

Moulting.

Observations extending over many years lead A. G. Gilbert to reach the following conclusions, of direct bearing to farmers, on account of the relationship between moulting and egg production:

1. That yearling hens usually moult earlier and easier than older ones.
2. That moulting is more gradual in some cases than others.
3. That the progeny from parent stock that have moulted during summer, in most cases have moulted at the same period.
4. That moulting hens are much benefited by a run in a field where clover and insect life may be found.
5. That, where moulting fowls are confined to limited quarters, meat in some form and green food should be supplied.

It is best, says Mr. Gilbert, to have the moulting period in the summer months. The summer moult usually lasts from eight to ten weeks. James Shackleton, a well-known authority, contends that, by feeding specially-prepared rations, this period may be shortened. The following treatment has been successful in our department for several years. During the early part of July—after the breeding season is over—the fowls were placed on half the usual quantity of rations for 15 or 20 days. The effect of this treatment was the stoppage of egg production and the loosening of the old feathers. At the end of 15 or 20 days, the full rations were resumed. A little linseed meal may be added to the mash, with benefit, on the resumption of full rations. Before the beginning of operations to bring on the moult, the cock birds were removed from the breeding pens, and placed in compartments by themselves. The hens were then allowed to run in small fields where they could find insect life, clover, grass, etc. In the breeding of fowls during moult, care should be observed that they do not become too fat. The fowls are more apt to become overfat, from too generous feeding during the moult than after they have got over it and recommenced laying.

Six-months Buff Leghorn Record.

Editor "The Farmer's Advocate":

I have been a reader of "The Farmer's Advocate" for a long time, and have never noticed a record of Buff Leghorn hens, so I thought I would write you my experience with that strain, as I think there are few hens that can beat them. I have 14 Buff Leghorns, and from the 10th of March to the last they laid 150 eggs; in April they laid 300 eggs; in May they laid 276 eggs; and in June 220 eggs. I am sorry I have not kept a record of the amount they laid from the first of the year, as they never stopped laying since a year ago last April. I was just keeping a record of what I sold from the first of January. In January I sold 9 dozen; in February, 7½ dozen; in March, 9 dozen; in April, 15 dozen; in May, 13½ dozen; in June, 12½ dozen; and the remainder of eggs were used at home or set, as I had about 45 chickens. I sold six young roosters when they were seven weeks old, which weighed 3½ pounds a pair, at 20c. a pound.

The principal feed we feed the fowl is barley, and I do not have a certain amount—I just feed what I think they need. Last winter we had not a good henhouse for them, so we dug a hole in the ground, built it up with old boards, and put a window in the south; we then covered it with manure, and banked it all up with sods, which kept it warm.

T. H.

GARDEN & ORCHARD

Ether to Hasten Strawberry Cropping.

Last summer the agricultural world was astonished to learn the results of electricity in promoting plant-growth, applied in field conditions, under the supervision of the eminent English scientist, Sir Oliver Lodge. Now comes a despatch announcing that an experiment has recently been made, at the Wisley Research Station of the Royal Horticultural Society, England, by F. J. Chittenden, director of the laboratories, who, it is stated, has proved that, by etherizing strawberries, the ripe fruit might be obtained ten days earlier. The method followed was to first place the plants in pots during July, and leave outdoors until the end of December, then place half of them in an air-tight box, in the bottom of which was a small glassful of ether, which diffused rapidly. The etherized plants were then placed alongside the unetherized in a greenhouse, and immediately began to make growth, ripening about ten days before those untreated.

The idea is not entirely a new one, as the method has been previously employed in Europe in the forcing of lilacs, and Prof. John Craig, of Cornell University, has tried it on other plants,

with results that attracted newspaper attention two or three years ago. It remains to be seen whether etherizing will prove commercially advantageous, except, perhaps, under very special conditions, as in the growing of early English strawberries under glass, but, scientifically, it is worthy of our interest.

Humus from Cover Crops.

One of the greatest advantages of a cover crop is the constant storage in the land of the organic or decaying animal and vegetable matter, usually known as "humus." In many soils the lack of humus permits the best elements of fertility, no matter in what form applied, to leach out and go to waste. Sometimes they merely percolate to the subsoil, but even there they are of little value to most crops, for surface-feeding crops do not reach down to the subsoil in search for rich humus, or fertility that has sunk there partly because the surface soil was too open and porous.

The cover crop plants the humus in the surface soil, and thereby holds the fertilizing elements of potash, phosphoric acid and nitrogen. They are retained in a position where the roots of the next plants can most readily reach and utilize them. Any cover crop will do this work. Some, of course, answer the purpose much better than others, but a crop that furnishes an abundance of green foliage will, in time, fill the soil with humus, which gives strength and vitality to plants. It may be said to provide necessary fertility to the earth, and to make it rich in possibilities. When any land is cropped steadily year after year without any new humus being added, it becomes lifeless, and no amount of artificial fertilization will wholly compensate for the loss.



Ordinary Rolling Coulter, Used on Cultivator to Cut Strawberry Runners.

In the orchard, one of the best cover crops is crimson clover, where it winters well, to be plowed under in spring, and hairy vetch, where crimson clover will not thrive. Vetch makes a big growth, and if left on the ground to decay, will not reseed itself. Seed is, at present, somewhat expensive, but not unreasonably so. Farmers can plant it lightly at first, and then raise their own seed.

To those whose land is so porous that a vast amount of fertility always percolates through the surface soil, the best advice that can be given is, plant a cover crop regularly, and the results will surprise you.

LAWRENCE IRWELL.

New York State.

[Note.—In most parts of Canada crimson clover does not winter very well, hence, hairy vetch, alfalfa or red clover is better for cover-crop purposes.—Editor.]

Ontario Fruit Report.

The Horticultural Branch of the Ontario Department of Agriculture issued, under date of July 12th, a comprehensive report relating to the Ontario fruit crop.

The strawberry crop was expected to be practically over by the end of last week. The crop this year was a good one, and prices in some cases fell pretty flat. At the end of the season fancy berries only realized from 7c. to 8½c. The returns of the shipments of strawberries by the St. Catharines Association to the Western markets are nearly all in. Those sent by express, and which arrived in good condition, netted the growers \$1.50 per crate. These results may be considered encouraging, and much better success may be looked forward to next season. As these

are the first and only experimental shipments made by the association, they have every reason to be congratulated on their initiative and success.

The cherry crop promised to be very good. The Sweets and Richmonds were getting off rapidly, and the Montmorency were in full picking last week, and when the northern sections commence to ship, cherries should be very plentiful. Sour cherries were fetching from 60c. to 75c. per 11-quart baskets; small Sweets, from 75c. to \$1, and fancy Sweets from \$1 to \$1.25. A quantity of sweet cherries have been shipped into the Toronto markets, which were not ripe enough, and the market has strongly discriminated in favor of the fit fruit; hence the low prices.

The raspberry crop promised to be from fair to good. However, the prolonged dry weather had commenced to show its effect. Some of the canning factories were contracting at prices ranging from 7c. to 9c. per quart.

The currant crop promised to be a good one, and was already on the market.

Benzoates as Fungicides.

Editor "The Farmer's Advocate":

During the last two or three seasons, Herbert H. Dow, General Manager of the Dow Chemical Co., of Midland, Mich., has been experimenting with Benzoates as fungicides, on his orchard. Having had considerable experience with Benzoates as food preservatives, Mr. Dow concluded that Benzoates should also kill any fungus or bacteria on unripe fruits; consequently, during the season of 1906, when a crop of plums began to rot when only about two-thirds grown, Sodium

Benzoate was sprayed, and, although the spread of the rot was entirely stopped, the Sodium Benzoate, being exceedingly soluble, was so easily washed off as to necessitate spraying after each rain. This led to experiment with the more insoluble Benzoates, and the calcium salt was found more satisfactory.

Experiments during the seasons of 1907-08 have shown Calcium Benzoate, used in conjunction with a very weak Bordeaux, to be very effective; also, this mixture was found to adhere much better than ordinary Bordeaux. The most effective mixture is made as follows: One

pound copper sulphate is dissolved in 10 gallons water, and to this is added one pound Calcium Benzoate dissolved in 10 gallons water. When well mixed, one pound of lime is added, and water sufficient to make one barrel (40-42 imperial gallons).

One very prominent authority (Thorpe) gives the relative efficiency of a number of different fungicides, and according to this table, one part of Sodium Benzoate to 2,000 parts of water, will prevent all fungous growths; while, to accomplish the same results with Copper Sulphate, one part to 133 of water is required. Calcium Benzoate would be approximately the same strength in fungicidal value.

For potato scab, soaking the potatoes in a solution of one ounce Calcium Benzoate to a gallon of water (for three or four hours), is highly recommended, and the Michigan Agricultural College reported a higher yield where Benzoate Bordeaux was used as a spray, than where ordinary Bordeaux was used.

Benzoates are not poisons, and where an insecticide is desired, as well as a fungicide, Calcium Benzoate has been used with Lead Arsenate, and adheres exceedingly well to the foliage, giving splendid results.

Toronto, Ont. W. H. VAN WINCKEL.

[Note.—Should any of our readers desire samples of Benzoate for experimental work, no doubt they could be obtained from the writer of the above article, whose address is 118 Van Horne St., Toronto, Ont.]

E. C. James, Deputy Minister of Agriculture, is expected home about the end of August, from his European trip, in the interest of colonization work.