have escaped. They can not, however, completely control the pest, because as stated above, a large number of worms leave the fruit before it falls to the ground. It is not advisable to allow old sows in an orchard as they sometimes injure young trees.

Use of Arsenical Poisons.-For the complete control of the Codling Worm we must rely chiefly upon the use of one of the arsenical poisons such as Arsenate of Lead, Paris Green or Arsenite of



Fig. 2.-Eggs and moth (after Slingerland).

Lime. The preference should be given to Arsnate of Lead, principally because no matter how thoroughly we drench the trees there is no danger of burning the foliage. Very heavy sprayings with Paris Green or Arsenite of Lime are much more likely to injure the fruit or foliage. Arsenate of Lead may be used at the strength of 2 pounds to 40 gallons of water though some are getting excellent results by using it as weak as 1 pound. (This latter strength is, of course, too weak for other purposes.) For Paris Green, the strength should be 4 ounces to 40 gallons. (If Bordeaux Mixture is used at the same time, it would probably be safer to use at half strength, viz, 22-40.)

Where the Worms are Poisoned.—It will be remembered that about 80 per cent. of the worms of the first brood and a considerable number of the second brood entered the apple at the calyx end and fed in the eavity at its base for some time before working farther into the apple. The main aim, therefore, in spraying it to get every part of its cavity so thoroughly coated with poison that no matter what time during the season the worm enters, it will be certain to be killed. Unless this is done we cannot hope for thoroughly satisfactory results from spraying.

When to Spray.—It is found that the little leaves the calyx remain open for one week after most of the blossoms have fallen, and after this period they close so tightly that it is almost impossible to force any spray in between them. (See Figs. 3 and 4). It is the first blossoms of each cluster to appear that regularly produce fruit, so that the calyxes of these are the ones that we must keep most in mind. If we waited until all the blossoms dropped it would be too late to get the poison into these most important ones. If there is much difference in the time of blossoming, earlier varieties may be sprayed first and later ones a few days afterwards.

How to Spray .--- Use a coarse nozzle. (Many claim that no kind gives so good satisfaction as the Bordeaux nozzle.) Apply plenty of pressure, never lower than 100 pounds and, if possible, as high as 150 pounds, no higher; spray directly into the calyx, and do not consider the tree properly sprayed until every calyx cup has been filled by the coarse driving spray. This will mean that the tree must practically be drenched. From time to time satisfy yourself that the calyx has been properly filled by examining a few. As the blossoms naturally point upwards toward the light it will be necessary, if one is to force the spray directly into them, to have a tower on the spray wagon and to use a nozzle set at an angle of about 30 degrees to the extension rod. A crook at the end of the rod may accomplish this purpose. A nozzle thus placed enables one to direct the spray much better than would otherwise be possible.

This one spraying if done thoroughly and at

the right time is all that is necessary to control the Colling Worm in any district where there is culy one brood, and in most districts where there are two. Whether it can do so in our worst infested district, viz., Niagara, will, we hope, be thoroughly tested this year, but from the excellent success obtained by a number of entomologists and fruit growers in the United States in apparently as badly infested localities we have strong grounds for feeling confident of the result.

Records Should be Recognized R. F. Hicks, York Co., Unt.

The importance attached to yearly records of cows was very forcibly demonstrated at Mr. R. S. Stevenson's sale of registered Holstein cattle on April 1st. His stock bull brought the sum of \$325, which may fairly be called a good price for a bull. The yearly record made by his dam, "Sherwood Gano," a cow that produced in 12 months under Record of Performance rules, 17,600 pounds of milk and 657 pounds of butter fat may fairly be claimed to account for the price paid. Coupled with this fact let us note that in her seven day test she produced 13 pounds of fat. This is not a large seven day record by any means, but it may be added that this seven day record was made six months after calving and she was milked twice daily instead of three times which is invariably



• Fig. 3.-Just right to gpray. A pear and two apples from which the petals have, A pear and two apples from which the petals have, a peak of the set of the the early: lobes are widely spread offer Silngerland). the method adopted in seven day testing. This explanation was not made known to the buyers at the sale, however, and they probably inferred that her seven days record of 13 pounds of fat was made while she was freak and at her best.

The ordinary value of young bulls having dams that have produced 13 or 14 pounds of fat a week does not exceed \$75 or \$100. Therefore we conclude that the record that this bull's dam made in 12 months enhanced his value to about four times what it would have been had she had only the seven days record to her credit. In drawing attention to this incident we would not wish to in any way disparage seven day tests. There is no doubt whatever as to the wonderful results that have been accomplished by this work. The yearly test work, however, being a comparatively new undertaking, has not as yet been taken advantage of at the hands of the breeders as generally as the scheme deserves.

The sale of this bull at public auction is the first real test that the writer has observed, as to how the opinon of buyers stand respecting the work of the yearly test. It can be considered gratifying to the limited number of breeders already engaged in the yearly test work.

A REGRETTABLE FEATURE

One regrettable feature connected with the record made by this cow is the fact that because ahe failed to drop her next calf within 15 months, her record will not be recognized in the printed report issued by the Live Stock Commissioners' Department. One of the rules requires that each cow entered in the yearly tests must drop her next calf within 15 months. This cannot always be accomplished and when it unfortunately happens with some of the cows producing large amounts, it is a distinct loss to the breed to which they belong. This has been the fate with several of the best cows under test in both the Holstein and Ayrahire breeds.

We would like to submit that it would be of great advantage to the breed to which they belong, and to the host of dairymen in Canada, (for the benefit of whom the yearly testing of cow; has been undertaken by the Minister of Agriculture at Ottawa), if cows that have qualified under the Record of Performance rules in every particular, except that they failed to calve again within 15 months, that the record of such cows be published with the added explanation as to the time when they dropped their next calf.

OBJECT OF THE TEST

The first and great object in this undertaking is to furnish information to Canadian dairymen that will enable them to select bulls for the purpose of improving grade, as well as purebred herdof dairy cattle. The work is necessarily tedious on the part of the breeder handling the cows and the expense of conducting the test is necessarily already incurred by the government. After all this has been done it is hard to understand where in any good is accomplished by cutting out quite a percentage of the best cows. We of course understand that the object of the Department has been to have the cows handled as nearly as possible under the conditions that exist in the average dairy herd; the test to indicate which are the most desirable cows to select bulls from.

Everything considered the incident of the salof this bull shows conclusively that the buyers do not discount the value of a cow or her progeny because she has been a little later than the average time in getting with calf again. We are firmly convinced that the greatest good to the greatest number will not be achieved unless the records of all such cows are recognized, with any necessary explanations added, in the published report.

No request for a change as suggested has been made by the Holstein or Ayrahire Association. not because they do not desires such change to be made, but rather for the reason that these representing either breed do not care to take the initiative in askingfor any change in the rules. They prefer to suffer any inconvenience that may result therefrom, lest in asking for any amendment to the rules the competitive breed should seek to make use of such suggestion to their disadvantage. Were this feature not present requestfor the change indicated would have been madby both the Ayrahire and Holstein Associations.

Choice In Varieties of Potatoes

L. H. Newman, Sec. C.S.G.A., Ottawa, Ont. The first important consideration as regardpotato growing is that of variety. In this country

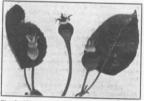


Fig. 4.-Almost too late to spray apples effectively. Note that ealyx lobes are drawn nearly together on the two apples, while on the pear in the centre thcalyx cavity is open (after Slingerland).

hundreds of varieties have been tested at our stations, while each year sees a long list of so-called "new introductions" or "new creations." Some of the best of these find their way to the farms of Canada in course of time and often give good results for a year or two. Owing however, to the common, hap-hazard practice of using for seed

May 27,

either small but inferior inally excelled they are ince we realize th regard to y placed in th Stations, sh plots side by promising so system shou strain might from year to In choosin

the potato is that quality speaking the mind, viz.: Yield; (3) A the skin; (5) Trueness to

Cooking qu upon the ger relative thic potato, being of the plant, tents of which cooking a pot will break do and allowing other cells in desirable qua when the tul taining the heavy and heavy ing the cooki yet a critical cooked tuber that are indi-For instance, quality will s defined pith, the periplury starch which proves unsatis The yield of

ter and differ varieties but same variety. should ascerta a heavy yield variety posses

The ability interesting an can be termed seem better a than are othe the locality se ther removed peculiar to it ceptible it see between varies ward diseases ing disease re been accomplis mental Station lars regarding annual reports

The color of only in so far a ets prefer a At present, th most favored. skin is regarde as indicating p

The shape of The shape white termed "flat, r sents a greater and since the those layers no