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Old Corn Into Beef

Tests Show That Corn 2, 3 or 4 Years Old Is Good if Properly Supplemented

By C. C. CULBERTSON

WILL OLD CORN—2, 3, 4 years old—produce as good results in fattening steers as the most recent crop of corn?

That question has been pondered by a good many cattle feeders. Some of the feeders have reported that the old corn had not given them as good results as newer.

The question is a pretty important one since we are on a program of storing corn for long periods. Eventually it must be used, and the main use is in feeding.

We therefore decided here at the Iowa Station to test this question in our cattle feeding operations of the past year. The answer we have for you is this: If you are feeding something else, such as good leafy, alfalfa hay, along with the old corn to make up for the vitamin A that it has lost through age, you will get as good results as with the most recent crop of corn, quality being on a par.

That answer is based on the results we got with 56 head of yearling steers which were fed for 7 months (210 days). The steers were divided into 7 lots of 8 steers each. Five of the lots were fed and handled exactly the same except that one lot got 1937 corn, another 1938 corn, and the other three had 1939, 1940 and 1941 corn.

The feed consisted of all the shell-ed corn they would eat, fed twice a day, 1 pound per steer daily of linseed meal, salt self-fed, 4 pounds of alfalfa hay per steer daily (this was fed in two feeds) and 0.75 ounce per steer each day of a mineral mixture.

On this ration the gains of the various lots of steers varied from 1.97 pounds per steer daily to 2.20—so close that the differences may have been due to not getting the steers divided evenly rather than to the difference in the age of the corn.

The margin per steer in the various lots (crediting the feed saved by the hogs) ranged from $21.78 to $30.63. The dressing percentage when they were sold in Chicago was exceedingly close—a range from 62.79 percent to 63.75.

One of the other two lots of steers was used to test the value of feeding chopped hay mixed with the shelled corn and the other to find the value of a sweetened protein supplement. Some feeders had told us they got better results feed-
ing chopped hay and they wanted us to test it out. Likewise, some feeders had thought that it was easier to keep steers on feed with a sweetened protein supplement.

So these lots got 1941 corn and were fed exactly like lot V (the 1941 corn lot) except that one lot instead of getting linseed oilmeal as a protein supplement got a sweetened supplement and the other lot got their hay chopped and mixed with their shelled corn twice a day, instead of being fed whole hay.

Our conclusions from the sweetened supplement was that it had no advantage. The chopped hay lot was the highest lot in dressing percentage of the seven fed and second highest in margin per steer. So if you can put up chopped hay at a lower cost than you can baled or loose, there may be an advantage in using it for fattening steers.

Of course if you are going to chop hay in the field, as we did this, you want to make mighty sure that it is dry enough so that it won’t heat enough to get on fire—or if you are in doubt—stack it out of doors. The man who chops hay in the field and puts it into his haymow is really “playing with fire” if he doesn’t understand the danger that lies there. Some farmers are doing it with success, however.

Going back to our feeding story, we had the corn of these various years tested for vitamin A content and we found that the 1937, 1938 and 1939 corn contained only about half as much vitamin A as the 1941 corn. The 1940 corn had about three-fourths as much as the 1941 corn. After it was 2 years old, it was only about half as well fortified with the essential vitamin as the most recent crop, and from there on no appreciable loss in vitamin occurred.

We believe that unless you feed a good quality, leafy legume hay, not too old—ours was grown in 1941—you may not get as good results feeding old corn. But if you do have such a vitamin A supplement, then you can expect just as good results as with new corn.

If one has hay that has been damaged by rains and is stemy and of poor quality, feeding that kind of hay with old corn may not produce the results which we got in our test.

The mineral supplement which we fed to all lots was made up as follows: Ground, raw limestone, 60 pounds; special steamed bone meal, 37.94 pounds; iron oxide (ferric), 2 pounds; copper sulfate, 0.02 pound; potassium iodide, 0.04 pound; total 100 pounds.

The sweetened protein supplement we used consisted of 50 pounds linseed meal; 25 pounds, expeller process, soybean oilmeal; 10 pounds cottonseed meal; 15 pounds cane molasses.

**Seed Alfalfa in August**

By H. D. Hughes

IOWA needs a lot more high protein forage feeds in order to produce the milk and other food products for our fighting forces, our allies and our people at home.

The crop in Iowa which provides the most protein per acre is alfalfa. And there is still time to make a seeding that will produce a crop next year.

August long has been recognized as a suitable time to make alfalfa seedings. Of course the success depends on soil moisture, and this year soil moisture conditions are ideal. There is the advantage of getting a crop next year, whereas waiting until next spring to seed means that there won’t be a crop until 1944.

To seed alfalfa at this time of year is not difficult. A good place for a seeding is on a stubble field following a small grain crop. We at the Iowa Station recommend disking the stubble rather than plowing it. By disking, a firm seedbed is obtained and that is important. Plowing is likely to leave the ground too loose.

Two important considerations in August seedings of alfalfa are a firm seedbed and sufficient moisture. Disking will aid in retaining the moisture better than plowing in addition to leaving a firmer seedbed.

Seeding in August should be as near the middle of the month as possible in central Iowa, but seedings made as late as Sept. 1 are likely to succeed. Seedings in northern Iowa should be a few days earlier than in central Iowa and those in southern Iowa may be a few days later.

Important items to consider in making a seeding this August are:

1. Be sure the soil is not acid.
2. Inoculate the seed.
3. Firm the seedbed surface by rolling with a cultipacker or corrugated roller, broadcast the seed and then roll again. Seeding in this way insures getting the seed in at the best depth and it gives the best seedbed we know how to obtain.
4. Use adapted varieties of seed. Ladak and Cossack have given the largest yields of any varieties we have tried at the Iowa Station. If you don’t use them, make sure that it is northern grown seed.

Following these points, and with cooperation of the weatherman, you should have a good stand of alfalfa.

**Alfalfa and Bromegrass**

One of the questions we have been asked at the Iowa Station is whether or not bromegrass and alfalfa might be seeded this fall and if so in what proportions the seed should be used.

Our experience at the Iowa Station indicates that a seeding of 10 pounds of alfalfa and 8 pounds of bromegrass is about right. This combination makes one of the finest pasture crops we know of. It can be used for hay until the brome gets well established, and even after that if one needs the hay.

Bromegrass has the advantage of providing pasture through the hot, dry months of July and August when most bluegrass pastures have dried up. Farmers who have bromegrass pastures have said that they will carry 1½ to 2 times as many head of livestock per acre as bluegrass.

Bromegrass seeded with alfalfa does not become sod-bound as soon as it may if seeded alone.