If ever a season demonstrated the necessity of noisture at the right time for crops it was this eason. Even on soil deeply drained the lack of oisture was shown in the crops. No matter low good the soil, unless it had plenty of humus it, the crops suffered about the same as crops lighter soils.

Possibly an explanation of this may be found the fact that the deep, heavy soils, as a result the excessive spring rains, packed rather hard and prevented the drains working well where they ere in. Then the rapid drying caused the surace to bake and cracks formed, that let the noisture off like smoke from a chimney. Just ver the drains and for a short distance each ide could one see the great difference in the rop. Wherever coarse stable manure had been sed and worked in the surface soil, there too ould one see a great difference in the crops, specially where that soil could be stirred as in se crops.

VALUE OF DRAINAGE AND HUMUS DEMONSTRATED Then again in bottom lands containing plenty f humus and well drained the crops came along ith great promise. On the north shore at Portlock there is some bottom clay with humus in it which gave promise of as good crops as I have sen anywhere this year. Over this land the ettlers of 30 or 40 years ago sailed in boats. It is now a veritable garden. Lying between two reeks and partly drained by tile, it has a subsoil which furnishes natural drainage, and consemently it didn't suffer from the extreme dry eather, and yet it had plenty of moisture below supply the needs of the crop. This moisture idn't steam off through the cracks of the surface eil because of the humus mixed with the clay, which prevented baking.

GREAT SEASON FOR QUACK GRASS This has been a very trying year to a good

any farmers. Clay soils aldn't be touched for three weeks during the ainy season. This delayed nearly all kinds of farm work, so that there was such crowding when weaconditions righted and then work had to be et with insufficient farm abor. Never in the history of quack or couch grass did it flourish so well as it did on clay soils durng the rainy season this oring. Much of it grew make excellent hav. There are many fields of grain which to-day ackwledge its supremacy as indicated by the crop growing in it. Quack apears in some cases to Lo the crop with a little grain re and there that might be styled the weeds.

I believe quack is the orst weed for smothering grain we have. It is causing more loss to farm-

ers and is harder to exterminate effectually than any weed I know, not even excepting the Peren-nial Sow thistle, which is bad enough on heavy lat soils. This season, however, I have seen some of the worst quack sods almost completely subsed. If the season did encourage its growth at ist, later the dry weather was just the time to it it, where cultivation could be given. Where orn was planted in hills after thorough disking d working of a quack grass field with good culivation in the corn the quack has now practicaldisappeared.

Quack grass has taught many a farmer the value of good cultivation. There are some to teach yet, and there are not a few to learn that it is folly to try to grow grain, especially peas, on ground that is badly infested with quack. The quack is sure to win out in the race. To many farmers the bare fallow would be a great boon. The fallow may not need so many plowings as before, but it will need many and thorough cuitivations, best done with a stiff toothed cultivator and broad shares.

We have had the two extremes this season, the best of wood producing and weed killing conditions. The labor problem has deterred many a farmer this year from taking advantage of his opportunity to deal out death to his enemies, the weeds on his farm.

## Overfeeding With Hav

J. R. Westlake, Carleton Co., Ont.

I believe that not a few of the numerous ills of the horse are due to overfeeding with hay The horse that has to depend on hay for a good part of its sustenance must cram its stomach full. Then every time it inflates its lungs the stomach is displaced and extra work is imposed on the system. Heaves, colic and other forms of indigestion in farm horses, I believe, are often due to this cramming of the stomach with hay.

The amount of hay that a horse should be fed will depend largely on its weight. For a horse of 1,000 pounds weight, I would advise feeding about 15 pounds of hay daily, 10 pounds at night and five in the morning. After one has weighed the hay a few times at feeding one can guess at it accurately thereafter. On the same basis horses weighing 1,500 to 1,800 pounds will not need more than 20 pounds of hay a day.

Of course in this amount of hay there is not enough nutriment to keep the horse in good health and full of energy for work. The rest of his sustenance should be gotten from grain,



Even the Pioneers Have Self Binders Now

Those hardy yeomen who hewed homes for themselves from the forests of Od ontario, cut their grain with the cradle. In New Ontario, the province has self binder very much as he does in the older sections of the province seems here illustrated is taken from a photo in the Temiskaming district. New Ontario.

which of course will vary very widely in amount depending on the work done.

A few weeks ago I noticed in Farm and Dairy an article from a Nova Scotia contributor in which he recommends feeding hay twice a day instead of three times. To this I will say "Hear, hear." That has been my practice for the last year and my horses were never in better health or more able for their work.

It pays to go to visit other breeders and to see what they are doing. - Jno. Arfmann, Orange Co., N. Y.

## Lessons from our Cow Testing Experience W. J. Telford, Peterboro Co., Ont.

Over a year ago I bought a grade cow that had taken first prize at one of our fall fairs and had been pronounced by the Government judge almost the ideal of dairy type. She certainly had all the points that we are commonly taught to look for in a dairy cow, and won championship honors over the pure-bred animals ex-

In our dairy herd, however, we do not judge the cows by outward appearances. We weigh and test the milk regularly. Did we select our cows as we did only a little over a year ago, by the eye, we would probably have pointed to this cow as one of the best in the stable. We now know that she is the poorest. The average of our herd is around 7,000 pounds of milk a cow, and this cow produced only 4,500 pounds. At present prices of feed she is not profitable, and we will dispose of her at an early date. The next best cow produced 5.800 pounds. We will dispose of her too. The rest of our cows run from 7,000 to 8,000 pounds.

## THE DIFFERENCE IS ALL PROFIT

This is a fairly uniform production, but looking at it in a businesslike way there is more difference than one would suppose. Up to a certain point all that a cow gives must be used in paying for her keep. Above that point all is clear profit. The difference between 7,000 and 8,000 pounds of milk would all go to the dairymen. Therefore the 8,000 pound cow is worth \$10 more a year to me than the 7,000 pound one.

We would not think of summing up the profits from each cow in our herd in this manner had we not first started to keep milk records. The milk records have now led on to feed records, and we know pretty well what each cow in the herd is doing for us. We find that feed records lead us to take much more interest in the feeding of the cattle. If a cow goes down in her milk we are bound to find out where the trouble lies.

Between milk records and feed records we are getting dairying down to a business basis.

## The Advertising Value of Horses L. C. Smith, Peel Co., Ont.

"We must have stylish horses," said a manager of a large carting company in Toronto to me, recently. "We make a specialty of stylish teams and our teams bring us business. Take the average man on the street. He sees our horses and notices the name on the lorry. There may be a dozen other companies in the city, but ours is the only one he will think of when he wants some carting done. And it is our horses that brings him our way."

This manager further informed me that they had great trouble in securing efficient horses of stylish conformation to meet with their requirements. The prices that he was willing to pay for horses that suited him, showed me how essen tial it is that we farmers who breed horses should study the needs of our customers and endeavor to supply them. If we manage to select and breed a good stylish team of drafters we will have made for ourselves a reputation and a ready market for every desirable horse that we have for sale afterwards.

Alfalfa is almost equal to bran if it is harvested properly. If many of the leaves are lost in harvesting, however, it will be much less valuable. I have found that the frequent use of the tedder immediately after cutting will save the leaves. For the last two years, we have not coiled the alfalfa at all. We run it into windrows and ted the windrows next day.-Henry Glendinning, Victoria Co., Ont.