmers in general have learned to make a profitable application of the principles of scientific agriculture that already have stood the test of experience. From data as unquestionable as the multiplication table we may affirm that the new agriculture will accomplish certain definite results:

First, it will show the farmer how to increase his yields of standard crops anywhere from twenty-five to one hundred per cent., and, what is almost equally important, the percentage of such possible increase as will yield him a maximum profit.

Second, it will show the farmer how to market his produce to better advantage while at the same time reducing the relative cost of farm produce to the consumer.

Third, it will show the farmer how to make his purchases more advantageously.

Fourth, upon a solid foundation of increased yields, increased profits upon what he has to sell, and lower costs for what he has to buy, it will enable the farmer to build a splendid superstructure of more intelligent, more enjoyable, and more purposeful living.

It is indeed highly important that the farmer learn the agronomic lesson of how to increase his yields and the economic and business lesson of how to buy and sell to advantage, but in a larger sense these matters are important only as stepping-stones to a realization of the higher possibilities of life. A scientific success has little importance to the farmer unless it can be made the basis for a business success, and a business success in turn has little real significance unless it can be translated into terms of life. I know farmers who have broad fields, great herds, huge barns, and large bank-accounts, but whose successes end right there; who live narrow, dull, purposeless lives—lives devoid of aspiration, happiness, or public spirit. The wealth of such men is like much of the fertility in our soil: it is not available. These men need instruction in the art of living as much as their less-prosperous neighbors need instruction in the art of growing and marketing crops. For, after all, it is only the wealth that we dominate and dedicate to some useful or noble purpose that we can be said actually to possess. All other wealth that stands to our credit is either inert or actively sinister, and in the latter event it often gains the upper hand and finally comes actually to possess us.

The agricultural possibilities that open

out before the American farmer in bewildering profusion are for the most part yet unrealized. The lot of the up-to-date, scientific, and businesslike farmer has improved greatly during the last few years, but the lot of the average farmer still leaves much to be desired, still lacks much that has been chronically lacking to the tiller of the soil for thousands of years. On a western Iowa farm there was a young boy who plowed corn and did divers other things from dawn to dusk. When asked what he got for all his hard work, a momentary fire of revolt flared up in his brain, and he said: "Get? Get? Nothin' if I do, and hell if I don't."

That boy summed up in one terse phrase the annals of husbandry for all the centuries before the advent of the science of agriculture. He is Millet's "Man with the Hoe" before he grew up. From time immemorial civilization has rested on the broad shoulders of the agricultural workers of the world, but before their eyes has opened up no vista of opportunity or of hope for them or for their children. Theirs has been the bitter choice between a life of unending drudgery on the one hand and the hell of starvation on the other.

In the last half-century the Department of Agriculture has spent some two hundred and fifty million dollars largely in research and experiment, to the end that American agriculture might be put on a high plane of efficiency. The results of this research and experiment have been agronomy and animal industry, a vast, but largely undigested and uncoordinated, mass of information about how to grow crops and "critters." During this entire period the department has been accumulating and hoarding a vast store of facts about how to increase production.

Thus during the first fifty years of its existence the department was chiefly a bureau of scientific research that gave the farmer from time to time an assortment of miscellaneous scientific information that he might or might not be able to utilize to his financial advantage. Unfortunately, a world of practical problems that de-

stroy the farmer's peace of mind and involve the success or failure of his business—namely, his business and economic problems—were virtually ignored. In other words, for the first fifty years of its life the department hopped along on one leg, the scientific leg. Happily, during the last three years a miraculous thing has happened: the department has grown another leg, the leg of business and economic efficiency. Now it begins to walk, and we confidently expect in the near future to see it going forward with giant strides.

During the last three years, for the first time in its history, the Department of Agriculture has had at its head an economist. Under the direction of Secretary Houston it has achieved a new point of view and a new conception of its mission. For half a century the department has used its utmost endeavors to show the farmer how to fight the chinch-bug and the army-worm, the cattle tick and the Hessian fly and other insect pests, but had not even so much as attempted to show him how to protect himself from the yearly toll levied upon the fruits of his toil by such human pests as the usurer, commercial pirates posing as legitimate middlemen, and the other business parasites of the agricultural world.

The farmer who makes two blades of grass grow where only one grew before may be a good agronomist, but if he cannot sell his second blades at a profit, he is a poor farmer. In other words, farming is primarily a business. Very few practical farmers till the soil to demonstrate principles of agronomy. They produce crops to live rather than live to produce crops. Even more than large production they want *profitable* production. Upon the realization of this fundamental fact is founded the agricultural renaissance which recently has been begun.

It seems strange that a fact as simple as this should have been overlooked for many years. Every farmer, at one time or another, has been brought face to face with the paradox of big crops and small returns. He has often been forced to the conclusion that the larger crops you raise

the less money you make. And statistics all too frequently have backed up this conclusion. In 1912, for example, the country produced 677,758,000 more bushels of corn than in 1913, and yet the farmers received \$171,638,000 less. In 1906 a wheat crop 101,174,000 bushels larger than that of 1907 brought \$64,104,000 less. In 1906 the corn crop, too, was unusually large,—more than 150,000,000 bushels larger than in 1909,—and it brought the farmers \$500,000,000 less.

In order to find a solution for this and a host of other problems in agricultural economics that involve the farmers' financial success or failure, the present administration created a new bureau, called the Office of Markets and Rural Organization. It has been in operation only two years, and has not yet solved any large number of these problems, but the very fact of its creation, the fact that the Department of Agriculture at last has undertaken the stupendous task of charting for the farmer the treacherous and tempestuous economic sea and of pointing out to him the shoals and reefs, the tides and undertows which have brought shipwreck to many thousands in the past, is a matter of historic moment. It will take years to get this work satisfactorily in hand, but it is a momentous achievement to have begun it. Some people have criticized the Office of Markets and Rural Organization for not having rounded out its life-work during its teething period. It would be almost as intelligent to belittle the work of Columbus because, having discovered America, he failed to populate and develop it.

In addition to the creation of the Office of Markets and Rural Organization in the Department of Agriculture, Congress has passed a number of laws, and is now in process of passing several more, dealing with the farmers' economic and business problems. Among these may be mentioned the Cotton Futures Act. Before this law went into effect the producer was virtually at the mercy not only of the local buyer, but also of the big operators on the cotton exchanges, who were able

to boost or depress the market at will through the exertion of undue influence within the exchange. Since the act became effective, such manipulation would involve the control of the price of cotton on the leading future exchanges of the country, a manifest impossibility. The establishment of official cotton standards for grade, promulgated under the provisions of this act, has worked also to the decided advantage of the producer, since it gives a definite basis for bargaining, whereas under the old system, with its multiplicity of standards, the grade was frequently a matter of guesswork, with the buyer in the habit of guessing to promote his own ends.

The Warehouse Bill, which was recently attached as an amendment to the appropriation bill for the Department of Agriculture, will probably become a law within a few days. The purpose of this measure is to enhance the value of warehouse receipts in order to facilitate the obtaining of loans thereon, and thus enable the farmers to market their crops more slowly, thereby securing better and more even prices for their commodities. This act was designed originally to apply solely to cotton, but it has been broadened to cover virtually all the other leading staple and non-perishable agricultural products, and its enactment will greatly aid in the equitable disposition of our chief farm products.

A matter of great importance to the grain farmer is the recent establishment of official grades for corn. This action is to be followed up as fast as practicable by the establishment of grades of wheat and other cereals. Moreover, there is now pending in Congress a bill which has passed the House and has been favorably reported by the Senate agricultural committee providing for Federal regulation of state grain inspection. This will provide farmers' elevators, individual farmers shipping in car-load lots, and groups of farmers shipping in car-load lots, the right of appeal to a Federal official whenever they feel that state grain-inspectors have not given them a square deal.

Another law of interest to farmers and consumers alike is that granting the secretary of agriculture authority to provide the same inspection for imported meats as for domestic meats.

Among the important measures in the interest of the farmer now pending in Congress that probably will be enacted into law during the present session, the most important is the so-called Rural Credits Bill, providing for the establishment of a system of land banks. This law does not attempt to provide additional personal credit facilities for farmers. That is a distinctly different problem, and one which ought to be and no doubt will be taken up by Congress at its next session. The Rural Credits Bill has a definite object, to furnish the farmer having the proper security to offer, first, more money, secondly, money on longer time loans, and thirdly, money at a lower rate of interest than he has been able to get it in the past. Every farmer will realize the vital importance of these three features of the bill. Every farmer will realize that a bill which furnishes him with these three things is an invaluable single step in the direction of a complete system of rural credits.

Another highly important piece of legislation now pending in Congress is the Good Roads Bill. If enacted into law, this measure will do more to provide our country with good roads than has all past legislation on that subject put together. This is a matter of primary economic importance to the farmer. At present it costs the average farmer more to haul his produce to his local market than to ship it to the nearest terminal market. The heaviest tax he pays is the penalty extorted from him for having bad roads.

Another recent achievement of prime importance has been the working out of a system of direct retail distribution to the farmer of the accumulated results of the scientific research of the last half-century. While each of the older bureaus of the department has many years of honest and invaluable research work to its credit, in the main little has been done until recently toward putting the results of the

work of the department's scientific men before the farmer properly condensed, correlated, and couched in terms easily understood. Fewer than a dozen years ago the Department of Agriculture was almost as far removed from actual contact with the masses of our farmers as the State Department or the Coast and Geodetic Survey. No wide-spread, continuous, and systematic effort has yet been made to carry agricultural education to the farmer by word of mouth or by demonstration; the Office of Farm Management was a minor appendage of one of the older bureaus; the publications of the department were lucky if they escaped being still-born, so little was the effort made to popularize them and to interest the farmers in them by means of the press. It is difficult to realize that a major government department, established for the specific purpose of informing the people, spending millions of dollars of the people's money every year for research work, could ever have been so indifferent to the practical application of the results of its research as the Department of Agriculture seemed to be until a few years ago. Yet one has only to glance over the current list of farmers' bulletins to find evidence of that seeming indifference.

Many of the so-called farmers' bulletins are really technical papers. Much of the information published on vitally important practical problems is scattered about in so many bulletins as to be entirely unget-at-able by the average farmer. The teachings of the department with regard to a number of the most vital farm problems have not been properly differentiated regionally and special bulletins prepared for the different important agricultural regions in the United States. Some of the most fundamental features of every-day farming have been almost entirely ignored. Indeed, here and there appears a most astonishing hiatus. For example, we find listed a bulletin on guinea-pigs, but no satisfactory popular bulletin on the rearing of the colt; a treatise on silver-fox farming, but until this year no farmers' bulletin containing all the available prac-

tical information on the feeding of the dairy cow; a compendium of information on raising pheasants, but no thoroughly worked out popular bulletins on possible profitable rotations of crops for each region; a bulletin on Natal grass, but no simple, concise instructions covering the important subject of timothy as a hay crop. Thus, even to-day, with the agricultural renaissance well on foot in many respects, the department still labors under an embarrassing handicap in the matter of simple, concise bulletins on fundamental farming operations. But this situation is being remedied as rapidly as possible. The best brains in the department are now being devoted to the preparation of concise popular bulletins on the essentials of practical farming. However, it takes time to produce simple, concise bulletins, much more time than it takes to produce technical, verbose bulletins, and as a consequence the available practical literature of the agricultural renaissance is as yet meager.

Another step in this same direction was the creation in 1913 of the Office of Information. This office summarizes and popularizes for newspapers and periodicals the various bulletins issued by the department. It also gives to the farmers of the country, through the daily and weekly press, all available information on such critical situations as threatened injury to seed corn by frost, or the appearance in a given region of the Hessian fly or other insect pests. As a result of recent efforts to popularize the teachings of scientific agriculture, the total output of farmers' bulletins increased from 9,680,850 for the fiscal year ending June 30, 1914, to 14,795,000 for the fiscal year ending June 30, 1915.

An even more important popular educational movement has been instituted by means of the Smith-Lever Bill. This bill has set in motion a plan which within a few years will place in every county in the United States that is willing to cooperate with the State and Federal governments an agricultural county agent, an official who is really a species of deputy secretary

of agriculture. This work is modeled on the agricultural demonstration work started several years ago by the late Seaman A. Knapp in the Southern States, and within a very few years will result in an annual expenditure of anywhere from ten to twenty million dollars, and is planning to bring the latest and most successful scientific methods directly to the door of the American farmers. This is the greatest university extension campaign the world has ever seen. It is learning democratized, learning brought out of the laboratories and the libraries, out of the experiment fields and the bulletins, adapted to local conditions, mixed with horse-sense and business gumption, and explained to the individual farmer by a man who lives in his community and understands intimately the needs both of its soil and of its people.

I was told the other day by a banker from central New York that in two short years one of our county agents located in his county had done more for the farmers of that county than the entire Department of Agriculture had done during the fifty years preceding. This same miracle is being wrought to-day in over a thousand counties in this country, though the Smith-Lever Bill is not yet three years old.

The business of the county agent, who must of course have practical as well as theoretical knowledge of farming in its various aspects, is to get in personal touch with the farmers of his district, to secure the cooperation of the more progressive among them in practical demonstrations of new and profitable methods of farm operation, and to offer concrete suggestions and practical assistance to the farmer or to the community whenever opportunity presents itself. In his efforts to answer the questions and supply the needs of the farmers of his county, he has not only his own knowledge and experience to draw upon, but can as well invoke the aid of any of the numerous experts in the state experiment station, the state agricultural college, or the Department of Agriculture. He is thus able to focus upon

any given local problem all the latest available agricultural information of the entire nation.

There are women county agents, too—hundreds of them. These women, working under the home demonstration branch of the department, are doing a great work, especially among women and children of the mountain districts of the South.

Thus in a number of ways the Government is trying to help the farmer to increase his legitimate profits. The future of American agriculture hangs upon that. Not until the average farmer makes an income comparable with his endeavor and in keeping with his contribution to the well-being of society will he be in a position to enter into his own as regards the larger issues of life. Purely sociological problems begin where economic problems end, hence the vital importance of first solving the farmers' economic problems if we would lay a foundation from which to work out a solution of his higher problems. Thus a discussion of the fundamentals of the new agriculture becomes largely a discussion of the problem of how to make the science of agriculture boost the business of farming.

The capital that the average farmer has invested in this country now pays him a return, in addition to the mere wages he gets for his labor, of anywhere from nothing to five per cent. per annum. If the apostles of the new agriculture could not promise the farmers any larger returns than that on the additional capital they are advising him to invest, it is hardly probable that their new gospel would strike any responsive chord in the farmer's heart. However, it has been demonstrated repeatedly that for the additional capital which the farmer is advised to put into lime, phosphate, or potassium, into better seed, pure-bred bulls and boars, into silos, tile, and hog-tight fence, he can realize not only the five or six per cent. that farmers ordinarily hope to get on their money, but the ten or fifteen per cent. that business men usually expect on their investments, or even considerably more.

Take, for example, the results of farm

demonstrations carried on under the direction of one of our county agents in New York. There fifteen field tests, made in 1915, showed a profit of 169 per cent. on an investment in limestone and acid phosphate used on oats, without charging any of the cost of application to future crops. It is estimated that if only twenty-five per cent. of the farmers who grow oats in that county would follow this practice, the oat crop of the county would increase in value \$87,000 in a year. On one farm in that county the increase in one crop of hay attributable to an application of lime yielded a profit of 257 per cent. on investment in lime. These dividends are exceptional, since they represent the initial gain due to the application of fertilizers to comparatively neglected land, but they serve to indicate the tremendous possibilities of legitimate profits from applied scientific agriculture.

Another way to increase the farmer's profits is by grading his crops so as to give the consumer a better and more attractive product. As an illustration of the advantages to be derived from this process, take the story of the potato-board. A year or so ago a county agent representing the department went before the farmers of a county in southern New York exhibiting a board about six inches wide and two and a half feet long, containing oblong holes of different sizes. This board was a sorting apparatus for grading the potato crop. Before it was introduced most farmers used to sell their potatoes in much the same fashion that coal dealers sell "run-of-the-mine" coal, hit or miss, the big potatoes with the little ones. They receive prices depending upon the obviousness of the percentage of the little potatoes and the whim of the buyer. As a result of proper grading, they now sell their big standard-shaped potatoes at a top-notch price to the metropolitan hotels, getting virtually as much for that one grade as they used to get for the entire crop, and having the small and odd-shaped tubers left for less-exacting markets, for home use, or for seed.

The profits of the farmer can also be

increased by various other legitimate devices for increasing the efficiency of his marketing methods. For example, in the past a large proportion of the poultry of this country was shipped to market alive. The result was a heavy transportation charge, heavy shrinkage en route, and other attendant evils, such as deterioration in the quality of the poultry. The Department of Agriculture worked out an entirely new system, in accordance with which the poultry is killed and chilled before shipping. The new method improves the quality of the product for the consumer, prevents any loss of weight in transit, and cuts down the cost of transportation. Thus the farmer is enabled to get a larger price for his product, the consumer is required to pay no more than before for the same quality of poultry, and the middleman who performs a useful social function is allowed to receive his legitimate profit as before. No one is injured, and every one connected with this industry is benefited.

One of many possible illustrations of the financial advantages to be derived from the standardization of crops is the case of the cotton crop of Caldwell County, Texas. For a number of years nearly all the farmers there have grown Triumph cotton, a variety which originated in that county. As a result there is a great demand for the pure-strain Triumph cotton-seed from that county at an average price of a dollar a bushel, or two or three times the ordinary mill prices paid for ordinary cotton-seed. Every year for the last ten years there has been shipped from the town of Lockhart from 250 to 500 car-loads of this seed destined for distribution throughout five or six neighboring States. In addition to the handsome profit made on this seed, the fact that virtually only one variety of cotton is grown in that county has enabled farmers there to obtain a premium for their cotton also, owing to the fact that cotton of a uniform quality can always be secured there in large lots.

As another illustration of the value to the farmer of efficiency in the handling

and marketing of his products may be cited the revolution in methods of picking and packing that has taken place in the orange and lemon industry of the Pacific Coast. Until 1905 the annual decay of oranges and lemons in transit often amounted to a million and a half dollars per annum. The cause of the trouble had been believed to be due to lack of icing and to other abuses in the transportation service; but after a careful investigation the Department of Agriculture discovered, to the surprise of everybody, that it was due to improper handling of the fruit in picking and packing. As a result the fruit is now usually picked by associations of trained gangs of labor paid by the day rather than by the box, care in handling rather than speed being the object aimed at. The depreciation of oranges in transit prior to the investigations of the Department of Agriculture amounted to from twenty to fifty per cent. of the crop. Now the California Fruit Growers Exchange reports that the loss is not over one to two per cent. annually. When we consider that the California orange crop is valued at twenty-five million dollars a year, it becomes clear how important this one improvement in the method of handling the fruit has been to producer and consumer alike.

Such illustrations could be multiplied almost without limit. One of the admirable features of this method of building up the prosperity of the farmer is that it is not done at the expense of any other legitimate interest. It is a creative, not a predatory, process, one that works a direct benefit to the farmer and an indirect benefit to the entire community. Efficiency in crop handling and crop distribution and marketing is just as important to the farmer, to the business man, and to the consumer as is efficiency in crop production. As a matter of fact, it is generally believed by many agriculturists that more than fifty per cent. of the cost to the consumer of farm products is added after these crops are grown, or, in other words, that it costs more to handle and market farm products than to raise them.

When the problem of securing higher prices to the farmer for his products is discussed, most people at once jump to the conclusion that this can be done only by eliminating in whole or in part the profits of the middleman, or by increasing the cost of farm produce to the consumer. Wherever the charges of the middleman are excessive or illegitimate, they can and will be either reduced or eliminated; but where the middleman is performing a necessary economic function for a legitimate profit, that profit cannot be tampered with unless the farmer stands ready to perform the same function for himself with equal efficiency and at less cost. The Department of Agriculture is not attempting to make the honest middleman the "goat" of our present cumbersome, costly, and thoroughly antiquated system of marketing farm products. That some middlemen take advantage of the farmer is common knowledge. That some farmers also "do their durndest" to take advantage of one another, of the middlemen, and of the consuming public is also common knowledge, although it is only fair to add that the percentage of successful exploiters among business men is larger than it is among farmers. The Department of Agriculture is endeavoring, first of all, to do a constructive piece of work that will eliminate these evil practices. It is trying to get the maximum of scientific efficiency into the distribution as well as into the production of farm products. As a result of a proper organization of the marketing end of the farmer's work, those middlemen and farmers who are not on the square gradually, but inevitably, will be penalized out of business.

In the past most people labored under the mistaken notion that the best and perhaps the only practical way to acquire wealth was to take it away from some one else. The average middleman believed that the rate of his dividends depended primarily on the measure in which he could reduce the profits of the farmer and add to the price that the consumer could be induced to pay. In other words, until very recently farmers and business

men alike have been led astray by the primitive, predatory economic conceptions of the nomad and the cave-man. This conception was the outgrowth of the economic conditions of life on our planet some thousands of years ago, when economic advantage was to be gained only by outfighting or outwitting one's fellowmen. But our slowly developing civilization is a result of the gradual dawning on the minds of men, and the gradual incorporation into laws and institutions, of a new and inspiring truth, namely, that it is easier to gain wealth by coöperating to increase the productivity of nature and of human labor than it is by devoting our energies and abilities to the lamentably wasteful and harmful game of exploiting one another.

If the new science of agriculture and the movement toward scientific business efficiency can be developed in the light of this truth, capital and labor will become so much more productive than ever before that there will be plenty and to spare for every one who is willing to perform a real economic service to society for a legitimate remuneration. It is high time for both farmers and business men to learn that it is more profitable to work together for their common interests than to squabble with one another over conflicting interests, real or imaginary. This means coöperation.

The true spirit of coöperation is the most vital need of the day in the agricultural world, and indeed in the world at large. Without that spirit no considerable advance along the lines of the new agriculture is possible. Here and there a person will be able to apply some of its teachings on his own hook, but nobody can carry into effect all or even a majority of those teachings unless he is able to work together with his neighbors in some of the many possible varieties of coöperative community effort. The coöperative spirit is as necessary to the realization of the possibilities of the new agriculture as is cement or mortar to the erection of a gigantic edifice of brick or stone. I believe that this spirit will prevail, that even now it is

prevailing, and that we are on the threshold of a new and more splendid epoch.

It is not easy to convey with words a sense of the splendor of the vistas that open up as a result of the transforming influence of these new forces upon rural life. It is easy, indeed, to see how increased efficiency in farm operations, genuine coöperation in rural community life, and wide-spread organization for the distribution of farm products may have a tremendous bearing upon the current of American life, urban as well as rural. It is not so easy, however, to set forth specifically all that these things seem to foreshadow. In the light of what already has been undertaken we may dimly project a vision of a new civilization, a more natural and clement civilization than this, a civilization admittedly agrarian and which glories in the fact that its roots are in the soil, a civilization in which the essentiality and dignity of agriculture are realized by those who follow it, and recognized and respected by those who follow subsidiary vocations,—as, indeed, all other vocations are,—a civilization in which the wholesome strength of the soil will avail to heal the canker of unbridled industrialism.

I am quite aware that all this sounds chimerical, that these are, after all, mere generalities, glittering or otherwise. Let me be more specific.

I have in mind a certain town in the Middle West. This town, to the casual observer, is like many another prairie town of its type. It has no unique beauty of situation or of architecture. Its elevator looks like the average elevator; its depot is painted the same color that other depots on the same line are painted; its stores have more or less ugly fronts of brick or frame or stamped steel, as the case may be, just as have the business blocks of hundreds of other little American towns. But this town, in the essentials of its economic life, is unique, wholly different from any other town that I know of. There are indeed a few other towns in this country where there are manifestations of this difference in kind,

but none, so far as I know, where it exists in the degree in which it exists here.

This is the essence of the difference: the chief store of the town, the elevator, and the creamery are owned jointly by the farmers of the community and operated coöperatively for the benefit of the entire community. The bank is controlled by the farmers of the community and run on a basis as nearly coöperative as the state laws will allow. The store in question dominates the general merchandise trade of the community. It is big and diverse, "handles everything from a needle to a threshing-machine," its manager will tell you with pardonable pride. Groceries, drugs, clothing, hardware, farm implements, virtually everything needed on farm or in home, may be bought at the farmers' store. The elevator handles not merely the grain of the farmers of the community, but also coal, feed, flour, fertilizer, hay, salt, and other bulky commodities.

These enterprises, including the creamery, are run on a straight coöperative basis. The system followed is virtually the Rochdale system, which has been applied successfully throughout the British Isles. Take the store, for example. Every stock-holder is allowed to buy one hundred-dollar share, and no more, which gives him one vote in the management of the affairs of the enterprise. He gets six per cent. interest on this investment, and in addition a dividend on all his individual transactions with the store. He pays the current market price for everything he buys, but gets back as a periodical rebate ten per cent. profit on his purchases. Thus he gets his groceries and other supplies at virtually wholesale rates, and at the same time the store escapes the odium and enmity that are wont to embarrass the coöperative concern that cuts rates. Furthermore—and this is as important as any other feature of the plan—the non-member who buys of the coöperative store gets something in the way of a bonus, too, five per cent. on all purchases. Thus interest in the coöperative ideal is fostered.

This is agrarian democracy of a high

type, simple, effective community organization for buying and selling. Everybody involved is personally concerned in the conduct of the business. Every division of profits saved is an object-lesson in economics; every meeting of stock-holders is an object-lesson in sociology. There is hope for democratic civilization in such organization.

However, communities like this are rare in the United States, not from any logical necessity, but because of psychological reasons. When one hears of new potatoes being sold by the Long Island producer at twenty-five cents a barrel, and resold to the consumer in New York City, only a few miles away, at thirty cents for a small basket, or when one hears of apples rotting on the ground on farms a few miles from Boston, and the same quality of apples selling to the consumer in Boston at fancy prices, one is apt to jump to the conclusion that there must be some simple and effective device for preventing such appalling commercial incongruities. But there is not, and never has been, any such device. Successful coöperative effort involves a combination of several equally necessary factors. As I have said before, the most important of these factors are psychological.

If the people in a given community have the coöperative spirit, if they appreciate the permanent economic benefits as well as the temporary financial benefits to be derived from coöperation, and if they are interested in the social and moral benefits that are certain to come in the train of a coöperative movement, their chances of success are excellent. If to this appreciation of the higher possibilities involved in a genuine coöperative movement there be added the element of determination or a willingness, when necessary, as it sometimes is necessary, to sacrifice temporary personal advantage to permanent personal and community well-being, the movement has a vastly better chance of success.

For a year and a half the Department of Agriculture has been carrying on the most scientific and painstaking first-hand

study of the coöperative movement ever undertaken in the United States. While the department's investigations are not yet complete, certain basic facts stand out in clear relief:

First, there are certain vitally important things that a coöperative marketing society can do for its members better than they can do for themselves. It can assemble berries, garden produce, or whatever its specialty may be, in sufficiently large quantities to have them properly graded and shipped in refrigerated car-load lots by freight instead of by express, and at a comparatively slight cost it can make it worth while for some first-class distributing and selling agency to dispose of them at top prices.

Second, necessity, which is the mother of invention, is also, in the vast majority of cases, the mother of coöperation. Experience shows that as long as farmers are able to make a fairly good profit marketing their own products they are inclined to go it alone. Serious financial difficulties usually have to be experienced before they become convinced that going it alone is not good business.

Third, coöperation is not a magical word that transmutes stupidity and inefficiency into success. Business ability is as essential to successful coöperative effort as to any other form of business enterprise.

Fourth, the surest road to success for a coöperative marketing organization is along the line of a highly specialized business handled as well as is humanly possible. A coöperative society that does a general business is apt, with fatal results, to neglect necessary details in the handling of perishable commodities.

Fifth, small coöperative societies which do not do a large enough business to enable them to employ skilful marketing agents at terminal points generally find it hard sledding unless they are able to connect up with some central coöperative selling agency such as the Ozark Fruit Growers Association and allow it to distribute and sell their produce for them.

Sixth, lack of sufficient capital has been

a prolific source of danger and disaster to coöperative associations. It is a serious blunder to attempt to start a coöperative enterprise without sufficient permanent capital to see the infant society successfully through its teething period; moreover, members must be willing to allow the association a reasonable commission or expense assessment, in order that it may thrive and develop properly and provide a reserve fund against lean years.

Seventh, very few States in the Union have satisfactory laws providing for the organization of coöperative societies. This is a serious handicap to the coöperative movement, and one which the Federal department is doing its utmost to remedy. For more than a year our experts have been working in conjunction with economists, lawyers, and coöperative managers from the different States in the Union in an attempt to draw up a model state law providing for the incorporation of coöperative societies on a sound financial basis.

While detailed figures are not yet available as to the extent of the coöperative movement among American farmers, it is probably safe to say that despite all the handicaps of the past, coöperative agricultural organizations in this country are doing over a billion dollars' worth of business a year. Manifestly this is only a beginning, as the movement in the United States is still in its infancy; but I think it will be generally recognized that it is a lusty infant, possibly an infant Hercules.

In the past farmers have regarded coöperation as merely a means of protection from the wiles of the middleman, but it is destined to be something of vastly greater moment than that. By means of coöperative effort the farmer not only can protect himself from the superior business ability of sinister business organizations, but, what is of greater importance, can increase his own efficiency enormously both as a scientific farmer and as a business manager, to the ultimate benefit of every one concerned.

Moreover, before the farmers in the country or the business men in the towns

can obtain the maximum benefit from our improved agricultural methods, farmers and business men must learn to coöperate for their mutual advantage. There are some farmers to whom this will sound like advising the lamb to lie down with the lion. They will have a fear that in case it is done, it will not be long before the lamb will be inside the lion. Indeed, for a long time there has been a wide-spread suspicion on the part of the farmer that the city business man regarded the farmers very much as the farmers regard their sheep, as creatures to be sheared, and occasionally even to be skinned. In the past this suspicion has not been without foundation, but the more enlightened among our business men are coming to see that their future welfare is indissolubly bound up with the welfare of the farmer, and that it is not only good morals, but good business, to help the farmer not only to make a scientific success of crop production, but to make as well a business success of crop disposition.

That there are and will continue to be middlemen who are unscrupulous can be taken for granted, that there are and will continue to be farmers who are likewise minded is beyond dispute; but that the more intelligent business men and farmers are rapidly learning that they have more interests in common than interests that conflict no longer admits of a doubt. The progress toward closer coöperation between the farmer and the business man depends more largely than upon any other single factor upon the attitude taken by the business man toward the farmer in this better farming movement. If the business man will recognize that this movement for the new agriculture is primarily a farmer's movement, and that the business man can help and not hinder this movement only in so far as he learns to play second fiddle to the farmer, to back up the farmer, to offer the farmer advice and assistance, without in any way attempting to control the farmer or the farmer's organization, then rapid progress can be made. If, however, the business man attempts to get control of this move-

ment and exploit it by any political or business manipulation, and attempt to dictate who the officers of farm organizations shall be or what their policies shall be, they will cut off the limb on which they are sitting.

It is obvious that in the near future the farmers are going to do coöperatively a number of things which to-day are done for them by the business men of the towns. The movement in this direction is inevitable and irresistible. It is every day gaining in momentum. The wise business man will recognize this fact and trim his sails accordingly. If he is engaged in an elevator business or a creamery business, and it becomes apparent that the farmers of the neighborhood are about to assume that function of the community, he will do well to say frankly to them: "If you think you can handle this business better and more economically than I can, I will sell it to you in a friendly way. There are plenty of other places where I can utilize my capital and trained business ability advantageously." That will be good business, for it is folly to fight the inevitable.

If the business men will take this attitude, they and the farmers will prosper in the future as neither of them has prospered in the past, and the entire nation will prosper with them. I have spoken to bodies of business men in a number of our States, and I find that more and more this reasonable and sympathetic spirit is gaining headway among them. They recognize that if the American people pull together, there will be prosperity enough to go around; but that if we squabble and squirm, each one striving for a mean personal advantage at the expense of his fellows and the community in general, there will be very little real and abiding prosperity for anybody.

There has been circulated a deal of eloquent misinformation as to the supposed *identity* of interest between various commercial and industrial groups—between the farmer and the railroads, for example, or the farmer and the banks, the stockyards and various other corporate interests

with which of necessity he must do business. That there is a *community* of interest between the farmer and these interests does not admit of a doubt, but that there is an *identity* of interest does not follow. After the farmer, the railroad, the bank, the commission man, the storekeeper, have worked together for their common advantage as far as they know how in the light of the old ideals, there is still left a twilight zone of opportunity where some men by stealth or craft can still profit at the expense of others. It is this commercial war zone that the spirit of coöperation is gradually encroaching upon.

The supposition that natural economic law will prevent all illegitimate profits is one of the strangest delusions ever harbored in the minds of intelligent men. Despite economic laws, reinforced by man-made laws, the cunning and unscrupulous sometimes gain larger profits than do men who conduct their business in a strictly legitimate way. If a man's controlling ambition in life is to pile up unearned millions regardless alike of private rights and public welfare, one could not truthfully tell him that the quickest way to the realization of this sordid dream always lies along the paths of legitimate business enterprise. We may as well recognize frankly and fully the wide gulf that yawns between men who are trying to earn money and men who are trying by hook or crook to possess themselves of money that other men have earned.

The paramount issue before the American people to-day is not the tariff or corporation control or any of those other political or economic problems which newspapers and politicians discuss glibly; the real issue is not political or even economic. It is moral.

Is the individual citizen willing to produce all the wealth he acquires and to work and vote to render it impossible henceforth for any one, by any financial hocus-pocus, to acquire wealth that others have produced? That's the issue. Along that line will be fought the battle for control of that twilight zone in business

where "dog eats dog" is still too often the rule. When a coherent and masterful majority of our people "gets" the full significance of this issue and insists that he who produces more than he acquires is a public benefactor, but that he who acquires more than he produces is an economic parasite, then means will be found of ridding our civilization of the predatory business type, and of giving each person the full product of his toil of brawn or brain. It is to this end that all the beneficent social forces of our day are trending.

Regulated competition is unquestionably better than irresponsible and uncontrolled competition. Moreover, by the slow, sure means of experience, Federal and state control of business is becoming at once more elastic and more effective. But no perfecting of the mechanism of such control can ever overcome the inherent limitations of this method of promoting social and economic justice. To realize the higher possibilities of civilization fuller recourse must be had to the principle of coöperation.

As far back as history goes we find civilization developing as fast as and no faster than men have developed the capacity to work together with their fellow-men to a common end. The day of hybrid, involuntary coöperation by means of slavery, serfdom, or economic exploita-

tion is past. As President Wilson has indicated, the time is ripe for a coöperation that is not exclusive or oppressive, but rather inclusive and beneficent, founded on the principle of the open door, and dispensing its profits among all who participate in its activities according to the measure of such participation.

Manifestly, one of the best ways to develop this spirit of coöperation during our present transition period is for the business man and the farmer to get together in spirit and in purpose, to forget old antagonisms, and, as far as possible, to infuse into the present era something of the creative, beneficent spirit of the future. Thus the business man who is on the square and anxious for better things should not only refuse to make common cause with business men who stand for the ethics of the jungle, but should line up actively with like-minded men among all classes of his fellow-citizens in an endeavor to bring about a general realization of the fact that our maximum of national efficiency and prosperity can come only when every citizen, business man as well as farmer or wage-earner, is able to feel that his success will be in proportion not to his craft and Machiavellian ability to outwit and spoil his fellow-men, but rather in proportion to the intelligence, determination, and industry that he puts into productive work.

Driven

By LOUIS UNTERMEYER

WHAT swords have clashed between us! Yes,
 What blows, forgotten and forgiven!
 With what a storm of stubbornness
 We thought we drove, when we were driven!
 Down to what wars we two have gone
 Toward peace, that cool and quiet splendor!
 And shall we still go fighting on
 After the ultimate surrender?
 Well, let it whirl about our lives
 Through breathless days and thundering weather;
 I do not fear, whatever drives,
 As long as we are driven together.