

Raising Poultry in America--Making It a Profitable Business

Most poultrymen use ground grain, or mash, mixtures in the ration supplied to their chicks and adult fowls. But there is a division of opinion regarding the best method of feeding it. A fair statement of both sides of the case is given in the following contribution:

BY PROFESSOR FREDERIC H. STONE-BURN.

GRAIN, in some form, constitutes the major part of the ration commonly fed to poultry. In practice, this is fed whole, cracked or ground. In the latter form it may be whole grain ground to the required degree of fineness, as cornmeal or ground oats, or only certain portions of the grain, as bran, middlings, gluten, etc.

It is quite probable that during the early days of the poultry industry in this country, the grain was commonly fed whole. Later, as the milling industry developed and byproducts became available, the latter were mixed with table scraps and other waste, and fed to the birds. Still later, special mixtures of ground materials, were made and mash-feeding became general. Today, one will scarcely find a flock of any considerable size which does not receive a meal of ground stuff virtually every day.

Advantages of Ground Grains.

There are many very good reasons for the use of mash mixtures.

First, finely ground material is probably digested more rapidly. It is quite possible that it is not more completely digested and assimilated than whole grain, because nature has provided our domestic fowls with a wonderful apparatus for grinding their food, and little, if any, passes unchanged through the organs of digestion. But laying hens and rapidly growing chicks require a great amount of nutriment so the rate of digestion is very important. If much of the slow work of grinding is done by machinery considerable time is saved.

Mash feeding is economical. The various byproducts of grain, as bran, gluten meal, middlings, etc., may usually be purchased at a lower price than the whole grains from which they are made in most cases, too, these byproducts are richer in the expensive nutrients than are the whole grains.

Mash mixtures may also be used as carriers for other materials, as table scraps, meat trimmings, vegetables and fruit waste, skim milk, cut clover, etc.

When properly made, the mash is bulky, distends the digestive organs and overcomes the danger of a concentrated ration.

The fowls enjoy a good mash, especially when it is fed moist.

A carefully compounded mash almost invariably increases the egg yield as compared with that secured from an exclusive whole or cracked grain ration.

In the case of growing chicks there is no doubt that the mash induces more rapid growth.

For the above very good reasons the utility poultryman, the one who is looking for maximum financial returns, should certainly adopt this method of feeding, especially for his stock which produces market eggs. There are some who hold that exclusive whole-grain feeding is desirable for breeding birds, claiming that better hatching eggs result. Exhibitors of certain breeds of poultry, in which hard, close feathering is essential, are also partial to the feeding of whole and cracked grains entirely. But these are exceptions.

Mixing the Mash.

In making up the mash mixture, one is influenced by several factors. As a matter of economy, the lowest priced suitable materials are used. As feed prices vary in different sections, one should study his local markets and buy to best advantage.

The mixture should be palatable to the fowls, in order to insure heavy consumption. It should be compounded as to be bulky, not highly concentrated or composed entirely of finely ground materials, as flour or middlings.

There are a number of standard mash mixtures which have been thoroughly tested and found entirely satisfactory under a wide range of conditions, and some of these appear below. It will be noted that these do not vary greatly in composition, but contain virtually the same materials, though in slightly different quantities.

The mash which has been used consistently in all the North American laying competitions and which has become extremely popular as a result of the remarkable results obtained in these events, is made up as follows:

	Pounds.
Wheat bran	200
Cornmeal	100
Gluten feed	100
Ground oats	100
Wheat middlings	75
Low-grade flour	25
Fish scrap	30
Fine beef scrap	30

This mixture seems to be satisfactory

regardless of the breed or variety of fowls to which it is fed.

The New Jersey mash, designed especially for the feeding of Leghorns, is highly recommended.

	Pounds.
Wheat bran	200
Wheat middlings	200
Ground oats	200
Cornmeal	100
Gluten meal	100
Cut alfalfa	100
High-grade beef scrap	100

During July, August and September, an equal amount of oil meal is substituted for the gluten meal, and when the stock has access to unrestricted quantities of fresh green food the alfalfa is gradually omitted.

The Cornell mash contains:

	Pounds.
Wheat bran	30
Wheat middlings	60
Cornmeal	60
Linseed meal	10
Alfalfa meal	10
Meat scrap	50
Salt	1

The following mash has been used with much success at the West Virginia experiment station:

	Pounds.
Wheat bran	55
Wheat middlings	30
Cornmeal	35
Oil meal	10
Beef scrap	25

It might be added here that the mash requires seasoning. The usual custom is to add fine salt at the rate of a half-pound to every 100 pounds of the mixture. This should be distributed throughout the whole mass, not left in lumps, as serious trouble may arise from this latter source. In fact, mashes should invariably be evenly and thoroughly mixed so that each hen will get her share of all the different ingredients.

May Be Fed Wet or Dry.

Whether it is best to feed the mash moist or dry is a question that cannot be answered in a word. The conditions obtaining on each plant must influence this.

Until about 15 years ago, virtually all poultrymen used the wet, or moist, mash. About that time some few started to feed the mash dry, and within a very few years this plan was widely adopted. Some observers seem to feel that there is a reaction and that a tendency is manifested on the part of many large operators to return to the moist mash. It may be sufficient to state that either method will give satisfactory results if properly used.

I have used both methods and have been successful with both. Under certain conditions, especially where I could personally attend to the details of feeding and had available a regular supply of table scraps to use with the ground grains, without the addition of other economical materials, or if dependent upon inexperienced help to look after the

feeding, I would certainly prefer the dry mash plan.

Fowls Prefer Moist Mash.

If you let the fowls choose, they will select the moist mash. They seem to prefer this to any other part of the ration. Whether they will lay better when so fed is a question which is open to debate. I will not attempt to answer it.

When mixing the moist mash the utmost care must be exercised to secure the proper consistency. It should be evenly moistened throughout, not wet in certain spots and dry in others, and the whole mass should be in a crumbly condition. Too much moisture makes the feed sloppy, unpleasant to handle and frequently a fertile cause of digestive disturbances in the flock. If too little moisture is used the particles of feed do not stick together. But better the latter than the former.

There is no evidence to warrant the belief that it pays to thoroughly cook the mash, a practice that at one time was not uncommon. At least the results of experimental work do not indicate that the cooked food gives better results.

However, certain ingredients of common mashes seem to be favorably influenced by the action of hot water. I would personally prefer to use hot water instead of cold when making moist mashes, preparing the daily meal sufficiently in advance of feeding time to permit it to cool before placing it in the feeding troughs.

Regarding the matter of the best time to feed the daily allowance of moist mash, successful poultrymen are not in accord. Some feed it in the morning, others at noon, still others at night. Excellent results have been secured under all three plans, which might indicate that the hour of feeding is of relatively minor importance.

Personally, I would feed the moist mash as the last meal of the day, because I have found that I can thus induce heavier egg production, keep the stock in better condition, and do the work more conveniently.

In order to economize time, the moist mash is given but once daily, and a full meal should be supplied at one time. If this is fed in the morning, or even at noon, the birds quickly fill their crops and have no incentive to take the exercise which is so essential to their well-being. I prefer to keep them hustling for their scratch grain during a large part of the day, then fill them up with the mash and send them to roost in that condition. On the average farm it will be found more convenient to take the time to attend to this work late in the afternoon than in the early morning, when many duties demand attention.

In the hands of an experienced poultry

keeper, one who knows just how to pare and feed it, moist mash is all right. But judgment must be exercised, as it is very easy to make and throw the flock out of condition. Uneaten material must be promptly moved and none left to sour. Constant care must be kept clean. Constant care must be paid to details all along.

Dry Mash Feeding

Under the dry mash system the ground grain mixture is fed through troughs or feeders which are all or the greater part of the time empty. In most cases the birds are permitted to help themselves at all times.

So far as the details of feeding are concerned, nothing could be more simple, one, no matter how inexperienced or negligent, can keep a supply of feed in the hoppers. Beyond that, the birds themselves do the work.

There is little danger of overfeeding unless the mash is too concentrated. The cause of the dry condition of the material the birds must eat it slowly, and do not relish it sufficiently to permit them to gorge themselves.

That this time and labor-saving works well is fully demonstrated by the fact that it is in general use at our agricultural colleges, on the farms of successful commercial farmers, where heavy egg-yields are secured. It is probably the most satisfactory feeding method under conditions.

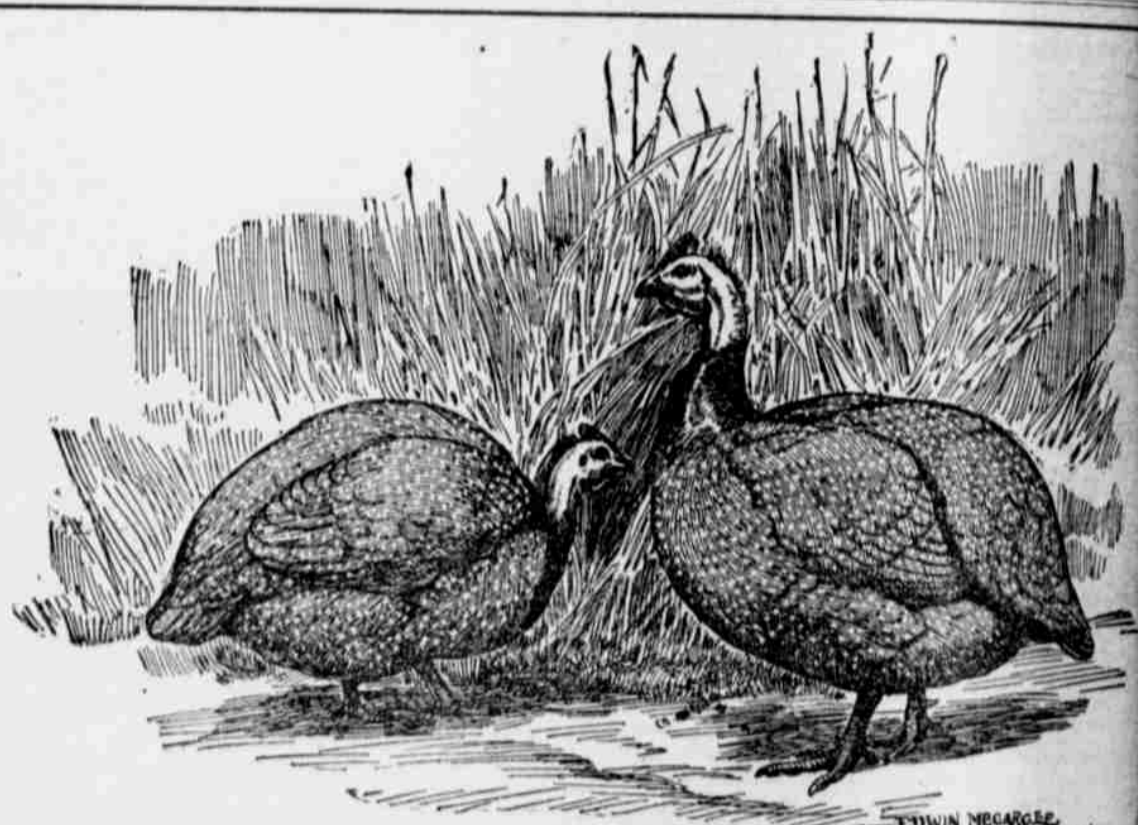
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Increasing Size of Fowls

If the fowls are inclined to be large, the breeder select a large male and large females, ignoring to some extent minor points. If the flock has a disposition to become short-necked, narrow-breasted, select a tall, broad bird with females similar in shape. The male should be robust, with good comb and wattles and these well developed.

The size of the feet and legs is an indication as to vitality. No small feet and legs will produce healthy youngsters. Avoid breeding long and snakey heads and slow in feathering up and growing. A male bird inclined to be scrappy is to be avoided. One that is not so pugnacious, develop the egg qualities, select birds with deep breasts, broad backs and a full abdomen.

The wheat crop of Uruguay last year suffered serious damage from excessive rains. This makes the consecutive poor crop, last year's harvest damaged in the same way.



Guinea fowls are commonly found in pairs or small flocks on our general farms in all parts of the country, and to a large extent on commercial poultry plants.

Among poultry-keepers they are valued as guards against hawks, which are constantly searching for chicken dinners. When marauders appear the guineas take wing and actually attack any hawk which comes too near the premises.

If these interesting birds are of sufficient use in this way to justify one in maintaining a flock, they should possess profitable stock under existing conditions because of the great demand for them in our markets. Broiled guinea chickens are a staple item on the bills of fare at many high-class restaurants, and are coming into quite common use in tables, especially those of the wealthy. In fact, these odd fowls are largely depended upon to take the place of certain species which were formerly used largely, but are now most difficult to secure.

The guinea fowl is a native of Africa, and has been changed but little, if any, under domestication. It is said that large flocks still to be found wild in certain parts of Africa.

The Pearl guinea, illustrated herewith, is the most common variety. The name is taken from the small, white dots, or pearls, which the gray plumage is marked. There are also strains of pure white birds, and not infrequently specimens are seen with both pearl and white feathers.

In general appearance the sexes are very similar, and the amateur may have difficulty in distinguishing them. The male stands out wider than those of the female, and frequently shows deeper and richer color, especially on the neck. His brilliant crest is only by the female.

Guinea fowls are wonderfully hardy, and will usually roost out in the trees, regardless of the cold. When permitted to do so, they will stand side, save during extremely cold weather. The hens lay during the Spring and early Summer months, the natural breeding season. Guinea chicks, or "keets," are strong and active when hatched, reasonably hardy and not difficult to rear when given a little of care.

A flock of these active birds can inflict severe damage on growing crops, but this is not as important as would seem at first thought, because of the vast number of injurious insects which they pick up. In this way they really are a great help to the farmer, and they convert insects and crops alike into a salable product.