President Hoffman.—Does it strike any of the members that he takes off a great deal of the clover? Would it not be better to leave more? I should say after taking two crops it would be much better to pasture, thus putting directly back to the land all that grows after the first year's cutting. By this means he would be sure of enriching the soil more rapidly, and I have no doubt he would find the course attended by better results. —*Husbandman.*

Capacities of Land for Keeping Stock.

The FARMERS' ADVOCATE has before now pointed out the great difference between the live stock on American and English farms, as indicating the comparative state of agriculture in both countries. The following article from the *American Cultivator* enters fully into the question :—

One of the great drawbacks to successful farming in this country is the attempt to cultivate larger farms than the capitals of the owners will warrant, and, on the other hand, the lack of real faith and confidence in the business sufficient to lead those who have ample means to invest in good stock, fertilizers, and general farm improvements, instead of investing surplus capital in railroad shares and mortgages. Our well-to-do farmers, men who have accumulated something in their legitimate business, are too apt to look beyond their own soil and occupation for profitable channels of investment, many of them to their sorrow.

How much better would it be for these same thrifty, common-sense and successful producers to invest their earnings, beyond their household expenses, in their own business, in a concern of which they are thoroughly conversant, rather than entrust their capital to the management of strangers and perhaps to those whose only qualification for the control of vast financial schemes for moneyed men consists in the fact that they cannot manage their own affairs.

Farming in England is carried on with greater outlay of capital and with greater confidence in its productive results than generally prevails in America, and we find single farms there carrying double the stock that our farms are capable of supporting, showing that we haven't yet commenced to realize the possibilities of agriculture.

For instance, Tunley Farm, six miles south-west of Bath, in England, consists of forty-three acres arable and 155 acres grass, making 198 acres in all. The arable is worked on the four-field shift, wheat, roots, spring grain and clover. This farm carries in stock 48 dairy cows, 14 yearling heifers, 2 bulls, 100 ewes with lambs at their sides, 70 pigs, with such horses as are needed for farm work. The outlay for bought food was $3,000 and for artificial manures $110.

Dillington Farm, about one mile from Ilminster, consists of 142 acres arable and 275 acres grass, or 417 acres in all. The 142 acres of arable are worked on a seven-field rotation, viz., wheat, swedes, mangel, wheat, clover, wheat, turnips, and the effect is to produce every year 60 acres wheat, 60 acres roots, 20 acres clover and 2 acres potatoes.

The stock in May consisted of :—Dairy cows, 21 ; heifers going in, 3 ; oxen three years old, 12 ; yearling heifers and steers, 20 ; feeding heifers, 6 ; calves, 15 ; bull, 1.

Of sheep the number was :—Stock ewes, 301 of old ewes, 116 ; wether lambs, 171 ; ewe lambs, 164 ; fattening sheep, 50 ; rams, 5. Total sheep, 807. Also 8 working horses. The outlay for purchased food here was $3,750 and for manures $840.

Of nine farms, including dairy and general farms, that were offered as prize farms, the total acreage was 2,333 acres, of which 955 acres were arable and 1,378 acres were grass, and on this extent of land there were kept 579 cattle, 3,576 sheep, 81 horses and 184 pigs. Each 100 acres consisted of :—Arable, 40.93 ; grass, 59.07 ; and the stock kept on each 100 acres as follow :—Cattle, 24.82 ; sheep, 151.95 ; horses, 3.47 ; pigs, 7.89.

But the food bought for each 100 acres was about $750. Yet, as 19.55 acres were in crop, of wheat, or oats, or barley, or beans, or peas, and as those crops are sold off the farm, of, if used on the farm, are entered as bought food, we may estimate that the stuff sold off the farm was at, say $45 per acre, on 19.55 acres, about $880. And as the food sold off the land was more than the food brought on to it as bought food, it is plain the land was able to keep the stock without any outside assistance.

Compared with the best managed of our farms, the amount of stock kept on these farms is surprising, and only goes to show that we have much te learn, or, at least, to practice, in bringing up the productive results in American farming to a proper standard. The true test of general farming is the amount of stock that can be profitably carried and brought into marketable condition. Better culture, more faith in the soil, would largely increase the meat production of this country, and should increase our stock so as to be able to supply the immense foreign demand for fresh meat, without such a rise in prices as to curtail the home consumption.

Excess of Humus in Soils.

The London *Agricultural Gazette* has an article bearing upon the subject of excess of humus in soils, in which it says the prevalence of chickweed is an indication of a soil having been manured beyond its capabilities. In relation to this matter we extract the following :

The common chickweed is so well known that its name has only to be mentioned. It is one of our commonest of garden weeds, and no less so does it track arable cultivation, always however in proportion to the constant use of mauure and its assimilation to gardening, both in the crops grown and their treatment, and hence the root crop is sure to encourage the growth of chickweed.

We recollect once receiving from the top of the Cotswolds a sample of mould taken from a field in which the soil was said to be dead. It was described as being incapable of growing roots, and hence an opinion on its management was desired. Having then gone to the field in question for a personal inspection, we found a soil scarcely more than four inches in depth reposing upon a solid floor of the inferior oolite rock, so full of surface weeds, and especially chickweed, that the ground was completely carpeted with it.

The solution of the mystery appears to have been that the thin soil, though on limestone, was a hard undecomposed shelf of that rock, which from repeated croppings and manuring had, like our garden soil, become charged with humus. In this case the remedy we proposed was that of a thick dressing of caustic lime, which we have found useful both in the garden and in the field where this dead earth abounds ; and we are happy to say that in this the remedy was highly successful.

Chickweed then on the farm is an evidence of an approach to garden culture, in which case a dressing of lime will often do more good than the best manure. Of course the hoe is the proper garden implement to kill chickweed when it is present—even hand-picking should be had recourse to if necessary, as in no case should the enemy be allowed to ripen its seed.

Relative Values of Food.

The relative value of oats and barley for feeding horses may be said to be definitely settled, in the sense that, in warm climates, such as the South of France and Algeria, barley exclusively is suited for Arab blood horses, but other horses thrive best, and are exempt from the disease of foundering, when in a like climate the ration consists of one part of barley and one of oats. As barley contains but little lime—less percentage even than in maize—draught horses, when fed on that grain, ought to have their food completed by lucerne, clover or sainfoin, or meadow hay containing some of these leguminous plants rich in lime.

The Position of the American Farmer.

F. G. E. in *Western Farm Journal* says:—In no country is agriculture so despised as in America. The Emperor of China holds the plow one day in the year as a mark of respect to agriculture. But says the fast Yankee, "China is barbarous." China has better agriculture than America. She has the largest population, the longest canal, the widest bridge, the deepest well, the greatest wall, the longest avenue of large trees in the world—she dates back in authentic history before our creation—she furnishes a good deal of our best scripture sayings—but is barbarous. A tenant farmer in English society ranks higher than a proprietor of land in America. France does not, like America, legislate against her agriculturists, but leaves them free and untrammeled and is commercially very successful. Her agricultural population are peaceful and prosperous, and would so continue if political demagogues would let them. Here we have demagogues and political quacks both to contend with.

Another Trial of Dynamite.

The use of dynamite or giant powder in clearing land of stumps and rocks appeared to us to be practicable, when the mention of it first came to our notice, and since then we have watched for any further information on the subject that might appear.

Some experiments were recently made under the direction of an expert who has made the business of clearing land by this method a specialty, and it appears that they were very successful. The first trial was made on a white oak stump 30 inches in diameter and deeply rooted. After punching a hole beneath the stump to its centre with an iron bar, a charge was inserted, consisting of two cartridges filled with the explosive ; they were tramped with some earth, and a pail of water was poured into the hole, which consolidated the earth around the hole. The fuse was then ignited, and the stump was split into numerous fragments and thrown entirely out of the ground, nothing remaining in the earth but a few loose shreds or roots. Several other stumps were taken out in like manner, occupying but a few minutes' time. The next trial was made on a fast rock weighing about 10 tons. As in the case of the stump, a hole was made beneath the rock, and three cartridges were inserted and exploded. It was blown into fragments which could be easily handled and removed.

This explosive is a mixture of nitro-glycerine with absorbents, by which, it is claimed, this dangerous explosive is transformed into a solid substance which is perfectly safe. In this form it is said to be impossible to explode it by ordinary accident, and its effect cannot be obtained until properly arranged in suitable shape for the blast. It is prepared and placed in cartridges suitable for blasting purposes. These cartridges are of varying sizes, according to the uses and work for which they may be wanted. We do not know what is the cost of the preparation or cartridges, but presume that it is not expensive. If all that is claimed for this method of clearing land of stumps and rocks is correct, it will, indeed, be a godsend to many farmers in very many localities besides the timber regions of Michigan.—*Western Rural.*

How to Save Clover Seed.

One of our best clover seed savers is just at our elbow, and he says :—Tell them the second crop is the one for seed, and is really fit for no other purpose, as it salivates the stock fed on it ; that the best time to cut for seed is a very nice point to determine ; it should be cut when the majority of the heads turn brown, and before any begin to shed off the little seed pods, each of which contains a seed. Cut the second crop of clover just as though it were for hay, rake it into windrows and let it lie and take one or two showers ; then put it into very small cocks while damp, about one good pitchfork full in a place, and when it is dry, put into stacks and cap with something that will turn water ; or what is still better, if you have a shed or barn, put it there and let it remain till you can get a huller to get it out for you. There are hullers enough now in the State to hull all the seed needed for home use, and the owners of the hullers are willing and anxious to go to any section where work can be had. Let our farmers save all the clover seed they can, and thus help to make thousands of dollars for the State, now sent out each year for clover seed to sow.—*Rural Sun.*

J. J. Mechi, whose name is familiar to all readers of agricultural papers, is a good specimen of an employer of farm laborers in Old England. Hear him for himself :—

During the summer I am frequently dressing between 4 and 5 a.m. (the sun shines before 4), and at 4.30 punctually I see, hoeing in a field of promising mangels, my old laborer, Moss, with one sound leg and a wooden one. He breakfasts at 8 and dines at 1, without cups and plates or tables. The ditch side is his seat. At 4 in the afternoon he leaves off work, and stumps his way home. When chatting with him, as I often do with my laborers, he tells me he is only seventy-four (one year my junior)—a better hoer never stumped the soil. John Moss makes his harvest during the hoeing season, and he is unable to do ordinary farm work. He has been my occasional laborer for many years, and most of my men have been with me over 30 years. So we are enabled to discuss and revert on the "good old times" when this neighborhood was in a very rude and primitive condition. I feel grateful to Jethro Tull ; for the horse and hand-hoe are some of the farmer's most profitable tools.