



#### Forgetting the Salt.

It is a very easy matter to forget to salt the cows, as every person that has had the care of dairy cows knows. Many a farmer realizes the need of the animals for salt and intends to give them salt at regular intervals. Frequently he does not awake to the fact that the cows are not getting enough salt till he notices a flat fresh taste in the milk, and he at once connects this with the absence of salt. This flatness is supposed to be the only detriment to the non-salting of the cows. But tests made at different times show that the volume of the milk is decreased by this withholding of the mineral that every animal craves. At the Mississippi Experiment station the experiment was tried of keeping cows without salt for a number of weeks. Three cows were deprived of salt for four weeks. The first two weeks the milk was not weighed, as it was likely that the cows would not at first notice the loss of the salt by decreasing their milk. During the two last weeks of the period, however, the milk was weighed and was found to be 454 pounds for the period. The salt was given to them again and the milk weighed for the ensuing two weeks, when it was found to amount to 564 pounds. This was a gain of 110 pounds of milk due to the salting. Doubtless the best way to give the salt is to place large lumps of rock salt where the animals can lick them at leisure. There will then be no danger of the animals eating too much at any one time or of poultry getting at it and eating enough to kill them. The love of all animals for salt is shown by the habit they have of frequenting places where salt is to be found. In the early history of the country, when hunting was a business as much as any other, the hunters used to lie in wait in the places where salt streams flowed from the mountains and left crystal deposits on the rocks, for the hunters knew that such places were frequented by animals from far and near for the purpose of licking the salty rocks. The processes of digestion require salts to assist them. They can be carried on without salt, but always at a disadvantage.

#### Butter Production This Year.

Butter production this season is running along about the same as last year, certainly not ahead. The West is making a little more butter, due to the good conditions of the pastures, but the Eastern states are making a little less. The surplus in the West does not more than offset the deficiency in the East. As butter moves readily from one great center to another there is no reason why prices this year should drop below those of last year. The conditions during the present month will tell greatly on the production of butter. If the month remains normal as to rainfall the production will be as great as last year. Up to the present time the season has been a normal one. In some parts of Illinois and Wisconsin it has been several degrees cooler than ordinarily, and this has been in favor of the increased production of milk and consequently of butter. Prices show a tendency to be steady, and are now likely to remain so, gradually rising during the next six weeks.

Experiments at the Wisconsin station showed that constantly changing milkers increased very slightly the amount of milk yielded, but that the difference was not great enough to become an object worth attention.

Pasteurization of skim milk has greatly increased during recent years, as this results in keeping the milk sweet for a longer period than it would otherwise.



#### Temperature of Sitting Hens.

A close observer of poultry says that hens differ greatly as to the temperature of their bodies at brooding time. Some hens have a high temperature, and such are good producers of chicks; as the heat is very necessary for the work of developing the chicks. A hen with a high temperature will leave her nest for a considerable time each day, and still the results of her brooding be of the best. There are other hens that have a low temperature and are very poor producers of chicks, whether they stick to the nest all the time or not. We have not made a study of this matter and do not know how much truth there is in the opinions of the so-called close observer. Testing a number of hens by means of a reliable thermometer should shed some light on the problem.

#### Turkey House.

In the accompanying cuts are shown two views of a turkey house, illustrated by the United States Department



TURKEY HOUSE (FRONT VIEW). of Agriculture. In the front, near the top, is seen a ventilator, which should always be open except in exceptionally cold weather. The roosts are placed near the front of the house and are on the level. The back view shows the slide door, which should be left



TURKEY HOUSE (BACK VIEW). open during the day, that the turkeys may go and come at pleasure.—Farmers' Review.

#### Geese.

The last census reported 5,600,000 geese in the country, and about forty times as many chickens. This shows the relative importance of the goose raising industry to that of the chicken raising industry. It is, doubtless, true that it would pay our farmers to raise more geese than they do. Goose raising has not largely passed into the hands of specialists, as has the industry of raising ducks. The goose requires a great deal of room to do well, and for that reason the farmer has the advantage over the specialist. Most of the geese in the country are raised on farms, but generally in small flocks. They use a large amount of pasture and this is one thing in their favor, as fields of clover and alfalfa can be turned into goose meat at little cost. The goose feeds very largely on grass, but needs water to swim in to do the best.

The fact that the goose does not lay a large number of eggs, and that it requires a good deal of room, have conspired to render the goose popular with American farmers. In spite of this, however, the statistics show that there are more geese in the country

than ducks. The goose could be used much more advantageously on some farms than any other domestic bird. There are on a good many farms marshy fields that are too wet for cattle or other farm stock that would make acceptable pasturage for geese. Some of these fields could not be drained without great expense and some of them lie so low that it is doubtful if drainage would ever be effective. This is just the place for a goose run, the frequent pools of water giving them the places necessary for swimming and hunting.

Geese raisers declare that geese do not thrive so well in large flocks as do ducks. The "why" is not explained. There may be no "why" except lack of care and crowding in too close quarters. It is probable that it is due to decreased opportunity to find food, especially where the birds have to hunt much of it themselves. The larger the flock the greater in proportion will be the amount of food the farmer must give, for the number of bugs found will be less per goose. Geese do not require much attention, and that should make them popular with the American farmer, who has more area than available labor. After the goslings are a week old they show a decided determination to take care of themselves, if a good range is given. Perhaps this characteristic has been taken too much advantage of by some of our farmers, and accounts for the lack of success with geese in some instances.

The geese of the country comprise a good many mongrels, the parents of which were imported so long ago that their breed names have been lost. The most profitable breeds are those that have been introduced in comparatively recent years, such as the Toulouse, Embden, Chinese, African and Egyptian. Canada or Wild Geese are being raised to some extent. The farmer that goes into goose raising will find it will pay him better to grow the distinct breeds than to raise geese of no known breeding.

"Quail on toast" is a common delicacy that is in repute with epicures. Some of them were shocked when they learned that squabs were being palmed off on them for quail. They will perhaps be more shocked when we tell them that now the "palmer" have gone a step further and are palming off very young chickens for squabs. Recently in visiting a poultry yard we were told that a dealer had been round and paid good prices for chicks just beginning to lose their down. He said he was buying them to sell to the market men for squabs, who would sell them to the restaurateurs and hotel men, who would serve them to the customers as quail along with toast. Now can some one find something to palm off in the place of the unfeathered chick?

The color of the chick at time of birth does not indicate the color of the mature fowl that is to grow out of it. This leads the amateur to conclude that certain chicks from eggs that he purchased as from pure breeds must have been wrong. The amateur will have to wait till the chicks have matured before he can be certain of the variety they are. A chick entirely black is not common, and the chicks of black breeds are generally canary-colored on the under part. The colors come out right when the feathers grow.

Many a farmer has weakened the constitutions of his animals by feeding too heavily of corn. This feed makes fat, but when fed in too great abundance deprives the animal of vigor and lessens the breeding qualities.

The poultry raiser needs to concern himself more about the conditions that surround his flock than about the breed, though the breed is important. Bad conditions will spoil the results from the best of breeds.

Chickens are like money; they can always be disposed of at a fair exchange. The prices for fowls are quite constant.



#### Bacteria in Soil.

A bacterium is such a small thing that the human eye cannot detect it. It takes the microscope to bring out this minute form of life. It takes some thousands of bacteria to do the work that is done in a single tubercle on the root of a leguminous plant. Nevertheless, small as they are, bacteria are of immense importance to the farmer and often the success or failure of a crop will depend on the kind of bacteria there is in a soil. The kind of soil and its physical structure also have a great deal to do with the abundance of bacteria. It has been found that a soil that is rich in humus, that is, has much vegetable matter in it, is better suited for the development of bacteria than soil that has in it very little humus. It has previously been believed that the only advantages in having the humus was that it was a source of nitrogen and that it also held moisture and kept the ground from drying out. The third good quality must now be added, that of making bacterial life more abundant. Whether this connection between the humus in the soil and the bacteria is important because the humus furnishes food for the bacteria or whether it is important because the humus keeps the ground light and moist and lets the air work through it easily, we do not yet know. Both are reasonable suppositions. We are sure to understand more about them in the not distant future. It is now certain that we can introduce new kinds of bacteria into soils and that we can by doing this greatly increase the productive capacity of the farms for certain crops.

#### Deep or Shallow Soils.

Ordinarily it is desirable to have a deep soil, that the roots of plants may strike deep. The latter is a desideratum for the reason that a deep rooting plant is less affected by the droughts than any others. We see this in the case of some trees, which have tap roots and are seldom affected by the dry weather. The shallow soils are first to respond to drought and sometimes they are the slowest to dry out, when the weather is wet. The deeper the soil and the more it is loosened up the greater the zone of earth that will be subject to the operations of the bacteria that add nitrogen to the soil. One way of deepening a soil is to plow it as deep as possible with a common plow and then put on a crop of deep rooting legumes. There are some legumes that do not send their roots very deep, such as cow peas, and there are others that send their roots to the greatest possible depth into the soil, such as the clovers and alfalfa. On multitudes of farms a soil will remain shallow whatever the crop unless the land is drained. When this is done the drains should be as deep as three feet. Then the frosts will work in deeper than they otherwise will and the air will be present on the displacement of the water. Subsoil plowing is sometimes effective and sometimes not, but it should not be undertaken unless there is to be a considerable benefit received from the operation, as it is an expensive one.

The fall of the year is the time to select the seed corn, and this should be stored in a place that will keep dry and yet not evaporate its moisture too much.

Good seed only can produce good crops, no matter how rich the ground may be or how much good cultivation may be given.

Many plants "run out" because the seed has been carelessly selected from year to year.