

should be present to replace that which the plant draws from the soil, and by which its strength and vitality are sustained."

#### EFFECTS OF DRAINING.

1st. It removes the surplus water and prevents ponding in a soil. It should be noted, that, if the drains are used, they should be of sufficient size to remove the surplus water in twenty-four hours.

2d. It prevents the accumulation of poisons in the soil, which result from stagnant water, either above or under the surface.

3d. The ammonia is carried down into the soil by the descending rain, stored for the plant food instead of stopping on the surface and passing off by evaporation, or borne away with the surface waste.

4th. It deepens and enriches the soil by opening the ground, allowing the roots of the plant to go deeper into the earth decaying after harvest, they form, this subsoil into surface soil, providing resources for the plant more reliable, and making the same ground better for a greater length of time.

5th. It avoids drouth, by enabling the plant to thrust its roots deeper into the soil.

6th. The drainage increases the temperature of the soil. In some cases the average has been increased as much as ten degrees.

7th. By securing uniformity of condition for plant growth, it hastens the maturing of the crop from ten days to two weeks.

8th. It enables the farmer to work his land in wet or dry seasons, and insures a return for the labor bestowed.

With our land thoroughly drained we can carry on the operation of farming with as great success and as little effect from bad weather as any business which depends on such a variety of circumstances. We shall have substituted certainty for chance, as far as it is in our power to do so, and made farming an art rather than a venture.—*Ex.*

**SALT AS A MANURE.**—The Massachusetts Agricultural Society concludes that salt, as a manure, has a property of hastening the maturing of all grain crops. That wheat on salted land will ripen six to ten days earlier than on unsalted land, all other conditions being equal; that it increases the yield from twenty-five to fifty per cent.; that it stiffens the straw and prevents rust and smut; and it checks, if it does not entirely prevent the ravages of the chinch bug. The quantity used may be from 150 to 300 pounds per acre, but the greater quantity is the better.

THE most valuable of all information to spread among the cultivators of the soil is a sound and thorough knowledge, not a blundering and superficial claim to it, of everything affecting the growth of crops, and the best modes of meeting intelligently the numerous enemies which sometimes sweep away the farmers' profits by millions. It may sometimes require years to reach all the facts on which practice may be founded, and thorough, deliberate and wise conclusions are better than superficial and blundering haste.

GOOD roots are evidences of civilization, and a true index of the thrift and public spirit of those sections which they traverse.

Why will you let your horses suffer from lameness when you can get Kendall's Spavin Cure? Read their advertisement.

## POULTRY.

### POULTRY ITEMS.

There are people who think raising poultry and eggs for market is small business; anyway; let all such meditate on the following figures:

Over 20,000 car-loads of live and dressed poultry are carried into New York city yearly, and 25,000,000 of eggs go into the same market. According to the best estimates, the United States produce 800,000,000 of eggs annually.

France exports eggs yearly to the value of \$6,000,000.

In Great Britain the demand for poultry and eggs exceeds the supply.

The wild parulane that grows in all gardens during the summer months makes excellent green food for fowls that are confined. Chop it up and mix with scalded corn meal.

One bushel of corn and oats ground together and fed to poultry will produce fifteen pounds of flesh. How many pounds of pork would the same quantity of food produce?

A cross between fine-blooded Light Brahmas and Partridge Cochins will produce the largest fowl known.

After chicks are a month old cracked corn and wheat screenings are better for them than dough.

Exhibition poultry is generally a poor investment for breeding purposes. They are generally stuffed for some time previous to the show, in order to attain the greatest possible weight, for other points being equal, the biggest bird gets the prize.—*Prairie Farmer.*

### DISEASES OF POULTRY.

Fowls are particularly liable to colds, as the air-cells occupy so large a part of their physical framework. Where there is a slight cold, put the fowl in a warm, sunny place, give warm food, and nothing more will be needed. The same method should be pursued in hard colds. If there is much fever, put four drops of tincture of aconite into the water, or sweeten it, and make it a little sour with sulphur or nitric acid. Add to the food a pinch of ginger or cayenne pepper. If there is much swelling about the head, a mild purge will be useful. The homœopaths give mercur virus for slight colds, ephrasia for more serious ones; each thrice daily, adding aconite for the fever.

A roup may only begin with catarrh, and, like roup, catarrh and bronchitis, sometimes cause death. But how are we to know such cases from roup? Simply by the offensive discharge of the beak which characterizes the latter disease. When the fowl has a discharge at the beak that is not offensive, you may call it a simple catarrh or common cold. When the odor is bad it is roup. No better distinction is possible in the present state of knowledge of fowl ailments.

The difficulty in telling these maladies apart will suggest to the careful poulterer prompt isolation of cases where he is not certain.

Cough may come from parasites in the air passages. This applies more particularly to the sneezing effort caused by the gape worm in the throat of young chickens. A spasmodic cough, lasting a whole day even, is reported as having accompanied the opizootic. It yielded under a treatment with potash.

Consumption or tubercular deposits may be suspected where a cough does not yield to treatment, and admits of no other explanation. Cod-liver oil

in barley meal would be the treatment if anyone really wanted to save consumptive fowls.

Asthma is nothing more than roup, as far as we know, and very likely this name may have been given to cases of that sort.

### KEEPING EGGS.

In the last week's issue of the *Rural Times* (agricultural department edited by D. Kennedy, Esq.), we see the following on keeping eggs, a practical test which is worth knowing.

About a year ago I put down a quantity of fresh eggs in various ways for the purpose of telling the merits of each method. The lime and salt mixture, consisting of one pint of lime, newly slacked, and one pound of salt, well stirred with a ten-quart pail of water, kept the eggs very well for six months, when the whites began to become clouded and the yolks dark and too tough to beat up. The mixture of beeswax, melted with twice as much olive oil, smeared, while warm, over eggs, kept the eggs well for a year, and some of the eggs yet unused, are still good. Those eggs which were thus prepared and packed in air-slacked lime, kept better than others packed in oats; the latter tasted considerably of the rancid oil, which seems to be absorbed.

The eggs covered with melted paraffine, kept the best of all, and those of them that were put down in weak brine, in which they sank to the bottom, kept better than others placed in dry salt or in plaster. Since then I have become acquainted with a German preparation of salt, saltpetre and borax, which however, is patented in America. I have some eggs put down in this for five months, and they are equal to fresh eggs, even when boiled for eating, a very delicate test, as eggs very soon exhibit any staleness when so cooked. An omelette made of eggs put down in this solution was very good, and so was one made of eggs a year old kept in paraffine, as was also a sponge cake made of beaten eggs. Paraffine is easily removed from the shells by holding them in hot water for a short time. The salt and lime mixture and the German salt both keeps the shells in perfect condition, and simple rinsing only is required to cleanse them. I think the German salt promises to be the best, but it is outrageously dear.

### TO CHOOSE POULTRY.

In a young turkey, the toes and bill are soft. A young goose is plump in the breast, and the fat white and soft. The feet are yellow, the rest of the legs thin and tender. Boil it an hour before roasting. Young ducks are very tender under the wings, and the web of the foot is transparent. The best fowls have yellow legs; if very old, the feet look stiff and worn. Pigeons should be quite fresh, the breast plump and fat. Fowls, in a general sense, mean all kinds of poultry, but in a limited view one species of bird. We distinguish this kind in cookery, as the chicken, capon, pullet, cock and hen. Chickens from their age can not be otherwise than tender. Capons should have a fat vein under the wing; thick belly and rump; comb short and pale; spurs short and blunt and legs smooth. Pullets are best in the spring just before they begin to lay. Cocks should have their spurs short, legs smooth, and comb short, smooth and bright color. Hen's legs and comb smooth, and full breast. Black legs are the best for roasting and entrees, and white for boung.

## DAIRY.

### MILK AS A CURATIVE AGENT.

Milk has the power to absorb obnoxious gases and effluvia from the air around it, and it should not be forgotten that the purest butter that ever was made may become tainted and poisoned in one short hour by objectionable surroundings.

Comes now the question of the digestibility of milk.

A glance at a table of the composition of cow's, ass's and goat's, would naturally convey the impression that that of the goat is the richest. This is so, but it is on that account the more difficult of assimilation. It cannot, therefore, be recommended for the very delicate, but it is a grand adjunct to the diet of those who are just beginning to regain strength after long, severe illnesses.

A residence at the seaside to induce a healthy appetite, and a diet consisting largely of goat's milk, would restore many a convalescent far more speedily to health without the aid of drugs, than anything I know of.

A course of goat's milk may often be taken with advantage in the autumn by those who suffer much from cold during the winter months, but who do not care to take cod liver oil. The extract of malt would go well with it as a tonic adjunct. The milk ought to be taken on the principle of little and often, not drunk wholesale.

Ass's milk contains a larger proportion of water, more lactine, and less oil and casine. This is the reason it is so easily assimilated, and is so often prescribed by the physician for patients who have delicate digestions. It is possible that it may be of a somewhat too laxative nature for some, but this is easily corrected.

Cow's milk most invalids can take. It is often an advantage to give it in conjunction with a little aerated water; and in cases where it has a tendency to turn sour or disagree with the stomach, it should be mixed with a little lime water. It should be remembered, however, that lime-water must not be taken for any length of time without intermission, or evil results may follow. Cream, if taken fresh in the morning, and if it can be well borne—which it usually can—is an excellent tonic and restorative. It should be taken with breakfast, and the fresher it is, and the more good and pure the milk from which it has been taken, the better will be the result. The cream of goat's milk is probably better than even that of the cow.

Skim milk is very nutritious, but, of course, being deprived of a large proportion of cream, it is not calculated to sustain the animal heat so well.

It is not every invalid who can take buttermilk; but it has, nevertheless, much to recommend it as a cooling nutritive summer drink. I might also claim for it tonic properties; however, there is no doubt that, taken an hour or two before any of the ordinary meals of the day, when a feeling of emptiness and fatigue is experienced, it is of a great service. The delicate should have it as fresh as possible.

Milk, talking physiologically, is demulcent, and therefore of great service in many cases of cough and lung irritation, as well as in dyspepsia. I need hardly say a word about the virtue of milk as a medicine for those suffering from consumption. In this case it ought to be drunk warm from the cow; it is certain then to be unadulterated. Too much of it can hardly be taken, so long as it agrees.

In all kinds of internal irritabilities,