

"Bug Death" under Test.

We have received from Dr. Wm. Saunders, of the Central Experimental Farm, Ottawa, memorandum of the result of an investigation relative to "Bug Death," conducted at that institution by three of its officers.

Prof. F. T. Shutt, the chemist, reports as was published in full in the "Farmer's Advocate" for Feb. 15th, last, that the preparation is practically commercial zinc oxide, deficient in the essential elements of plant-food, the only constituent of any fertilizing value present being nitrogen, of which there is only one tenth of one per cent. Claims for it as furnishing nourishment for crops are without foundation.

Dr. James Fletcher, the entomologist, found that rows of potatoes treated with "Bug Death" were freed from potato bugs rather more quickly than with Paris green, either alone or in combination with Bordeaux mixture, but not so quickly as those treated with arsenate of lead. "Bug Death" did not keep the vines free from bugs quite as long as Paris green and other mixtures. Bordeaux mixture was more effective in combating potato rot than "Bug Death," and the expense of using being greater, he prefers to recommend the old standard remedy, Paris green. There was no noticeable increase in the yield of plants treated with "Bug Death."

Prof. W. T. Macoun, the horticulturist, reports as to its value respectively as an insecticide, fungicide, and fertilizer. His conclusions are that as a fungicide, it is not as economical to use as Bordeaux mixture. As an insecticide and fungicide, combined, it can probably be used more profitably than Paris green alone, which is an insecticide only, as there is a difference of 61 bushels 12 pounds (potatoes) per acre in favor of "Bug Death," as compared with Paris green alone. "Bug Death," however, cannot be used as economically as Bordeaux mixture and Paris green combined. Nine varieties out of the 11 in the test yielded more per acre where Bordeaux mixture was used than where "Bug Death" was applied. In two varieties the yield for "Bug Death" was greater. There was no evidence to show that it was a plant food, the vines were no more vigorous than where Bordeaux mixture and Paris green were used together. "Bug Death" adheres well to the foliage.

MISCELLANEOUS.**London Dairy Show.**

At the 27th annual show of the British Dairy Farmers' Association, held in London last month, there were 224 entries in the cattle classes, including those for competition by inspection and for the milking and buttermaking trials. In the butter test, only Jerseys and Shorthorns entered, the number of the former being eighteen and of the latter eleven. In the Jersey class, the five-year-old cow, Oxford Dewdrop, entered by the Bishop of Ipswich, won first prize and gold medal. In the one-day test she yielded, 178 days after calving, 43 lbs. 12 ozs. milk, and 2 lbs. 8 ozs. butter, a ratio of milk to butter of 17.50. The second prize and silver medal went to Lord Rothschild's Bayleaf 4th, age 5 years; yield, 164 days after calving, 36 lbs. 13 ozs. milk and 2 lbs. 4 1/2 ozs. butter; ratio 16.02.

In the Shorthorn class, Mr. Albert Merry's six-year-old cow, Molly, won first prize yielding, 28 days after calving, 58 lbs. 11 ozs. milk and 2 lbs. 10 ozs. butter, ratio 22.35. Second award went to Chas. Bordsey's Duchess; age 6 years; yield six days after calving, 55 lbs. 11 ozs. milk and 2 lbs. 13 ozs. butter; ratio 19.80.

Quebec Dairyman Favors Pasteurizing.

Dear Sir,—With satisfactory work, the immediate flavor of butter from unpasteurized cream is very apt to be superior to that from pasteurized cream, but the ultimate flavor cannot possibly be as good, the deterioration being more marked as its age increases. The flavor of butter from pasteurized cream suits the English consumer better, but the local consumer less. Pasteurization is an absolute necessity in handling gathered cream to obtain uniformity, but where separation is done at the factory uniformity can be obtained without pasteurization. Continuous pasteurization of milk or cream at 185° F., and immediate subsequent cooling to 58° F. The system must become general if we wish to dispose of our butter in England at paying prices. Can we afford to lose our hold in the English market and stop making butter altogether?
Compton Co., P. Q. H. WESTON PARRY.

The Best Fair to Come.

The greatest of educational live-stock shows of the year is the Ontario Winter Fair at Guelph, Dec. 8-12, announced on page 819 of this issue. Breeders and feeders will be out with grand exhibits and everybody should attend. Mr. A. P. Westervelt, Parliament Buildings, Toronto, is the secretary.

APIARY.**How Shall we Winter our Bees?**

Although "wintering" has lost most of its terrors to the practical beekeeper of to-day, yet the fact remains that it is still one of the most important problems that the apiarist has to deal with.

As nearly all are aware, two systems of wintering bees are in vogue, viz., outdoors, with protection, and placing them in cellar or other repository.

Which system is best is, of course, a matter of opinion, some preferring one method, some the other. So good an authority as Doolittle says that for wintering indoors or outside, abundance of good stores is more essential than any other one thing to insure successful wintering. No doubt a great many beekeepers would be even more emphatic and say that good stores is more important than all other things combined. Granted that all colonies have sufficient well-ripened stores, the question of wintering will resolve itself into one of individual opinion, locality, and the facilities for either system that the beekeeper may have at hand. As to how far north bees can be successfully wintered outdoors I am not prepared to say. To my knowledge, a number are wintered that way in the Parry Sound district. Further north than that, I suppose, there is no question but that a repository of some sort would give the most satisfactory results. It seems to be quite generally conceded that bees in the cellar will consume less stores

ventilation as a secondary matter at most. The aforementioned authority, Doolittle, winters his bees in a practically air-tight case; in fact, there is so little ventilation that on entering with a lighted candle sometimes the flame will be extinguished. Notwithstanding, there are few but will admit that Doolittle is successful in wintering, as he is in all other phases of beekeeping. The bees should be placed in the cellar some time in November, the sooner after having had a cleansing flight the better. The bottom row of hives should be at least twenty inches from the floor, then tier up one above the other to the ceiling, not touching it, however, as the jarring from above would disturb the bees too much. Of course, it is understood that all board covers should be removed from the hives, only the quilt being left over the frames. If loose bottom boards are used, it is desirable to raise up the hives from the bottom, behind, an inch or more, by means of a wedge or block in each corner. This will keep the combs drier, and thus insure better wintering. The room that the bees are in should be kept dark at all times. Aside from seeing that the temperature is right, the bees will need but little attention from now until spring, save such little details as sweeping up dead bees about once a month, being careful to see that mice and rats are not playing havoc with the bees, etc. The latter named pests can best be disposed of by placing a little "Rough on Rats" within their reach.

POULTRY.**What's Wanted.**

On the dressed poultry market, at the present time, the price to be obtained depends greatly on type of bird marketed. The highest prices are being realized for those with great width across the shoulders and breast carried well forward, but not too deep. The more breast meat the better. Montreal is calling for white-fleshed birds, weighing five pounds when dressed, and are paying as high as 13 cents per pound for the right kind. Our experiment stations tell us that the Rock and Wyandotte are about the right conformation, and Prof. Graham, of the O. A. C., has found that by feeding in the fattening crates on two parts oat dust, two parts ground buckwheat, and one of corn, with an equal weight of skim milk, the desired color may be produced.

Winter Eggs.

Seldom has the outlook for good prices for winter eggs been better than at the present time; in fact, the cry is coming from almost every quarter that a shortage is certain. Farmers and poultrymen cannot, therefore, do better than prepare to share in the profits. The essentials to successful winter egg production are young healthy birds, good food, clean, well-ventilated quarters, and exercise. Select all the pullets and hens likely to respond to good treatment, fix up the pens, and get ready to run this department on business principles.

At Moulting Time.

During the moulting season, mature birds are apt to require something to improve their vitality, and even when that period is passed a tonic may be given with profit. Nothing is better than the Douglas mixture, which consists of sulphate of iron (copperas), one pound, and sulphuric acid, one fluidounce, dissolved in two gallons of water to be used as drink. Some good poultrymen recommend its use once a week throughout the year.

The Winter Show.

Keep in mind the great Ontario Winter Fair, Guelph, Dec. 8-12, announced on page 819 of this issue. Secretary A. P. Westervelt, Parliament Buildings, Toronto, will furnish prize lists and full information.



PAIR HIGH-STEPPERS: BOBBIE BUENS AND WIRY BILL.
First at Aylmer show, first at Tilsonburg, and third at London, 1902. (See Gossip, page 807.)
BRED AND OWNED BY C. D. WOOLLEY, PORT BYERSE, ONT.

than those outdoors; while, on the other hand, many claim that the consumption of stores after the bees are set out in the spring more than makes up for the extra amount consumed by those left outdoors during winter. From my very limited experience with cellar-wintered bees, I am led to believe that this theory has some truth in it. Again, there are those that claim that taking one year with another, bees wintered outdoors will invariably out-distance cellar-wintered bees when it comes to the honey harvest. In my opinion, this will depend much upon whether the season is early or late, as bees wintered outside are generally ready for an early flow before those wintered inside.

As to the method of wintering outdoors, I have nothing new to offer. The bees are put upon from five to eight Quinby frames, according to strength of colony. Each hive is protected with four inches of sawdust on back and sides, with two inches in front, allowing, of course, a passageway to entrance for bees to fly from. Over the frames is a cotton quilt, with a cushion filled with sawdust five or six inches deep over all. Care should be taken to see that the roof is waterproof, as dampness is the arch-enemy of outdoor wintering. Bees invariably winter well with me when prepared like this, and, no doubt, for the beginner at least, the outdoor method will prove most satisfactory.

For wintering inside, any repository that can be kept at an even temperature of about 45 degrees should winter the bees all right. Much has been said in the past about providing very elaborate systems of ventilation, but at present the majority of beekeepers who winter indoors regard