

CONTROL OF SWARMING

(Experimental Farms Note)

ONE of the greatest problems in bee-keeping to-day is the control of swarming. It is natural for a strong colony of bees to swarm in early summer when honey is coming in, but the breaking up of the colony cuts down the honey yield; while watching for and hiving swarms takes a great deal of the beekeeper's time, and the swarm may escape notice and fly away.

The methods of controlling swarming that have been tested at the Central Experimental Farm, Ottawa, fall under three heads:

(1) General measures. Partly shading the apiary; providing a large entrance with deep space between combs and floor; giving plenty of room in the brood chamber and supers; and young queens. These measures, while valuable, have been found insufficient in themselves to prevent the bees from raising queens in preparation for swarming.

(2) Manipulations to prevent more than one swarm. The queen's wings are clipped, preferably during fruit-bloom, and when a prime swarm issues and is still in the air, the queen is picked up from the ground and placed in a cage, and the hive is removed to a new stand. A new hive containing the caged queen is then placed on the old stand to receive the returning swarm, the queen being liberated later. The field bees join the swarm, leaving the parent hive so much weakened that it is not likely to swarm again. To make certain of this, however, the parent hive may be merely turned around and not removed to the distant stand until five days later. This method of swarm-control necessitates immediate attention when the swarm issues, but, as manipulations are simple, they can often be carried out by the home folks should the beekeeper be away.

(3) Manipulations to prevent swarming altogether. At the time of writing, none of the manipulations that have been tried has succeeded except the cutting out of all queen-cells every seven or eight days, and this failed during a heavy honey flow from clover at Ottawa in 1916, when the bees raised queens from worker larvae, and swarms issued before the queen-cells were capped over. It has, however, been found possible to prevent swarming in out-apiaries, forty miles north of Ottawa, by this means, although it entailed weekly visits from the middle of May until the middle of August, and much time was spent in examining each colony.

Experiments in the control of swarming are being continued, especially along the following lines, which seem the most promising:

(1) Testing systems of raising brood to the super. Many of these will delay swarming under some conditions.

(2) Finding means by which the brood

chamber may be easily examined without lifting off the supers. A hive in which the brood combs are in a rack that can be drawn out sideways is being tried.

(3) Endeavoring to breed a strain that will not swarm, of which the preliminary step is to find out if the non-swarming character shown by some queens is inherited. A queen showing this character was found to retain it the following year.

PENALTIES FOR OMITTING TO REGISTER

Don't fail to register on June 22. The following penalties for the defaulters are prescribed in the regulations:

(a) He shall be guilty of an offence, and shall be liable upon conviction to a penalty not exceeding one hundred dollars, and to imprisonment for any term not exceeding one month; and moreover to a further penalty of ten dollars for each day after the day when he should have registered during which he shall continue to be unregistered.

(b) He shall, for so long as he remains unregistered, forfeit his right and be disqualified to vote at any Dominion election; and if he fail to register within thirty days after the time when he should have registered he shall forfeit his right and be disqualified to vote at the next Dominion general election.

(c) He shall, for so long as he remains unregistered, forfeit his right and be disqualified to obtain or continue in any employment, or to receive or earn any salary, emolument, or wages.

(d) He shall, for so long as he remains unregistered, forfeit his right and be disqualified to the services of any person in his employment, although he shall nevertheless remain liable for any salary, emolument, or wages earned by such person during that time.

(e) He shall, for so long as he remains unregistered, forfeit his right and be disqualified to purchase, receive, or have in his possession any railway, steamboat, or other public conveyance ticket, or to travel by any railway, steamboat, or other public conveyance, except a tramcar or street car, unless for the purpose of any prosecution or execution of sentence under these regulations.

(f) He shall, for so long as he remains unregistered, forfeit his right and be disqualified to board or lodging at any hotel, public house, inn, tavern, club, restaurant, or boarding house.

(g) Any person who employs or continues him in his employment while unregistered, or pays him any salary, emolument, or wages in respect of any period while he is unregistered, shall be guilty of an offence and liable to a penalty corresponding in character and amount to that which the unregistered employee himself shall by reason of his non-registration at the time, have incurred.

NEWFOUNDLAND PAPER SUPPRESSED

St. John's, Nfld., June 3.—The government on Saturday, under the authority of the war measures act, suppressed the *Daily Star* newspaper on the charge of printing articles calculated to hamper the operation of the conscription act. The newspaper instituted proceedings against the police officers who carried out the government orders, alleged for unlawful entry upon its premises. The case will come before the supreme court on next Tuesday.

THE COST OF MUTTON PRODUCTION

(Experimental Farms Note)

THE scarcity of wool and meat has given a new impetus to the sheep breeding industry in Canada, and once it becomes again firmly established as a common farm industry and the benefits coming from it are fully recognized, the writer feels confident that it will not again go into decline.

This class of stock, while enjoying to the full the benefit of the increased high prices of the products produced, is probably the one which has been affected the least by increased cost of production, common to the products from other classes of stock. This is due to the fact that the feed consumed consists largely of home grown roughages and grains, thus eliminating, to a large extent, the purchase of high priced concentrates. It is also due, in part, to the fact that very little labor is required to handle a flock, so that the increased price of labor has not the same effect.

To arrive at the cost of mutton production many factors must be taken into consideration. It may be safely considered that the value accruing from the manure produced and weeds destroyed fully offsets the labor expended. From the records of the breeding and feeding work at the Central Experimental Farm, the remaining factors in the cost of production of year-old mutton may be tabulated as follows:

Cost of feed in maintaining ewe from weaning of one lamb to weaning of next	\$5.00
Interest on value of ewe (\$3.00 at 6%)	1.80
Service charges and maintenance of ram	.35
Cost of feeding lamb from weaning till finishing at one year old	6.72
Wool from ewe (7 pounds at 60¢ per lb.)	4.20
Cost of 120 pounds mutton	9.67
Value of 100 pounds mutton Spring 1918	17.75
Cost of 100 pounds mutton	8.06

Profit per 100 pounds \$9.69
This is a profit of \$11.63 per lamb if but one lamb is raised per ewe.

The above figures are based on an increase of one lamb per ewe. Where two lambs were raised practically the same results in weight may be expected at the end of the year. In such a case the first three items in the cost would be split between the two, thus reducing the cost to \$5.09 per hundredweight and increasing the profit to \$12.66 per hundredweight.

The foregoing estimates are exclusive of overhead charges or depreciation, but these items may well be overlooked as they are almost negligible in sheep raising owing to the fact that so little is required in buildings or equipment. Moreover, the estimates are conservative, and though they show a return of at least 38.8% on the investment of \$30.00 per ewe, the same may be looked for under Eastern conditions, while under Western conditions even greater dividends may be realized.

RASPBERRY LEAF CURL

(Experimental Farms Note)

In the interests of market gardeners and small fruit cultivators, this note on Raspberry Leaf Curl has been prepared at the Field Laboratory in Southern Ontario at St. Catharines, and is issued by the Central Experimental Farm, Ottawa.

This disease has been known for some time both under the above name, as well as under the name of Raspberry Yellow. Since the curling of the leaves is the most outstanding feature in connexion with the disease, it is preferable to use the term Raspberry Leaf Curl.

The disease affects the leaves and shoots and is often confined to a single bush or part of a bush, some of the shoots being perfectly normal and others with the leaves affected. The affected shoots, instead of producing normal, large, broad leaves, bear leaves which are conspicuously small and badly curled downwards. In the early stages this symptom is not so pronounced, and while a small amount of curling may occur then, the disease is more noticeable on account of the yellowing which takes place during the summer because of the unhealthy state of the foliage. Since yellowing of the leaves may be due to a number of other causes, such as wet feet, poor soil, drought, etc., it is best to determine the disease mainly by the Leaf Curl symptoms.

In the advanced stages, the canes bear no fruit. When first attacked, they flower almost normally, but the fruit is small and dry and shrivels up before ripening, so that little or no fruit is ever produced from an infected bush. Of the three varieties which are commonly grown in the Niagara district, Outburst, Marlborough, and Herbert, the Herbert seems to be freest from the disease. The other two varieties are quite susceptible but one rarely sees signs of Leaf Curl in the Herbert.

So far as is known the disease is not due to any parasitic organism. It apparently belongs to that type of trouble which

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has been called physiological disease, and could therefore be put into the same class with peach yellows and little peach, and the mosaic diseases of tomatoes, tobacco, potatoes, and so forth. No records are available as to how the disease is brought into the field in the first place, nor how it is transmitted from one plant to another. It undoubtedly does spread once it becomes established in a plantation, and many fine plantations are known to have been greatly injured by the presence of a large number of Leaf Curl plants. If the disease corresponds closely with the mosaic or yellow disease, one would suspect that it is carried either by insects or pruning operations.

Although too little is known about Leaf Curl to advise a sure means of control, one should always remove the affected plants as soon as they show signs of disease. They are of no use in any case and are likely to spread the disease to other parts of the plantation. In taking out Leaf Curl plants, one should be careful to get the whole of the root system, otherwise the parts that are left will start to grow and produce new shoots which will also show Leaf Curl. It is possible that some of our Leaf Curl originates from nursery cuttings and some care should be taken when setting out a new plantation, to avoid this disease.

BRITISH CASUALTIES REPORTED IN MAY

London, May, 31.—Casualties in the British ranks reported during May reached a total of 166,802. The losses were divided as follows:

Killed or died of wounds—Officers, 1,536 men, 20,517.
Wounded or missing—Officers, 6,182; men, 138,566.

British casualties reported week by week have recently been running over the 40,000 mark, evidently representing the losses sustained during the heavy fighting that started with the beginning of the German offensive in March. The total reported during April was only 52,475, as the lists apparently did not begin to reflect fully the effects of the casualties sustained in resisting the German thrusts in Picardy and Flanders until the beginning of May.

He—"I'm curious to know how you manage to spend so much money." She—"I wouldn't be, my dear; I might get curious to know how you can make so much."—Puck.

She—"What did papa say when you told him you wanted to marry me?" He—"He asked me if we had any insanity in my family."—Baltimore American.

CANADIANS HONORED

London, June 3.—Several Canadians are mentioned in the King's birthday honors issued by the Colonial office yesterday. It is also announced that the list of appointments for the Order of the British Empire for the dominions has been deferred until next September.

Sir George Foster, Minister of Trade and Commerce, is made a Knight of the Grand Cross of St. Michael and St. George.

Hon. Richard Stuart Lake, Lieutenant-Governor of Saskatchewan, is made a Knight Commander of St. Michael and St. George.

Hon. John Douglas Hazen, former Minister of Marine and Fisheries, and now Chief Justice of the Supreme Court of New Brunswick, is made a Knight Commander of St. Michael and St. George.

Lieutenant-Colonel Sir Edward Scott Worthington, formerly of Toronto, and medical officer to the Duke of Connaught,

is made a Knight Commander of the Royal Victorian Order.

Hon. Hormisdas Laporte, of Montreal, is made a Knight Bachelor.

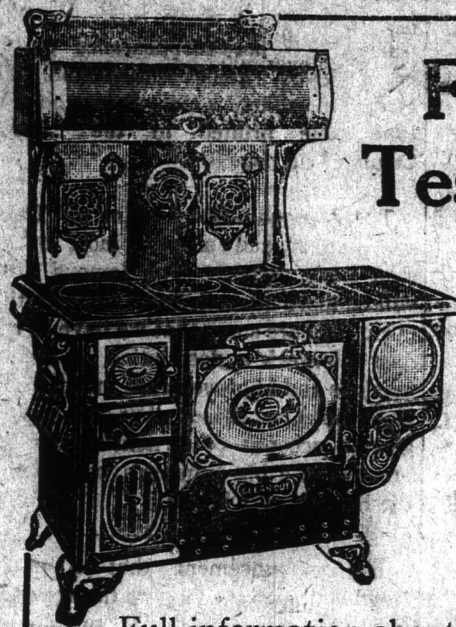
Those made Companions of the Order of St. Michael and St. George are: Austin Ernest Blount, clerk of the Senate; John William Borden, accountant and paymaster-general of the Canadian militia department.

Companions to the imperial service order named are: Francis Kent Bennett, assistant clerk of the Canadian privy council; Ernest Frederick Jarvis, assistant deputy minister of militia.

Knight Commander of the Bath—Major-General Henry Edward Burstall.

Captain Bert Kemp, of Toronto, is given the Distinguished Flying Cross.

Sir Owen Phillips is also made a knight of the Grand Cross of St. Michael and St. George. John William Borden is a younger brother of Sir Robert Borden. Austin Ernest Blount is a native of Stanstead, Que. Ernest Frederick Jarvis is a P. E. Island man.



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Two Questions

With so many low-priced so-called anti-skids obtainable, would that great host of motorists pay more for Dunlop "Traction" Tread if they could get its merits elsewhere?

Also, would that other large list of car owners buy —"SPECIAL"—if tires which somewhat resemble it in appearance resembled it in efficiency?

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