

with a view the better to adapt them to the purposes for which they are grown. For instance, it is legitimate and commendable to remove the suckers from corn, in varieties that are grown chiefly for grain. It is commendable to seek increase in hardness in varieties that are grown far north. In such areas it may be wise to try and increase the leaf growth in crown that is intended for the silo, where the conditions are such that it cannot mature. These modifications may affect the protein content or they may not. If they do it will only be slightly. Nor is it a matter of much consequence.

Again, take the question of the sugar beet. The more perfectly that the crown is buried in the soil, the less will be the loss in sugar in the crown part of the beet, which is rejected for the factory. Should a variety acceptable otherwise, but faulty in this respect, be grown extensively, experiment to remove this defect would be helpful. Once again, should mangels be grown for stock feeding, it may be worth while to encourage by way of experiment the mangels growing well out of the ground, for this will add to the ease in handling the crop, but it may not materially influence its food constituents.

Once more, take the oat plant. The amount of hull and the proportion of the same differs very considerably, not only in varieties but in the same variety. Now the food value of the kernel is greater than the food value of hull. It would be commendable, therefore, in a large-yielding variety to experiment with a view to decrease the amount of hull without decreasing at the same time the yields. The outcome would be increase in weight and in feeding value. This may doubtless result without affecting materially the chemical constituents of the oats. So, too, it may be legitimate to try to increase the relative oil production in flax grown chiefly for the grain, rather than to try to increase the protein in the same. The oil is the essential element in such flax—the protein is a by-product.

Some Notes on Millfeeds

By Agricola

To feed or not to feed is the problem confronting many stockmen just now. Of course there will be those who will adopt the latter course as near as may be, and bring their animals through the winter more or less alive. It will, however, be the feeder who is willing to invest an extra dollar now, who will draw the biggest milk cheques next June. Although purchased feedstuffs are ruling high in price, the careful feeder who is looking for business six months hence, as well as the present, will be in search of the best and cheapest concentrates wherewith to supplement his home-grown grains. He knows that an unbalanced ration is wasteful; that if the quantity of digestible protein is too small, the animals produce less milk or beef. Furthermore, the other feed components, starch, carbohydrates, fat, etc., if in excess of the animal's capacity for assimilating them, are to some extent passed out of the body incompletely digested. Having tried a good many millfeeds, I am tempted to offer a few notes on the more common kinds, that in my experience seem to possess the highest nutritive value.

Cotton Seed Meal

Cottonseed meal as a concentrate rich in protein is unexcelled. Both as a milk and beef producer it deserves consideration. Analyses establish its high feeding value and clearly demonstrate that it holds the premier position for the largest amount of digestible protein to be had in any concentrate. For growing yearlings and other young stock it is unequalled, if fed moderately. It should not be fed to calves under six months of age, or be included in a ration for young

pigs. A small quantity may be fed to ewes after parturition with advantage.

This valuable concentrate is the by-product in the manufacture of cottonseed-oil. The hull of the cottonseed is removed, the kernel cooked and subjected to pressure to remove the oil. The residue or cotton cakes are then pulverized, in which form they are placed on the market.

Cottonseed meal is frequently adulterated. If one is familiar with the genuine article, the difference can be easily detected. The pure meal is a light golden color, and should be free from black and brown specks. Hulls are generally used to adulterate the meal.

Linseed Meal

Linseed meal gives good results when fed to all classes of animals. On account of its concentrated nature it, of course, must be fed in moderate quantities, and will be found valuable to correct the deficiency of protein in some of our home grown feedstuffs. Containing a high percentage of crude fat it has a beneficial mechanical effect in rendering the passage of the other components of the ration through the alimentary canal less difficult.

This product is the residue left after extracting the oil from flaxseed with naphtha, benzene, or a similar solvent of oily matter. In the extraction of linseed oil by the old process, the flaxseed was subject to pressure. The new process admits of a more perfect removal of the oil from the seed; therefore, linseed meal obtained from the "new process" generally contains more protein and less fat than the "old process" meal.

Gluten Products

Gluten feed and gluten meal are two important by-products from corn. Unfortunately, these names are often confused. The terms are very much alike, and yet there is quite a wide difference in the composition of the two products. Gluten meal is very much richer in protein and fat than gluten feed, whereas gluten feed is considerably higher in carbohydrates than gluten meal.

Gluten meal is the residue, or part of the residue from the manufacture of starch and glucose. The process consists essentially in the separation, first, of the germ and hull from the starch and gluten; and second, the final separation of gluten from the starch. The residue may then consist of three products: a mixture of gluten, germ and hulls; a mixture of any two of these components, or a single component. In any case, the by-products are part of the original corn, but when prepared for market they differ from it, and from each other, in the amount of nutrients, and also in appearance. The entire residue is called gluten feed. It has a bright, yellow color and is more bulky than corn meal.

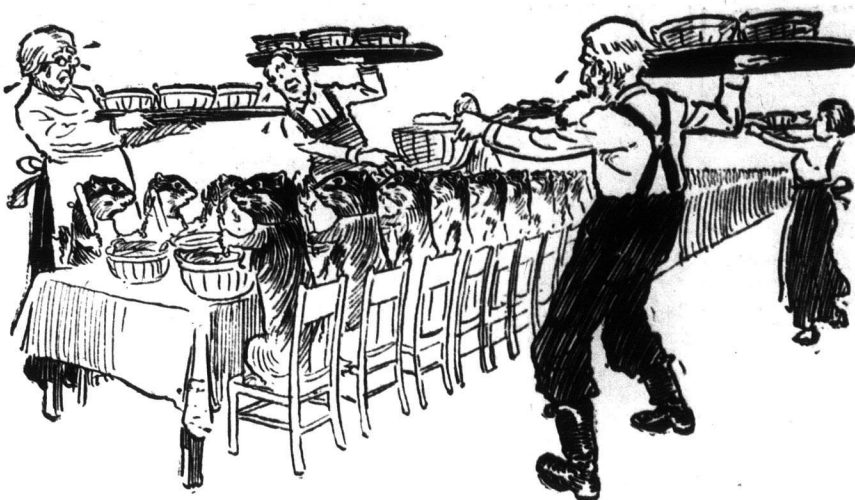
Ten Rules for Poultrymen

The ten following rules if observed will aid in increasing our production:

1. Keep more pure-bred hens of a good laying strain.
2. Keep one breed, the best you can get.
3. Select your breeding eggs from the best layers—the latest hens to molt in the fall and winter.
4. Select large uniform eggs of even shape and color.
5. Hatch pullets in February, March and April.
6. Keep plenty of green feed where the hens can graze it regularly.
7. Provide good feed and housing, and provide water in clean vessels.
8. Feed a variety of grains, such as wheat, corn, oats, and sunflower seed.
9. Feed a dry mash of corn meal, cottonseed meal, wheat bran and shorts or ground oats.
10. Keep a good scratch of straw and throw all grain feed in it to induce exercise.

Disappointing

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"Oh, it's another of those publications in which a caking good title is spoiled by the story."



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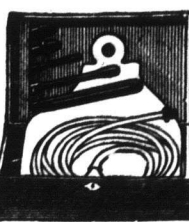
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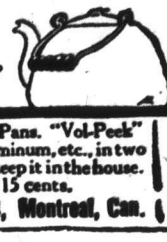
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