FARMING, LIVE STOCK, HORTICULTURE AND EVERYTHING OF FARM INTEREST

O. A. C. INCUBATORS WILL HATCH 7000 CHICKS FROM CHOICE STOCK

Department's "Homozygous" Rooster Imparts Wonderful Egg-Producing Power to His Progeny—Problem of Experts is to Prevent Best Birds From Killing Themselves by Over-Production.

Prof. W. R. Graham, B. S. A., and his staff at the Ontario Agricultural College are being kept busy by a rush of spring work for their eggs to pack for hatching and for marketing; incubators show by the glow of their lamps that they are there for business and not for ornament and the brooders are already chirping with fluffy youngsters.

Great changes have taken place in the buildings. The old lecture and office building is to be moved and to form a residence for teamsters or other employes, while a fine three-storey brick building has already been erected to take its place. This is equipped with an elevator, has airy, spacious lecture rooms, egg rooms, and offices. The heating and plumbing arrangements are the very best obtainable and the whole building is, in fact, a great improvement on pre-existing conditions. It will greatly facilitate not only the practical work done by the staff and graduating classes, but will also enable the largely increased classes of students to be handled to better advantage. Prof. Graham was modestly reticent on the work being done by the department but the facts were patent and The World had no difficulty in obtaining an insight into such phases of it as should interest the public.

Leaving the $30,000 building, on the second floor of which countless thousands of eggs, each bearing the number of the pen from which it came and the number of the hen that laid it, were being sorted, a walk round the various houses, the yards of which were alive with birds revelling in the spring sunshine, showed that the stock of every breed kept were in excellent condition, in fact, a healthier, brighter lot of birds it would be hard to find anywhere. Pre-eminent were the "Barred Rocks," the bred-to-lay strain, which has made the college famous. But White Rocks, Buff Orpingtons, Anconas, Leghorns and White Wyandottes seemed to run them a close second. There are some thirty or more breeds kept and a great deal of experimental crossing is being done. Particularly interesting is a cross with which Prof. Graham has been working for some five years and which he hopes will be a suitable breed for New Ontario. Not to enter into the minute technicalities of mating, these are a Sussex-Brahma cross which has the Brahma coloring, mated to a cross of the Cornish Indian Game with the White Rock. The resulting bird is white, is practically comb less as regards the females, is a good meat producer and has a tendency to large egg-production. These birds are already breeding true among themselves but have not had sufficient work put upon them to reach the standard of all-round perfection expected of them. The fact of their combless ness should make them excellent birds for cold districts, for as every poultry keeper knows, there is nothing like a frozen comb for checking winter laying.

The Sussex-Brahma cross itself, which has had many years devoted to it, gives us a clean-legged bird, which is more active, a better layer and a superior mother than either of the parent breeds.

It is not the policy of the department to give free advertising by recommendation of any one make of incubator, but the incubators chiefly in use are the Chatham, Cyphers, Prairie State and Candee. The use of the latter for pedigree hatching shows the modern tendency towards larger incubators, the machines holding some 3000 eggs. The use of large incubators necessitates the use of larger brooders, and the writer noted that experiments were being conducted with three or four types of large brooder, some of them heated by coal stoves. It is expected that some 7000 chickens will be hatched this year from pedigree stock of various breeds and strains.

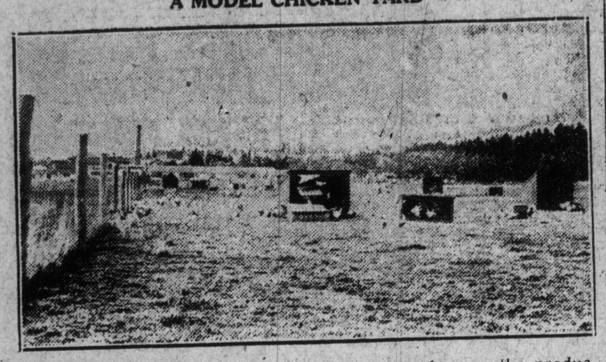
The department is fortunate in the possession of that "rara avis," a homozygous rooster, by which is meant a rooster which will without fail hand on the quality of great egg production to his daughters, even if he is mated to a hen with inferior laying qualities. The breeding of such a rooster is a work of years and entirely beyond the power of the ordinary poultryman. It has, however, been advanced by Dr. Raymond Pearl of the Maine Agricultural Experiment Station, that such homozygous birds should be raised by the colleges and distributed to various districts for use by the farmers. That this would inevitably greatly improve the standard of egg-production thruout the country is evident, and with the advancement of poultry science and government extension work the day when such a course is taken will, no doubt, soon be with us.

Strangely enough, one of Prof. Graham's greatest problems this past winter has not been to get eggs, but to prevent some of his best birds from killing themselves by over-production. In fact, more mature birds are stated to have died from this cause than from any other. The yolks are formed inside the hen faster than the oviducts can place the whites, membranes and shells around them. Consequent derangement of the oviduct leads to death. There is, however, no cause for alarm among owners of high producing strains, for such deaths are not likely to occur with any but excessive layers, and the man having even 200-egg strain need have few fears about the matter. It is said by some that the 200-egg strains are as fabulous as fish stories; they are, however, an established fact not only at the Ontario Agricultural College, but also at similar institutions in Oregon and Maine, besides being in the hands of many first-class poultrymen. There are dozens of birds with a record of over 200 at the O. A. C., and quite recently a pen of six bred-to-lay B. R.'s held an average record of 259.5 eggs, the best pullet laying 282. Oregon holds an official record for one bird of 303 eggs. These were laid between Nov. 13, 1912, and Nov. 12, 1913, and the producer was a cross-bred hen.

Good work has been done by Prof. Graham and his assistant, A. G. McCullough, B.S.A., in bringing up-to-date a revised edition of the old bulletin on Farm Poultry. This new bulletin, No. 217, can be obtained by writing to the Ontario Department of Agriculture, and gives in a concise, well illustrated form probably all that the ordinary farmer need know about poultry.

There are, besides instruction on feeding and rearing, several pages giving detailed plans and figures for poultry house construction, suitable to any purse, and a great deal of unsurpassed information on the preparation of fowls for market. It is this marketing end of the business that is neglected perhaps more than any other by the average poultry keeper.

A MODEL CHICKEN YARD



By giving fowl plenty of room and clean, warm houses, the production of eggs is greatly increased

HOW TO KILL CHICKENS SO THEY WILL KEEP

Well-Bled Birds Draw Two-Fifths Cent More on Market Than Those Carelessly Killed

The following method is that recommended by the U. S. Department of Agriculture, and gives the very best results in perfect bleeding: "Grasp the chicken by the bony part of the skull, without letting the fingers squeeze the neck of the bird. Use a straight-edged knife two inches long and not more than one-quarter of an inch wide. The point of the knife must be extremely sharp. Make a small cut on the right side of the roof of the chicken's mouth, at the place where the bones of the skull end, the purpose being to sever the arteries. If dry picking, plunge the knife into the groove in the middle line till it reaches the skull midway between the eyes."

When it is considered that badly-bled chickens keep badly, that the flesh is apt to be flabby, and that the appearance is far from taking, it is easy to see why a well-bled bird is worth from 2 to 5 cents a pound more on the market than a badly-bled one. The consumer should be able to tell a badly-bled bird at a glance, for, where the feathers have been pulled out, red spots are apparent. The neck is apt to be reddish to purple in appearance, and, if on a fowl killed many days previously, may even be green. We all have had the experience of eating a nice bit of chicken, only to get a portion in one's mouth that has begun to decompose. This decay is due, in the majority of cases, to inferior or careless methods of bleeding.

CATERPILLAR PEST THREATENS NOW

Use Ordinary Spring Strength Lime-Sulphur Spray to Check Orchard Plague

Eastern Ontario and Quebec are threatened by a dangerous enemy, and the invading hosts are spreading westward to Toronto and beyond. The importance of at once coping with the advancing hordes of tent caterpillars and destroying those already in possession cannot be exaggerated. They attack not only our fruit trees but a variety of shade and forest trees, being particularly fond of wild cherry and hawthorn. Square miles of poplar and birch have been known to be stripped by these insects, and their presence in large numbers in an orchard may mean a complete loss of crop. In such myriads do they advance that it was not uncommon in the summer of 1912 for trains on the Gatineau River line of the Canadian Pacific Railway to be stopped by them, their bodies effectively greasing the rails and necessitating much work on the part of the engine men before the trains could proceed. Similar stoppages of trains also occurred in New Brunswick and British Columbia. Millions of the moths collected around the arc lights of Ottawa and deposited their egg-masses on the city shade trees. Recurrences of these outbreaks have taken place from the earliest times, and any other is now with us.

Fortunately a remedy is at hand, and L. B. Caesar, B.A., B.S.A., our leading provincial authority on economic entomology, has informed the world how the evil may be dealt with. According to his authoritative statement it has been discovered by Mr. E. P. Bradt, district representative for Morrisburg, that the ordinary spring strength lime-sulphur spray, such as is used against San Jose scale, oyster shell scale and blister mite, will kill the young tent caterpillars if applied at the right time, namely soon after the eggs have hatched and previous to the formation of the webs. "There is no question at all about its efficacy," says Mr. Caesar, "as I have myself confirmed the treatment on a small scale with complete success. It is a reliable remedy." He remarked that of the two species of tent-caterpillar now with us, the American, the one whose moth has light bands across the wings, was the worst as regards attacks on orchards. "Last year whole orchards were defoliated and will be again this year. In many places the result was that scarcely a single fruit could be found upon the trees. Frost was undoubtedly a contributing cause, but a minor one; and it is the opinion of the district representatives with whom I have spoken that tent caterpillars alone would have completely destroyed the crop even if no frosts had occurred." He points out that the pest attacks not only the apple trees but also such trees as the maples and poplars, and that, therefore, extensive damage may be done, not only in county but in the city suburbs. "One precaution that should always be taken by the orchardist is to cut down every wild cherry tree in the vicinity of his fruit trees, the wild cherry being one of the favorite host plants of this pest. The picking of the egg-masses by hand is only practicable on small trees, and the nests are in such abundance that the ordinary precaution of burning and destroying them is almost impossible this year."

Mr. Caesar recommends that the ordinary sequence of three sprays as usually applied by the fruit growers should be applied as usual, but that a slight alteration in the time should be made, adapting each spray to the periods when the tiny caterpillars are just emerging from the egg-cases. In the case of the third spray usually applied just after the blossoms have fallen, and before the calyces are closed, an increased amount of arsenate of lead should be used, 3 lbs. being taken instead of the 2 lbs. customary. This authority asserts that he has never seen any great damage to orchards by tent caterpillars where spraying has been methodically and intelligently carried on.

For the benefit of those interested who may not be conversant with the usual practices of spraying, I append the following list of sprays with the time for their application, as used by apple growers.

1st Application.—Shortly before the buds burst. Use concentrated lime-sulphur, strength 1030 specific gravity—commercial 1 gal. to about 8 gals. of water.

2nd Application.—Just before the blossoms open. Use concentrated lime-sulphur, strength 1009 specific gravity—commercial 1 gal. to from 32 to 35 gals. of water.

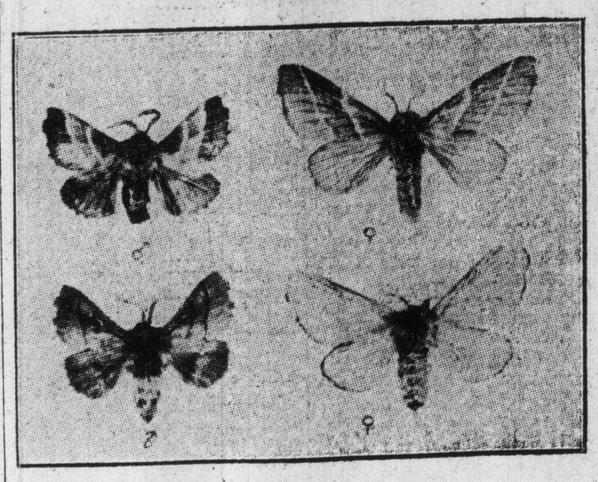
3rd Application.—Immediately after the blossoms have all, or nearly all fallen, and before the calyces close. Use concentrated lime-sulphur strength 1008 specific gravity—commercial 1 gal. to from 35 to 40 gals. water. Mix with this 2 lbs. of arsenate of lead to each 40 gals. of the spray, or 3 lbs. if tent caterpillars are in the orchard.

The nests or webs of the tent caterpillars are known to all as it is common in orchards during May and June, and cannot, therefore, be confused with the fall webworm nests, which are not constructed till much later in the season, and are considerably larger. The adult is a medium-sized moth with a wing expanse of one and one-half inches or less, reddish brown in color, and with two oblique bands across each fore-wing, near the middle. These bands are light in the case of the American tent caterpillar, and dark in the case of the forest tent caterpillar. The latter it must be remarked makes no nests. The egg-masses are thick ring-like clusters about the twigs. The eggs hatch during the first warm spring days just before the leaf buds open, and the caterpillars feed on the covering of the egg-mass until the leaves begin to come out, when they attack these ravenously, and build their nest of web around the twigs, feeding within it.

One wild cherry tree at Chelsea, Que., has been seen which had no less than thirty-seven of these tents on it, each such tent containing from one hundred to two hundred and fifty caterpillars. The caterpillars mature about June, and pupate in the angles of fences and buildings, in folded leaves and under loose bark. These "pupae" are contained in cocoons of tough white silk. With these pointers to guide him no man should be able to plead ignorance as to his orchard being infested by tent caterpillars or not. To summarize the control methods use the sprays as recommended by Mr. Caesar; pick the egg-masses when practicable and burn them; jar or shake the caterpillars from the trees, afterwards fastening a band of tangle-foot around the tree; destroy the tents while small by using a torch made of rags soaked in coal oil; gather cocoons and burn them when gathered, but above all spray and keep on spraying as recommended.

If you are determined to have smut, well, don't use formaldehyde, but personally I do not like smut.

TENT CATERPILLAR MOTHS



M. Americana (upper left, male; upper right, female); M. Disstria (lower left, male; lower right, female).

CATTLE MARKET SLOW AND DULL

Sheep, Lambs, Calves and Hogs Were Unchanged Wednesday.

Receipts of live stock at the Union Yards yesterday were 45 car loads, 535 cattle, 1369 hogs, 73 sheep, and 102 calves.

Trade in cattle was a repetition of Tuesday, as regards prices, when quality is considered.

Receipts were light but quite equal to the demand.

Several buyers from different parts of Ontario were on the market buying stockers and feeders, and prices for these were equal to the butchers class in many instances.

As usual sheep, lambs and calves were steady at firm prices, and hogs were unchanged from Tuesday's quotations.

Butchers'.

Good steers sold at $7.50 to $7.75; medium, $7.25 to $7.40; common, $7; choice cows, $6.75 to $7; good cows, $6.25 to $6.50; common to medium cows, $5 to $5.50; canners and cutters, $3.75 to $4.75; bulls, $6 to $7.25.

Stockers and Feeders.

The market for stockers and feeders held about steady. Choice steers, 800 to 900 lbs., sold at $7.35 to $7.50; steers, 600 to 700, sold at $7 to $7.15; stock heifers, $6.25 to $6.75.

Milkers and Springers.

The supply of milkers was not equal to the demand, but prices remained steady at $60 to $100 for good to choice cows.

Veal Calves.

Choice calves sold at $9 to $10; good calves, $8 to $9; medium, $7.50 to $8; common, $6.25 to $7.

Sheep and Lambs.

Receipts of sheep and lambs were not as large, with prices very firm. Sheep, ewes, sold at $6.50 to $7.50; rams at $6 to $6.50; yearling lambs at $7.75 to $9.50; spring lambs at $5 to $10.75 each.

Hogs.

Selects fed and watered sold at $9, and $8.65 f.o.b. and $9.25 weighed off cars.

Representative Sales.

Rice & Whaley sold 5 loads of cattle: Butchers', $7.40 to $7.65; one load of cows at $6.25 to $7; one deck of hogs at $9 fed and watered.

C. Zeagman & Sons sold one load of cows at $6.25 and bought two loads of steers, 1150 lbs. at $7.55; sold two springers at $85 each; 100 calves, common to good at $6.25 to $8.50; one deck of hogs at $9 fed and watered.

Samuel Hisey sold two loads of cattle: Cows—1100 lbs. at $6.50 and 8 steers, 1300 lbs. at $8, and these were the only cattle that we heard of selling at that price.

The Corbett Hall Coughlin Company sold six car loads of live stock: Best butchers, $7.65 to $7.80; fair to good, $7.40 to $7.60; best cows, $6.50 to $6.75; fair to good, $5.75 to $6.25; bulls, $6.75 to $7.25; four milkers at $70 to $82; and bought two loads of feeders on order.

Charles McCurdy bought 160 cattle thus far this week, 950 to 1050 lbs. at $7.40 to $7.80.

Fred Armstrong bought 13 milkers and springers at $60 to $100 each, and sold one load to J. Cardnelli, of Quebec.

John Saison of South March bought 100 stock cows and steers for feeding purposes.

Representative Purchases.

George Rowntree bought 250 cattle: Steers and heifers at $7.20 to $7.95; cows, $5.50 to $6.80; bulls, $6.25 to $7.

The Swift Canadian Company bought 110 cattle: Medium to good steers and heifers at $7.35 to $7.75; cows, $5 to $6.50; bulls at $6.25 to $6.75.

Market Notes.

E. L. Woodward, well known to the trade in Canada, and buyer of cattle for Swift & Co. of Chicago, was a visitor at the market yesterday. Mr. Woodward is now a resident of Indianapolis, Indiana, where he has been stationed for some time.

BUFFALO LIVE STOCK.

EAST BUFFALO, N.Y., April 22.—Cattle—Receipts, 1,200; dull prices unchanged.

Veals—Receipts, 22; slow and steady, $6 to $9.50.

Hogs—Receipts, 1,600; active; heavy, 10c lower; pigs 10c to 15c higher; heavy, $9 to $9.10; mixed and yorkers, $9.15 to $9.20; pigs, $9 to $9.15; roughs, $8.10 to $8.25; stags, $7 to $7.50; dairies, $9 to $9.20.

Sheep and lambs—Receipts, 2,400; active; lambs and wethers, 15c to 25c higher; wool lombs, $7 to $8.90; clipped lambs, $5.50 to $7.85; yearlings, $5 to $6.75; wethers, $5.75 to $6; ewes, $3.50 to $5.50; sheep, mixed, $5.50 to $5.65.

CHICAGO LIVE STOCK.

CHICAGO, April 22.—Cattle—Receipts, 15,000; market, steady; beeves, $7.05 to $9.35; Texas steers, $7.15 to $8.20; stockers and feeders, $5.50 to $8.10; cows and heifers, $3.70 to $8.50; calves, $6 to $8.50.

Hogs—Receipts, 20,000; market, weak; light, $8.25 to $8.55; mixed, $8.25 to $8.60; heavy, $8.05 to $8.55; rough, $8.05 to $8.20; pigs, $7 to $8.25; bulk of sales, $8.40 to $8.55.

Sheep — Receipts, 23,000; market, steady; native, $5.25 to $6.75; yearlings, $5.70 to $7.40; lambs, native, $6.20 to $8.15.

CHICAGO MARKETS.

Erickson Perkins & Co. (J. G. Beaty), 14 West King street, Toronto, report the following fluctuations on the Chicago Board of Trade:

	Open.	High.	Low.	Close.	Prev. Close.
Wheat—					
May	92⅛	92⅞	92⅛	93⅛	91⅞
July	87	88	86⅞	88	86¼
Sept.	86¼	87⅝	86⅛	87⅝	85⅞
Corn—					
May	63⅞	64⅝	63⅝	64⅝	63
July	64⅛	64⅝	63⅞	64⅝	63⅛
Sept.	64⅛	64⅝	64⅛	64⅝	63⅛
Oats—					
May	37¼	37⅝	37⅛	37⅞	36⅞
July	37½	37⅞	37½	37⅞	37
Sept.	36⅝	36⅞	36⅝	36⅞	35⅞
Pork—					
May	19.65	20.20	19.65	20.20	19.65
July	19.80	20.22	19.80	20.22	19.80
Lard—					
May	10.02	10.20	10.02	10.20	10.00
July	10.22	10.37	10.22	10.37	10.20
Ribs—					
May	10.87	11.00	10.87	11.00	10.75
July	11.10	11.17	11.10	11.17	10.95

WINNIPEG MARKETS.

	Open.	High.	Low.	Close.	Prev. Close.
Wheat—					
May	91⅛	92	91⅛	91⅞b	90¾
July	93	93⅞	93	93⅞b	92⅝
Oct.	87⅞	88⅝	87⅞	88⅝s	87¼
Oats—					
May	35¼	35½	35¼	35⅝b	34⅝
July	36⅛	36⅝	36⅛	36¼b	35⅞
Flax—					
May	..	..	..	136½b	136⅝
July	..	..	..	139⅛	139⅝
Oct.	..	..	..	139¼	140

MINNEAPOLIS GRAIN MARKET.

MINNEAPOLIS, April 22.—Close: Wheat—May, 91⅛c bid; July, 92½c to 92⅝c; No. 1 hard, 95⅞c; No. 1 northern, 93½c to 94⅝c; No. 2 do., 91⅛c to 92⅞c.

Corn—No. 3 yellow, 62½c to 63c.

Oats—No. 3 white, 36c to 36½c.

Flour—Fancy patents, $4.60; first clears, $3.50; second clears, $3.25.

AGRICULTURAL TIT-BITS

If you are looking for good grass, choose seed that is bright, plump and of good color. Nothing else is good enough for anybody.

The Farmer's Advocate gives the following "don'ts" on seeding:

Don't sow poor seed.
Don't neglect thoro soil preparation.
Don't overwork the horses.
Don't cultivate grass seeds in too deeply.
Don't sow too little seed.
Don't sow too many varieties.

Now is the time to keep your eye open for wet spots. Close observation will help you out quite a bit when it comes to putting in that drainage scheme.

The time when the college man was looked upon by farmers as an educated fool is over. They are realizing that the agricultural colleges are turning out big men with a grasp of not only local, but national questions. The district representatives are filling a long felt need.

R. B. Britton, B.S.A., has been appointed to fill the vacancy left by A. H. Maclennan, B.S.A., demonstrator in pomology, Ontario Agricultural College, Guelph, Mr. Maclennan having taken the place of F. M. Clement, B. S. A., lecturer in horticulture at Macdonald College, P. Q. Mr. Clement takes the position of director of the Vineland experiment station.

"By all means let us be merry, and let us co-operate in our pleasures. Then we may learn how to co-operate in our business."—Peter McArthur.

The following reasons are given for milk shortage in western Canada: Insufficient dairy stock, lack of proper transportation, general use of highly perfected machinery increasing the practice of home butter-making. Let us add to this list a cold winter, a hot summer, scrub bills and poor range lawa, poor silage or none of it, and gad flies, deer flies, horse flies, black flies, sand flies, every other kind of fly you can think of, and then some.

Do your collars fit, then why not your horses? All collars should be overhauled before heavy spring work. Wash the horses' shoulders with warm water and salt when the day's work is done, to avoid scalding.

Progressive Jones Says:

"Here is the Right Fertilizer For Lawns and Vegetables"

The most effective method of nourishing grasses and vegetables to get rich yields should also be the cleanest and handiest way.
If you want these results, I say—use Harab Fertilizers.

Manures are not only offensive to handle but they sow weed seeds. Fertilize the Harab way; there is a Harab Fertilizer specially adapted for the kind of grasses, flowers and vegetables you want to grow. Harab Fertilizers are food for both land and crop.

Harab Fertilizers

If your dealer does not handle Harab Fertilizers write direct to the makers and send for this Harab Fertilizer Booklet which the Harris Abattoir Co. would like to send you free.

Yours for bumper crops,
Progressive Jones

The Harris Abattoir Co., Ltd.
Fertilizer Dept. Strachan Ave.
Toronto, Canada 19

That Son-in-Law of Pa's

By G. H. Wellington

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