against the spirit of trade and dicker so universal among farmers. If the farmer has more horses or anything else than he wants let him sell of course; but why he should continually swap one horse for another horse I never could see, unless he expects to "beat" the other man. If he is going to beat a professional trader he must be a professional himself with all a professionals dishonesty and wandering, roving habits and he can no longer be counted as a farmer.

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 in outside work or speculation, and that "mix 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 remunerative employment 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, as I thought I was seven years ago to become Secretary O. S. B. Ag'l, and again less than a year ago to become Pres. I. A. C. and as my friends, Terry and Gould of Ohio are to spend half their time, or nearly so in writing and in lecturing. But I can no longer be classed as a regular farmer. My private farming of my Ohio farm must be done by proxy or, if you please, with plow handles and forkstales 700 miles long, while my official farming as Pres. and General Manager of our great college farm, must be largely of an experimental sort. My friends Gould and Terry too, though both of them still bona fide farmers, must plan their whole years work on a basis more or less different from that they would adopt if they were at home the whole year and if farming were their whole source of revenue.

My effort in all my writings and lectures is to keep this fact sharply in mind, and to recommend to the actual farmers 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.

The investments in cattle in Colorado amount to over $50,000,000.

Specialities in Farming.

[J. B. Dwinell, Lodi, Wis.]

Webster defines specialty to mean "a special occupation." That which one makes an object of special attention.

Perhaps my subject would be better stated as special versus mixed farming; and we have only to take a look at almost any of the farms in this vicinity to see that it is pretty well mixed.

Is it not a fact that we are nearly all farming in a sort of haphazard way, spreading out our best thought until like a leaky vessel that will hold no water, the profits should accrue from the hard labor of the farmer, his wife and children are not to be found. A newsboy once said "there's a best way and a worst way to do almost everything." I try to get the best. In these times of short crops and low prices let us inquire if there is not a better way than we have been pursuing.

As before intimated our farming has been very general, including the raising of almost all kinds of grass, grain and stock. We have for instance in our dairy what for the want of a better name is called a "general purpose," a cow that will on an average make say 100 pounds of butter in a year, and produce a calf which, if a heifer, will make a cow just about as good as the mother, and if a steer will, when 1,000 days old, weigh 1,000 pounds.

Then we find one or two mongrel brood mares, a cross between the native and something a little better, the foal from which may, if well cared for at three or four years of age, bring $75 to $100. We find the swine are very sick and fat, but bred so fine and fed so much fat producing food while breeding that they are an easy prey to cholera or any other disease to which the hog is subject.

Waldo F. Brown, of Oxford, Ohio, says in Farmer's Review that not long since the swine disease swept through his neighborhood and that although his hogs were in a pasture adjoining that of a neighbor who lost nearly all that he had, that he (Brown) lost only two from quite a large herd, and he attributes it to the fact that he fed his breeding stock on muscle producing food, such as oats, bran, etc.

Then we have sheep, half Southdown and half Merinos or Seicesteer, and the
clip is neither fine nor coarse, long nor short.

We find the poultry a little Cochlin, Plymouth Rock, Leghorn, Houdan, Brahama and Langshire, well mixed. We call them nice birds; but they don't make a very pellplastic pocket-book at four cents a pound. Then of grasses and grains we raise timothy and clover, corn, oats, barley and wheat with a little sorghum thrown in to sweeten the mess. And to cap the climax our buildings are ill adapted to the purpose for which they were intended. Our fences are expensive and we almost cover our farms with machinery.

S. L. Sheldon estimates the machinery on the farms of the state of Wisconsin costs on an average $600, and that it is replaced every eight years. What an enormous tax upon the farm! Then, what is worse than all, there are so many cows in the fire that some of them are sure to get burned. Now, some one may say, all very true, but what are you going to do about it? What I propose to do is to give a few hints in the line of specialties on the farm. Perhaps some of you have a taste for dairying. You like the cow, and do not seriously object to spending an hour each morning and night in milking. You like to manipulate the milk and cream and butter. You like to study the markets, and choose the best; in short, you like all the details connected with a butter dairy. If this be so, arrange your buildings for this business. Have a barn that is convenient, and can be kept clean and well ventilated. Build a dairy-house, or convert some of the buildings used in the mixed process into one. If the silo has come to stay, build a silo, buy the most approved dairy utensils and machinery, such as a steamer for warming the water in winter, a power grinder and cutting machine. Raise fodder corn for soiling in summer, and with that and the ensilage one cow can be kept a year from the produce of one acre. Whereas, under our present system, it takes from three to four acres. And, most important of all, stock with some one of the best dairy breeds of cows, and feed the machine for all there is in it. Test the milk of each cow with an oil test churn, or in some other way, and send to the butcher all that will not, at full matur-

ity, make 300 pounds of butter per annum.

If the farm is better adapted to the production of beef, or the fancy is in that direction, take any breed that is short in the leg, broad across the loin and deep in the brisket, such as the Shorthorn, Polled Angus or Hereford. Feed the calves the new milk, and at three years old make them each weigh 2,000 pounds. This has been done, and can be done again. Such steers bring, in Chicago, from $1 to $2 more per hundred than the 1,000 to 1,200 pound steers we are now sending to market from our farms.

Geo. H. Harding, President of the Wisconsin Shorthorn Breeders' Association, said, in a paper read last winter at the Agricultural Convention held in Madison: "A few years ago I made steers of two Shorthorn calves. I wanted to see them grow. At three years and three months old I sold them to Layton & Co., of Milwaukee, for $252. They weighed 4,000 pounds. The average price of 3 year old steers that day was $30," and I think he might have added that it cost no more per pound to grow the steer that brought $126 than the one that brought $30.

I saw at the fat-stock show in Chicago two years ago, grade Shorthorn steers, three years and six months old, that weighed over 2,300 pounds, or a gain of 1 and 82-100 pounds a day from birth.

If the farmer desires a comparatively easy life and still keep up the fertility of the land, he might stock with sheep. For this the buildings need not be expensive. The fences may be built low, and if the wolves or dogs are troublesome have a herder boy with them through the day and yard them at night. Three years ago this winter I selected from my flock one hundred wethers worth $2 50 each, and fed them a little grain and clover hay until about the 1st of March, when I sold them to O. A. Kilbourn for $500.

If you have a farm adapted to raising corn, then adopt swine husbandry. My friend George Miley has truthfully said the hog has rooted the mortgage off from many a farm. Some years ago I knew a farmer in Dane county, this state, who owned a farm of 100 acres. He bought an adjoining farm of 140 acres, for which he agreed to pay $8,000 and mortgage this 240 acres for the
amount at 10 per cent. interest. He built a hog house 100 feet long; purchased a set of burrs to grind his grain; made arrangements for cooking the feed, and stocked with from 250 to 300 Poland China hogs. He kept no other stock except one cow and horses enough to do the work. The result was that in a few years he had the mortgage paid in full, and one of the best farms in Dane county.

The breeding of horses is, perhaps, all things considered, the most profitable at present prices of any of our industries. Who does not like a good horse, one that will step a mile inside of three minutes and as well can draw the plow, or do almost any kind of farm work?

Probably the most serviceable general purpose horse is one that will weigh from 1100 to 1200 pounds, and if there is heavy hauling to do put three abreast. But I am not at all sure, but there is more money in raising for the market the Percheron or Clydesdale. There is now a market for them at good figures. As examples of success in this specialty the Messer Boys, of the town of Hampden in this county might be named, who are breeding both the American trotter and the heavy draft horse.

With any of the specialties named, and to further increase the fertility of the soil, mammoth clover might be grown for the seed. I am acquainted with a farmer living in the northeast part of this county, who keeps on his farm 400 sheep, and last season raised 300 bushels of mammoth clover seed from fifty acres, for which he has been offered at Portage $5 50 per bushel, or $1650. He thinks that by taking off one crop of seed, and then turning the roots under, the land is becoming more fertile.

With our present system of diversified farming we must make a study of every kind of stock; how to breed, how to feed, and the best time and place to sell. I assert without fear of successful contradiction, that there is no business on God's footstool requiring so much hard work, hard study and good management in order succeed, and what I plead for in this paper is not more work or more thought, but concentrated thought and work.

A mother once said: "If I can train my boy to plain living and high thinking, to fear God and keep his commandments, I shall not have lived in vain." Most farmers have enough of the plain living, but let us have more of the high thinking concentrated upon some specialty in farming; then there will be more money and greater satisfaction in our work.

Some have used as an argument for mixed farming that with a large variety to sell we will hit it on something; but I can see but little difference whether we sell one thing high and the rest low each year, or once in five or six years have a low price for all we raise to sell. Besides, with a little cash in bank, which the specialist would be sure to have, he could "hold over" the produce for a better market.

I have said about all I care to say to my farmer friends on this subject. I have only hinted at some changes that might with profit be considered. Anything worth doing at all is worth doing well. Think on these things.

Sorghum, Its Culture and Uses.
[By William Frazier, Viroqua.]

While I have devoted much thought and study to the process of manufacturing syrup and sugar from sorghum, I have never made a specialty of its culture and uses. To write upon this subject may seem almost like taking up a dead issue.

It is well known that the Chinese varieties of cane were introduced into this country about thirty years ago. The African varieties some years later. During the last years of the civil war, and for some years afterward, cane-growers' conventions were held in many of the Western States, and much was written upon the subject—thousands engaged in the business. Many were certain they could and would make sugar. However, but few succeeded, and the business was almost wholly confined to syrup making, which flourished for a time and then subsided. Only a few continued in the business. About ten years ago the business revived again, under the name of the "Early Amber," which is a superior variety of Imper, or African cane. Since which time many conventions have been held and much has been written on the subject. Again thousands rushed into the business, determined to make a fine quality of syrup, and sugar, too.

Again there is a subsidence, espe-