Although in a few instances importations had been made into the United States by different persons, extending over a long period of time, there had been no general movement to introduce them to the notice of the farmers of this country until twelve or fourteen years ago. T. L. Miller, of Beecher, Ill., and others having had them brought to their notice, investigated their merits and decided that they were superior to any other race of cattle. They went into the business of breeding them and determined to make it a success if it was possible for merit to succeed. The record of their achievements is familiar to most of you who have read impartial newspaper reports. They have made a record in the past six years of which any admirer may feel proud. They have fought their way against wealth and prejudice, and followed up the successes they have met with during the past century on the other side of the Atlantic, by the highest honors to be obtained on the continent of America. All the White-face asks at your hands is fair play and no favors. I need not burden you with statements of the winnings of prizes at the fairs and shows this fall. They have been all that could be desired. But we can not refrain from giving a clipping or two from the Breeders Gazette, of the 2d and 9th. In summing up the successes of the Early Dawn Herd it says: "At the Inter-State Exposition at St. Joseph, Bean Real beat a field of twenty-two competitors (followed by four others). It is questionable whether a stronger ring of bulls was seen at any fair this fall, Short-horns, Herefords and Angus being represented by 'crack' specimens of the breeds."

The last issue says: "Just as we go to press we are informed, by wire, that a cablegram just received by C. B. Stuart, of Lafayette, Ind., announces that the championship of the Smithfield Club's Fat Stock Show, just concluded in London, Eng., has been awarded to a Hereford steer. In view of the fact that a bullock of this same breed gained the grand sweepstakes prize at the great American show recently held in this city, our informant's enthusiasm is perhaps pardonable, when he concludes his dispatch by saying, 'Blood will tell. White-faces will not down. Every dog has his day.' But the Herefords have made a grand record during the past three months, and no one will be disposed to rob them of their laurels."

In conclusion, let me say, whenever a bullock is found of a heavy, blocky build, on short legs, whatever name he may be known by as to breed, he is pronounced a good one, and the breed that produces such, of the greatest uniformity, is the best. The Hereford is uniform in this particular, and this class of bullock is the exception in the Short-horn breed; hence the value of the Hereford.

**Mixed Farming.**

[By W. A. Chamberlain, L. I. D., President of the Iowa Agricultural College.]

Mixed farming is coming to have a bad name in many quarters. The word mixed seems to suggest the idea of confusion, lack of system, frittering away the energies on a multitude of small details. This kind of "mixed farming" I do not believe in, at least for these times. The mixed farming I do believe in I will describe further on. The kind I don't believe in is a kind of outgrowth of old times and conditions—a failure to adopt the style of farming to the changed conditions. When transportation was practically impossible, no railroads but "corduroy," and no markets except for barter or store pay, the farmer must raise and make about all he and his family ate, drank, wore and lived in; i. e., farm, clothing, shelter. But, now, with our immense advance in machinery, our matchless facilities of transportation and exchange, the tendency is strongly towards division of labor, and concentration of effort upon specialities. And it is wisest and best that it should be so. It sometimes cramps and narrows the individual worker intellectually, especially under our manufacturing systems. Unquestionably the division of labor and the specialization of employments in manufactures and commerce greatly increase the production of material benefits to the race. In agriculture, however, Nature has set up barriers against carrying specialties too far or in too narrow lines. Some of those barriers I will describe further on. But to a certain limit specialty farming, concentration of intelligence and effort upon fewer crops and kinds of stock, is wise.

I have said that the objection to a
certain kind of "mixed farming" is well founded. I have in mind a typical "mixed farmer" of the sort I don't believe in. No matter when and where I knew him, nor how many there are of him in Ohio, Iowa, or Wisconsin. He is always mixed and so is his business. He has "more than he can carry," or at least, like the tipsy man, he "might better have gone twice for it." Three large farms he has and he keeps tending more land. He doesn't "want all his eggs in one basket," and so has so many baskets he can watch neither eggs nor baskets. He has all sorts of crops, stock and industries, and seems to need them all to make the "two ends meet," or rather the forty ends. He has three maple sugar camps, and you can smell burnt syrup in some one of the three pretty much all the time, when the hired help get careless or asleep. He has two summer dairies and one winter one and is on the anxious seat half of the time about their feed. He keeps sheep, too, and raises lambs and pigs and colts. A good colt amused himself by chasing the sheep; the father of the flock turned on him, played Roman battering ram and broke the colt's front leg. He whirled and with the three legs left kicked the breath out of the hundred dollar buck, and then had to hill himself. It was a fair fight and a draw game as between buck and colt, but it cost the mixed farmer $200. He raises all the crops in the catalogue. His sugar making bucket washing run into oat sowing two weeks, and that into potato planting as much, and that into corn planting, and that into the next thing and so on. He is two weeks behind, all the time, and winter sets in with potatoes undug, corn unhearsed, and half an acre of piles of cider apples frozen around his big cider mill. He goes into every new thing that promises to make him rich, and his 200 busheles of Bohemian oats that he is waiting to have the "company" take off of his hands at $10 per bushel. He has a brick yard and gravel bank, and threshing machine and portable saw-mill and a number of other strictly agricultural interests. He and his family work early and late, but with little system, or on the same system on which the man drove his oxen. "Gee, haw! Buck and Berry, go just where ye durn please; the hull field's got to be plowed." He's always behind hand with his work as I have said, and never gains on it any.

Now you will readily understand that I do not believe in that sort of mixed farming. Still I do believe thoroughly in the right kind of mixed farming as against narrow specialty farming; and I would lay down these four guiding principles:

1st. Successful farming must combine or "mix" crop raising with animal industry in order to keep up the soil's fertility.

2d. Rotation of crops and order of work should be so arranged as to furnish the farm force steady and remunerative work nearly or quite the whole year around.

3d. The farming should not be so mixed as to multiply fields, fences, and the kinds of machinery necessary for profitable work, or so as to waste the time in changing from this to that, or in puttering with small non-paying jobs.

4th. The farmer should make his money on his farm, in legitimate farming, and not in outside work or speculation.

First, then, successful farming must be mixed so far as to combine crop raising with some form of animal industry. Our domestic animals are the heaven appointed means of keeping up the soil's fertility. I do not believe it can long be kept up without them. I have tried to explain this in my lecture on manures. These animals, if good individuals of good breeds, have the power of taking from our grass and grain crops their feed value or money value for our pockets, and leaving in their voidings almost their entire manure value for our fields. Specialty farming without a fair proportion of live stock kept and their manure wisely saved has, after a time, invariably exhausted the soil or brought disaster of some kind. Witness the cotton fields of the South, the peach lands of Michigan, the potato lands of Lake County, Ohio, and the wheat lands of the Genesee Valley, N. Y., where the farmers that trusted the clover alone without much live stock were driven out of their specialties by diminishing returns.

One of the most successful potato-growers in the country manured heavily up to three years ago, i.e., the immediate effects continued till then. In 1881,
1899, and 1883 he had 47½ acres of potatoes which yielded about 10,704 bushels of potatoes or 225 bushels per acre. In 1884–5–6 he raised a few more acres, but kept almost no live stock and trusted mainly to clover for manure, and his average yield per acre for these three years has shrunk nearly half. But the weather was on the whole and on the average as favorable for potatoes the last three years as the first three, as shown by the fact that the average yield for his own State was 4 1/10ths bushels larger and in his own county was but five bushels less the last three years than the first three.

I can see no possible explanation except the almost entire discontinuance of the use of manure the last three years under continual cropping of over one half his arable land in potatoes. While he manured heavily he had big crops. When he stopped manuring his yields fell off nearly one-half. I have never known a case where potatoes (of all crops) were successfully raised repeatedly on the same land even with occasional rests of a year or two with wheat and clover, unless large quantities of stable or yard manure were applied, either furnished by live stock kept on the place, or drawn from neighboring city or village. In the lecture on the "Value and Management of Manures" I have given other striking illustrations of the great value of regular old-fashioned barnyard manure. I repeat then my first proposition that we must "mix" stock keeping with crop raising in order to maintain the fertility of our soil.

Second: rotation of crops and order of work should be so arranged as to furnish the farm force with steady and remunerative work nearly or quite the year round. This seems impossible with any mere crop specialty, even where it includes two or three crops but no live stock. The Dakota specialty, wheat farming, gives employment only about six or seven months in the year, and potatoes, wheat and clover as a specialty without live stock will give employment for only seven or eight months. But the farmer must find employment the year round on his farm, and it can be done where live stock are kept. For example, my own farm of 126 acres has a good maple-sugar camp of 1,500 trees, including one-half rented trees, 15 acres of orchard just come to good bearing condition, and about 65 acres of land nearly all tile drained and suitable for rotation of crops, and the rest rather rough pasture land, including the sugar grove. If I were farming it now myself with one or two sons my plan would be as follows, which is in the main my plan now, working it as I do, absent from it most of the time, through a hired foreman: From November 1 to April 1, much of the time would be given in the warm-bank barn to care of winter dairy, selling milk or butter, or cream in the neighboring city, feeding well and high, saving all manure, solid and liquid, with great care, and drawing it upon the snow or frozen ground to the field to be all ready to be ploughed under for spring crops. Wisconsin practice might need to be different, owing to inability to raise winter wheat, and the common custom of fall plowing for spring crops. From February 15 or March 1 to April 15, devoted chiefly to making and shipping to first-class customers strictly first-class maple syrup in sealed packages, with brand of maker on each package. This is an exceedingly profitable branch of my farming, yielding over $850 one year, and often over $500, with little real out-go, and no manure required, or feed, except to the teams and men. After April 15th, the pruning of the orchard and the planting of ten acres or so of early potatoes, and ten acres of Hungarian grass late in May, and of three or four acres of sowed corn for dairy. Potatoes planted with Aspinwall planter and dug with McCallum digger. Care of potatoes and sowed corn would occupy the time until the cutting of the twenty acres of clover and timothy hay, about July 1; then the cutting of twenty acres of wheat, threshing wheat, digging and marketing potatoes, cutting Hungarian grass for hay, preparing wheat ground and sowing twenty acres of wheat to be seeded in spring to clover and timothy mixed. Wheat sowed about September 10; then finish marketing potatoes, if not finished, and pick, pack and market winter apples. Then fall work—building, fencing and repairing old sheds, etc., marketing wheat, if prices suit, and general fall work, and beginning care of winter dairy.

The specialties would be (beginning in the spring) maple sugar for sale,
clover and timothy and Hungarian hay and corn fodder all for winter dairy and teams, wheat and potatoes and apples and products of winter dairy for sale. The dairy would be dry four months of the busiest time in summer and would take little care, being out at pasture. This in brief would furnish regular remunerative work for a force of two or three men and four horses the year round. It would bring a good income. Sell only condensed and chiefly carbonaceous products that do not much exhaust the soil and make a royal lot of richest manure from some 24 cows, four horses and a few helfer calves each year to replenish the dairy. This is my idea of one way of combining specialty farming with mixed farming so as to combine the excellencies of both. Only one kind of stock besides work teams, and a few pigs and chickens to pick up the waste of the dairy. Only a few crops or products for sale and those of the best possible quality. Large fields, few fences, pasture if possible in all one field, except calf lot. Land for rotation all in one field if possible and hoof of horse or cow never allowed on that field. Horses kept up most of the year and their manure carefully saved. Tillage thorough; clover freely used as an aid but not as a dependence. All necessary tools and machinery for the best handling and marketing of the few crops and products raised, which would be impossible if very many different kinds of crops and products were grown for market and various kinds of stock kept. That would also necessitate many small fields with increased expense of working and of fencing and for proper machinery for handling. This really covers my third point, viz.:

Third, the farming should not be so mixed as to multiply fields, fences and the kinds of machinery necessary for profitable work, or so as to waste time in changing from this to that or in putting with small non-paying jobs. This point scarcely needs further remark.

Fourth, the farmer should make his money on his farm and not in outside work or speculation. Mixed farming properly managed will enable him to do this. He should not mix his farming too much, as I have said; that is, he should concentrate his best thought, study and work upon a few things and excel in these, rather than divide his energies too much, or scatter fire like my father's old flint-lock musket that would "scatter" the fellow that fired it all over the barnyard. Some farmers make their farms simply a basis of their trading operations. Trade everything they can lay hands on; act as agents for all farm implements, fertilizers and supplies; join stock companies for this and for that; trade horses in particular, and come home with a new one at least once a week, or even trade with the professional gypsy trader that comes along. You hardly know how universal this spirit of dicker and trade is among the farmers in sections.

The point I am trying to make is this, that the farmer should make his money on his farm, and by legitimate farming, and not by outside work or speculation, and that "mixed farming" of the general kind I have described, i.e., a combination of animal industry with cropping is the only kind of farming that can furnish steady employment, remunerative the year round and keep up the farm's fertility. Of course, a successful farmer may be legitimately called away from his farming wholly or in part. My effort in all my writings and lectures is to keep this fact sharply in mind, and to recommend to the actual farmer such things and such only as I practiced when I was actually and only a farmer, and as I hope to practice if I return to my farm in partnership with one of my sons when this harder, more anxious and exacting work I am now doing, shall have worn me out once more as it did over twenty years ago.

Summer and Winter Feeding Compared.
[By A. O. Fox, of Oregon, Dane Co.]

The nature of my subject is such that it can hardly be treated under the title of "Summer and Winter Feeding," because of its scope, its great diversity and its varied bearing upon the different branches of farming. I will therefore speak upon "The Problem of Cattle Feeding in Southern Wisconsin."

To the general farmer the cattle business of Southern Wisconsin is divided into two branches, that of dairying, and feeding for beef. I will speak only of the latter. Leaving the technical subject of breeds undiscussed, there comes the vital propositions: What class of cattle are best adapted to our needs for making beef? How can we produce