

About Cottonseed Meal.

The peculiar circumstances for which this and the year 1914 will long be remembered have influenced the cotton industry in the South to such an extent that cottonseed meal is being procured by feeders at very reasonable prices. Some do not buy it because they are not acquainted with its properties, while others have purchased considerable quantities on its reputation as a feed for dairy cows. Yet they are at a loss regarding the propriety of feeding it to other classes of live stock. In the mills of the South a special piece of machinery cuts the dry hulls of the cotton seed and liberates the germ or kernel. These kernels are heated, placed between cloths in a press and subjected to hydraulic pressure to remove the oil. The residue is a thin cake about one inch thick, one foot wide and two feet long. This cottonseed cake is shipped abroad, but for home use the cake is ground into the commercial product, cottonseed meal. The difference between decorticated and undecorticated meal is that the former is practically free of hulls, while the undecorticated retains a considerable percentage of them, sometimes as much as fifty per cent. It can plainly be seen that the decorticated product is more valuable as food and fortunately that is the kind that is usually sold on this continent.

Cottonseed meal should be a light yellow color with a nutty flavor and a pleasant taste. Exposure to air will make it dull in color and reduce its value as a fodder. Products from old or fermented seed should never be used. The proper kind of meal is excellent food but the inferior product is a menace to successful feeding.

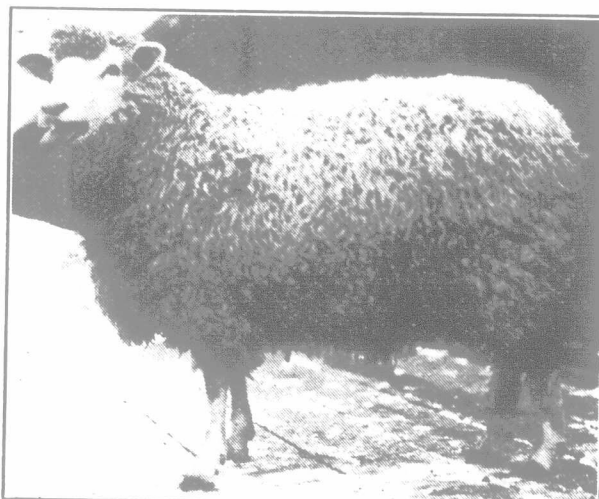
Cottonseed meal is rich in protein and fats. It contains about 37 per cent. protein, 21.4 per cent. carbohydrates and 9.6 per cent. fats. For comparison we are herewith giving also the analysis of oats. They contain 8.8 per cent. protein, 49.2 per cent. carbohydrates and 4.3 per cent. fats. By comparing cottonseed meal with food so well known as oats it will be plainly seen wherein the special value of the meal lies. In protein and fats cottonseed meal is exceedingly valuable and at present prices it is economical feed with which to augment rations which contain a large amount of carbohydrates and fats. Some of the meal now being purchased contains as much as 41 per cent. protein according to the guaranteed analysis on the bags.

Cottonseed meal is undoubtedly put to its best use when fed to dairy cows. It is sometimes found, however, that the butter from cows consuming cottonseed meal is white in color and tallowy in character. Linseed oil meal has the effect of softening the butter and comparing these two feeding stuffs as regards milk production experimenters have found little difference but where a difference occurred it was in favor of cottonseed meal. Michels, of the South Carolina Experiment Station held that one pound of cottonseed meal was equal to two pounds of wheat bran, while Moore, of the Mississippi Station, held one pound of cottonseed meal equal to 1½ pounds of wheat bran or two pounds of corn and cob meal. The former experimenter also wrote that "cottonseed meal and corn silage form by far the cheapest dairy feeds available to our dairymen." It should be remembered, however, in this connection that these experiments were carried on where cottonseed meal could be procured more cheaply than it can with us, especially at the time of their investigations, but that fact does not alter the relative feeding value of cottonseed meal and those which were tried in conjunction with it. Kellner claims that no milch cows should receive more than two pounds of cottonseed meal per day. Although milch cows will consume a larger quantity than two pounds, discretion should be used as continual heavy feeding has been found to deteriorate the breeding qualities of the herd.

In connection with steer feeding many experiments have been tried favorable to the use of this feed. At the Indiana Station, Skinner and Cochet fed two lots each of ten-year-old steers, averaging 1,010 pounds, on corn, clover hay and corn silage for 180 days. The steers in lot two received, in addition, a daily allowance of three pounds of cottonseed meal. It was found that the addition of cottonseed meal to an already excellent ration so stimulated the appetite of the steers that they ate more corn and as a result gained .7 pounds more daily than the other lot. It was shown that the feeding of 116 pounds of cottonseed meal effected a saving of 255 pounds of corn, 63 pounds of clover hay and 226 pounds of corn silage in making 100 pounds of gain. At the same station, Henry, in his "Feeds and Feeding," reports another experiment of two lots each of ten two-year-old steers. The steer receiving cottonseed meal gained .4 pounds more daily and required 120 pounds less concentrates and 110 pounds less clover hay for 100 pounds gain than those receiving no supplement. Five pounds per day should be the maximum amount of cottonseed meal fed to fattening animals. Even on less than five pounds with continued heavy feeding fatalities have been reported. The symptoms first observed were blindness and a staggering gait.

Young calves must be fed cottonseed meal with extreme caution. Emery, of the North Carolina Station reported the death of two calves when fed a ration of one-quarter to one-half pound of cottonseed meal with skim-milk. While calves that have become accustomed to roughage and grain will adapt themselves to a limited use of this meal, the young animal must be treated very carefully to its use. Oil cake meal or linseed meal is superior for calves and more adapted to their conditions.

It has not been the custom in Canada to feed horses on cottonseed meal. However, in the South where the meal has always been cheaper to the stockmen they have used it quite freely. Reports from the Southern States are favorable to the use of cottonseed meal and some have fed as high as two pounds per day to work horses without any ill effects. Cottonseed meal is not



Lincoln Wether.

One of the winning Lincolns at the Guelph Winter Fair. Exhibited by H. Lee, Highgate, Ont.

so laxative as oil cake or linseed meal and consequently better suited for working horses. Light horses will make use of one to one and one-half pounds per day and horsemen who have used this meal in the ration report that their animals have kept in the best of health. It must, however, be borne in mind that other ground grains should be fed in conjunction with cottonseed meal and it is to this practice that horsemen attribute much of their success with the meal.

As food for pigs, cottonseed meal must be discouraged. Henry, in "Feeds and Feeding," writes: "Cottonseed meal is particularly fatal to swine. Pigs getting as much as one-third of their concentrates in the form of cottonseed meal, thrive at first but after five or six weeks, or sometimes earlier, they quite frequently show derangement and may die. Restricting the allowance of



Good Corn.

This field of Wisconsin No. 7 corn, the property of John C. McGregor, Treasurer of Tilbury East Seed Corn Association, Tilbury, Ont., was awarded first prize in the Standing Field Crop competitions, under direction of the Agricultural Societies Branch of the Ontario Department of Agriculture.

meal, keeping the animals on pasture, supplying succulent feeds, or souring the feed may help, but no uniformly successful method of feeding cottonseed meal to swine has yet been found.

Ewes do not require any foods particularly rich in protein but cottonseed meal is sometimes used on fattening lambs. It is not considered as good however, as oil cake or gluten meal. From one-eighth to one-quarter of a pound can be fed without fear of trouble and fairly satisfactory results may be expected from the allowance.

THE FARM.

Agricultural Conferences and the Unemployed.

Editor "The Farmer's Advocate":

I understand that the Agricultural Department of our Government has launched a grand scheme (worthy of a schoolboy) for the dissemination of specific knowledge among the farmers concerning conditions arising from the war, and the great opportunity and necessity of raising more crops.

If this is as far as the scheme intends to go it is an insult to the farmers of the Dominion; ninety per cent. of whom are intelligent, well-read men and know all that is necessary to know about patriotism, war conditions and crop necessities. I would like to line up the men who will be appointed to hold these conferences and ask them some questions. I am not a party man, but just as independent as one of my York-shires, and am ready to fight whenever I find that farmers as a class are having their legs pulled.

This scheme seems to be only a needless expense. The meetings will probably be held by a number of platform orators who are after easy money. They will be attended by a few farmers who need neither information nor aid, and the speakers will be banqueted, laden with votes of thanks, and go back and report to the Minister of Agriculture that the country was never so prosperous—and the men who need real help will be worse off than before. Our farmers are fully alive to the necessity, and just so far as they were able to do so last fall they made preparations for extended operations in 1915. But they do not want flowery patriotic appeals—they want money not in bonuses or gifts, the farmer is no beggar, but in the form of loans for which they will give good security, and let me say right here, if the Government will do this it will be one of the best investments it ever made. A little cheap money, a little help in cheapening fertilizer, a little easing of freight rates (it costs \$6.00 per ton to haul feed from Ontario to the Annapolis Valley), a little help with the marketing, these are the aids the farmers of Nova Scotia want, and not lectures on patriotism. See what the farmers are up against this winter—apples 50 cents to \$1.50 per bbl.; potatoes not saleable or 30 to 40 cents per bushel; pork lower than it has been for years; ordinary beef 3 to 7 cents per lb.; butter 25 cents per lb.; and on the other hand bran \$1.50 per cwt.; middlings \$1.70; feed flour \$2.15; flour \$8.00 per bbl.; and sugar 7½ cents per lb. Do you think the farmer wants cheap official advice?

Then there is the problem of the unemployed. The situation is not so acute here in the Maritime Provinces as in Ontario, for the principal reason that those immigrants who belong to the class that, under ordinary stress of circumstances become out of work, do not find lodgment in the Maritime Provinces but go on toward the more-adversely-taxed West. These people have, in many cases, come from Old Country cities and naturally want to continue that sort of life when they get on this side. They know little of farm life and do not want to learn. Now, as I understand it, since the industrial depression dependent on the war has set in, these people are out of employment while the patriotic captains of industry and the newspapers, etc., are shouting to the farmer to take this off-scouring into the bosom of his family and support him until such times as these captains of industry are ready to take him back again. Verily the farmer is a long-suffering creature or he would rise in such insults. No sane reason could be advanced why the farmer should thus injure himself. In the first place they are incompetents. In the second place any self-respecting farmer would hesitate to allow strangers of this kind to come in with his family. No, let the city that lured these doubtful support them, the farmer has all he can handle with his own problems.

N. S.

R. J. MESSENGER