

methods. A cleaner cream will also result. For instance, we have known cases where bloody milk was first detected by finding the blood in the separator bowl while cleaning it. A cream free from fibrin, which is an albuminous substance, also results, which is a benefit. Further, there is no prolonged exposure of cream to the atmosphere while separation is going on. We also find in the condition of the skim-milk an item in favor of the separator, as it is in the best possible condition for feeding young stock.

Instruction for Western Ontario Cheesemakers.

The Dairymen's Association of Western Ontario has re-engaged Mr. T. B. Millar as Inspector and Instructor for the coming season. During April, May, and the early part of June, Mr. Millar will give instruction to cheesemakers and others, in the best methods of making early spring and summer cheese, at the following factories on the dates given below:

Verschoyle	April 9 and 10
Harrietsville	" 11 " 12
Northwood	" 15 " 16
Bright	" 17 " 18
Elm	" 19 " 20
East and West Oxford	" 22 " 23
Thamesford	" 24 " 25
Nilestown	" 26 " 27
Norwich Junction	" 29 " 30
North Brant	May 1 " 2
Nixon	" 3 " 4
Attercliffe Station	" 6 " 7
Forest	" 8 " 9
Warwick	" 10 " 11
Cedar Springs (near Komoka)	" 13 " 14
Glencoe	" 15 " 16
West Lorne	" 17 " 18
Elythwood	" 20 " 21
Harrow	" 22 " 23
Lucan	" 27 " 28
Ripley	" 29 " 30
Harrison	" 31 June 1
Burgoyne	June 3 and 4
Shelburne	" 5 " 6
Stayner	" 7 " 8
Newmarket	" 10 " 11
Wyebidge	" 12 " 13

After the completion of this tour, Mr. Millar will begin his regular work of instruction. The prospectus giving a full account of the work to be carried on during the season will be issued in a few days.

A Representative Canadian Cheese Factory.

The Harrietsville cheese factory, in the County of Middlesex, Ont., is one of the largest in the world. The auditor's report for 1894 shows that 5,323,073 pounds of milk were manufactured into 498,075 pounds (over 244 tons) of cheese, for which \$48,877 were received; of this amount \$13,191 were paid the patrons. The cost of manufacturing was \$4.980; milk hauling, \$3.49; miscellaneous expenses, \$526. Average number of pounds of milk required to make a pound of cheese, 10.68; average price, 9.84 cents. The net price per 100, received by the patrons for their milk, was: April, 83 cents; May, 82.4; June, 73.5; July, 71.5; August, 81.5; September, 85.5; October, 92; November, 95.2; December, 91.4. Mr. R. Facey, the proprietor, also encloses us the names of half a dozen of his patrons having different sized herds, with the amounts received from the factory last season, in addition to which would be the amount produced by these cows in winter buttermaking:

PATRON.	NO. COWS.	AMOUNT RECEIVED.
Stephen Yorke	35	\$ 1,610 93
A. Yorke	20	" 927 65
Wm. Rickard	11	" 651 49
Wm. Barr	11	" 512 68
Rich'd. Tooley	8	" 474 18
Thos. Radway	4	" 172 80

The most of the above herds average about \$16 per cow, though one of them ran over \$50.

Setting Milk in Deep Cans.

Observing the comments of A. W. R. (Renfrew Co.) upon my article, "Farm Buttermaking," I am pleased to offer an opinion regarding the points raised. Noting that I recommended setting twenty-four hours in winter time, A. W. R. says: "We only set the milk twelve hours, and find that the cream seemed to be all raised, judging from the following test: Out of 282 lbs. milk we had 13 lbs. butter," and compares this with creamery work. First, I would say that the amount of butter taken from milk is hardly a safe guide as to thorough skimming. The richness of the milk in butter-fat would materially affect this. To test samples of the skim-milk with a Babcock milk tester (in one or other of its modifications) is really the only reliable method outside of laboratory work.

In recommending twenty-four-hour setting in winter, I do so because the majority of the best experiments indicate its necessity. Why it is so may not be quite so clear, and yet we know that cows long in lactation, as is frequently, and indeed usually, the case in winter, give a milk that does not part with its cream so readily, nor yet so thoroughly, as when the cows are new in milk. The dry rations in winter doubtless have their effect also. When experimenting on this line we need to remember also that the milk of some cows gives up its cream much more readily than that of other cows, and in giving general rules we must allow for this.

I would not, however, state that A. W. R. does not do good skimming. It is quite possible that he does, as he says that his cows "seem all fresh in milk," while the hollow pipe up the centre of the can will also assist to that end.

P. J. S.

GARDEN AND ORCHARD.

Spraying Calendar.

Plant.	1st Application.	2nd Application.	3rd Application.	4th Application.	5th Application.	6th Application.
Apple.	Copper Sulphate.	Bordeaux.	Bordeaux.	Bordeaux.	Bordeaux.	
Applespotfungus, codling moth, bud moth.	Before buds start.	Just before blossoms open.	Paris Green.—Soon after blossoms fall.	Paris Green.—10-15 days later.	10-15 days later, if spot disease is severe.	
Cherry.	Bordeaux.	Bordeaux.	Bordeaux.	Ammoniacal Copper Carbonate		
Rot, leaf diseases and injurious insects.	Before flower buds open. Kerosene Emulsion for aphids.	When fruit has set.	Paris Green.—10-15 days later.	10-15 days later.		
Grape.	Copper Sulphate.	Bordeaux.	Bordeaux.	Bordeaux.	Bordeaux.	Ammoniacal Copper Carbonate.
Mildew, rot, leaf-eating insects.	Before buds burst.	Paris Green.—When first leaves are half grown.	When fruit has set.	10-15 days later.	10-15 days later, if disease persists.	If disease persists.
Peach—Apricot.	Copper Sulphate.	Bordeaux.	Bordeaux.	Bordeaux.	Bordeaux.	Copper Carbonate.
Rot, leaf curl, curculio.	Before buds start.	3 lbs. copper sulphate, 50 gals. water. Just before blossoms open.	Paris Green.—Soon after fruit has set.	Paris Green.—8-12 days later.	Paris Green.—8-12 days later. If rot is prevalent.	10-15 days later, if rot is prevalent.
Pear.	Copper Sulphate.	Bordeaux.	Bordeaux.	Bordeaux.	Bordeaux.	
Scab, leaf blight, codling moth.	Before buds open.	Just before blossoms open.	Paris Green.—Soon after blossoms fall.	Paris Green.—10-12 days later.	10-15 days later.	
Plum.	Copper Sulphate.	Bordeaux.	Bordeaux.	Bordeaux.	Copper Carbonate	Copper Carbonate.
Rot, shot hole fungus, curculio.	Before buds open.	Paris Green.—Soon after blossoms have fallen.	Paris Green.—10-12 days later.	10-15 days later.	10-15 days later, if rot is prevalent.	10-20 days later, if rot is prevalent.

SPRAYING MIXTURES.

An extended series of spraying experiments were last year carried on by Prof. Craig, Dominion Horticulturist, in conjunction with the Ontario Fruit Growers' Association, the results of which were most gratifying. The above calendar, together with the following directions for preparing spraying mixtures, should be carefully preserved for future reference, as they embody the results of the investigations referred to:

Diluted Bordeaux Mixture.—The ingredients are copper sulphate, lime, and water, in the following proportions:

Copper sulphate	4 lbs.
Lime	4 lbs.
Water	50 gals., or 1 kerosene barrel.

To destroy leaf-eating insects add 4 ozs. of Paris green. For peaches use 3 lbs. each of copper sulphate and lime, and 3 ozs. of Paris green, on account of the tenderness of the foliage.

When a single barrelful of this is required, dissolve in the barrel 4 lbs. of copper sulphate (blue-stone). Hot water facilitates the operation. To dissolve quickly, place the copper sulphate in a cotton bag or basket, and suspend this in the vessel containing the water, so that it is entirely immersed. Solution rapidly takes place. In another vessel slake 4 lbs. of fresh lime with as many gallons of water. If the lime, when slaked, is lumpy or granular, it should be strained through a fine sieve, or coarse sacking, into the barrel containing the copper sulphate now in solution; fill the barrel with water. It should be used soon after being prepared.

When a large amount of spraying is contemplated, it is a good plan to make up a stock solution separately, each, of lime and bluestone, which can be diluted as needed:—Dissolve 100 lbs. of copper sulphate in 50 gallons of water; two gallons, when dissolved, will contain 4 lbs. of the salt. In another barrel slake 100 lbs. of lime, and make up to a milk by adding 50 gallons of water: when well-stirred, two gallons should contain 4 lbs. of lime. When it is desired to make a barrel of Bordeaux Mixture, take two gallons of the stock solution of copper sulphate, and add the same quantity of the milk of lime; if the lime is of good quality it will be sufficient to neutralize it completely. If the lime is air-slaked or impure, the right quantity can be ascertained by applying the ferrocyanide of potassium test. If the lime is deficient a drop of the ferrocyanide of potassium (yellow prussiate of potash) added to the mixture will turn brown. Add lime water till the drop of ferrocyanide of potassium remains colorless.

Ammoniacal Copper Carbonate.—Copper carbonate, 5 ozs.; ammonia, 2 quarts; water, 50 gallons.

This is prepared by dissolving the copper carbonate in the ammonia, and diluting with water to 50 gallons. The concentrated solution should be poured into the water. Care should be taken to keep the ammonia in glass or stone jars, tightly corked.

This mixture is more expensive than the former, but is more easily applied, and may be used as a substitute, especially in the case of grapes, where late spraying is necessary, and when Bordeaux Mixture might, by adhering to the fruit, injure its sale.

Copper sulphate, 1 lb. to 25 gallons of water, is used for the first application only. It should never be applied after the buds burst, as it will injure the foliage.

Equipments for Spraying.—Where the area to be sprayed exceeds 15 acres, it will probably pay to buy a horse-power pump. For smaller areas, strong, barrel force pumps will answer all the requirements. The valves and inside working parts should be of brass, the metal chambers and all castings strong and heavy, and the packing of the most durable character. Pumps of this kind can be obtained from manufacturers whose advertisements appear in the FARMER'S ADVOCATE. Each pump should be supplied with two lines of hose, the length proportionate to the height of the trees, each hose fitted with a stop-cock.

The nozzles should be such as will apply the mixture in a fine, misty spray.

Raspberry Anthracnose—Experience in Its Treatment.

BY ELLIS F. AUGUSTINE.

This disease is rapidly spreading, and causing much damage in many berry-growing districts. Some growers have dug up and destroyed whole plantations in order to prevent its further spread. This is entirely unnecessary if the proper remedy for checking it be applied in time. The first symptom of the disease is the appearance on the young canes of small, white pits, surrounded with a dark-bluish circle. These soon enlarge and spread over the cane until it is sometimes entirely girdled with them. The following season, just before fruiting time, the foliage of both old and new canes becomes affected, and the bushes appear as though a fire had passed over them. Many of the canes dry up completely, while upon others the berries do not grow to more than half their natural size, and are dry and tasteless.

The first season of fruiting, the disease is scarcely perceptible; but the second, if unchecked, it causes much damage; and the third season often ruins the entire crop. It is more prevalent on wet, cold soils than on lands that are warm and rich.

A year ago last summer we had an acre of raspberries—mostly black caps—affected. Being then unacquainted with the disease, I forwarded a few specimens of the injured leaves to John Craig, Horticulturist, Experimental Farm, Ottawa, for inspection. He at once recognized it as anthracnose, and advised spraying with diluted bordeaux mixture immediately after harvesting the fruit, and again in the spring before the buds burst; to be followed by one or two later applications. Having no sprayer at that time, I neglected spraying in the fall; but in the spring I thoroughly sprayed the old plantation on 4th May. This was just before the buds began to burst. In each case it rained within 24 hours after spraying. The solution used was composed of four pounds copper sulphate, four pounds lime, and 50 gallons water. I found that by first filling the barrel half-full of water, then pouring in the copper sulphate and lime solutions, and then adding the remainder of the water, the mixture adhered much better to the foliage during

rain show usually re copper sul the barrel. 12th and 13 form. On quite badl three acre 17th, whic last sprayi

Now, a plantation the disease leaves of o some of th vious year the fruit o should ha many of th than six o reached th and none a plantation canes are the disease last applic would ther before the

Again, difficult to Colossal, to the foli variety, t thoroughl the fruit d the disease

In conc

sons find f

consider th

if their tea

benefits v

special cas

of dollars.

The gr beetle. W protection beds raise the grub working t salts and e boards. T rapidly w constant sown with these and the caulic Dust is als lime, ashe as a prot decoction

The cu combated. is to trap in the field method re National spraying a Cut it, div field a day The worm their caree

Of cou America, little use transplant with the l at about object is to begin to h the north, a hot-bed, setting in in August of very po

The ear should be in the ro four feet flower, li sized, or e large, tho "button" very early rain: if th sary to w thorough trenches. tion is pra ridges are cold, and culture.

A str checked at once be con head: the teaches w when of wat that in croping pear g made