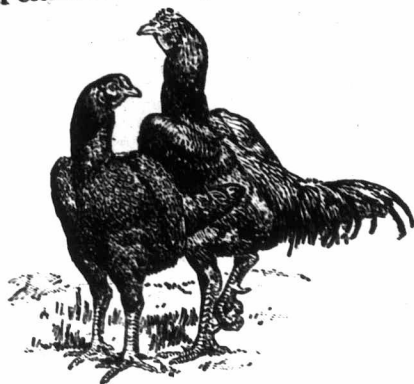


when possible, a vigorous yearling male with two-year-old hens. The latter mating will make better layers than it will market fowls. The first will make layers and fowls for market.

Second.—By purchasing a thoroughbred Plymouth Rock or Wyandotte male and two females of either sort. Buy in the fall, when they may be



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had at a reasonable price. In spring breed all the chicks you can, and the earlier the better. Kill off your scrubs, and in the fall you will have a nice lot of thoroughbred chickens, and the old stock besides. The cockerels may be sold on the market, and the pullets

kept for winter layers. The latter plan will be found more profitable in the long run. Many start by getting settings of eggs of pure breeds of their choice from reliable breeders.

RECAPITULATION.

The following summary of foregoing remarks may be useful:

Fowls for eggs and flesh, good winter layers, good sitters and mothers, chickens hardy and mature rapidly—Plymouth Rocks and Wyandottes.

Fowls for eggs, good winter layers, non-sitters, chickens hardy and grow quickly—White and Brown Leghorns, Black Minorcas.

As before stated, in mentioning the above-named breeds or varieties it is not intended to detract from the merits of others. And, again, they are within easy reach of the farmer at reasonable cost, while newer varieties are more difficult to obtain, are much higher in price, and not any more meritorious.

APIARY.

Handling Bees.

After procuring a stock of bees, it is essential to know how to handle them. To the practical hand it is no task to open a hive and go through it, but to the novice it looks like a great undertaking to open a hive with its many stingers. The secret, however, is this: Bees, when filled with honey, are not inclined to sting unless they are squeezed. To cause them to fill themselves with honey, it is only necessary to frighten them, and they will make a rush to save their most valuable property. Closing the entrance and rapping upon the side of the hive a few times, or blowing smoke into the entrance or down among them from the top, will make them fill themselves with honey and be docile. But the actions of the persons have much to do with it also, as it almost seems as if bees know anyone who is afraid of them. In going to a hive and opening it, make slow, deliberate motions, and keep the hands from the face, unless put there slowly. Get a good bellows smoker to begin with, and fill it up with dry, rotten wood, approach the hive from the side, to be out of the way of the flying bees, and give one or two strong puffs at the entrance. Wait a minute or two for this to have effect, then move the cap, with as little jar as possible, take off the quilt or honey-board as carefully, blowing a little smoke as you do so, and give the bees a little time to fill themselves with honey. The bees will be seen with their heads stuck in the cells, lapping away for their dear life. Then make slow motions, turn the frames over with as little jar as can be, and while looking at the combs, keep the breath from striking the bees too much. Patience and practice will soon give the beginner confidence, but, above all, do not have too much smoke.—W. N. B. in *Farmer and Stockbreeder*.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to be advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquiries must in all cases attach their name and address in full, though not necessarily for publication.]

Legal.

Removal of Cornstalks from Rented Farm.

O. W. G., Middlesex Co., Ont.:—“Has a tenant a right to take away cornstalks from the farm he rents when the landlord objects, nothing being provided about it in the lease?”

[Yes.]

Miscellaneous.

Solution for Spraying Potatoes.

J. K. McI., Middlesex Co., Ont.:—“Kindly let me know in your next issue the best solution for spraying potatoes to prevent blight and rot, and also when to apply it. Will it hurt potatoes to spray while in blossom?”

[Potato blight or rot has long been known as one of the most serious and destructive potato

troubles. When the weather is warm and moist the disease spreads with great rapidity, so that an entire field may soon suffer from an attack. The first symptom of the malady is the browning of distinct areas upon the potato leaves. These may be small or extended over the entire leaflet. There is also soon formed on the under side of the discolored parts a frostlike coating, which is composed of the summer spores and of the threads bearing them. The tubers of the plants thus attacked almost invariably rot. This disease, *Phytophthora infestans*, rarely attacks plants before the middle of July and sometimes not until late in August. The proper treatment is Bordeaux mixture, sprayed on at the first appearance of the blight, and two or three times later at intervals of one to three weeks, depending on the weather. The correct strength is 4 lbs. copper sulphate, 4 lbs. quicklime, and 50 gallons of Paris green, if a treatment for bugs is needed. The crop being in blossom will not affect the usefulness of the spraying.]

Feeding Young Pigs.

J. A. M., Prince Edward Island:—“Kindly give the best method of feeding thoroughbred pigs up to 6 or 7 weeks old; wishing to feed them to great growth and heavy weights, consistent with good results as breeders. (a) The kind of feed, first to sow, how often? (b) The feed to litter, how often per day? Weaning pigs at 6 weeks, would it not be just as well to ship them as to keep a week or too longer after weaning at this period? My practice is to wean at 6 weeks, and keep the couple of litters a week or so longer on the sow. An answer to the feeding and care of high-priced pure-breds to many will be considered from so high an authority a great favor. What should such pigs weigh at 6 weeks?”

[The sow for the first three days after farrowing should have only thin, warm drinks, such as kitchen swill with a little bran in it, after which her feed may be gradually increased in quantity and strength—shorts and ground oats or barley being given in milk and swill—till at two weeks she may have all she will eat up clean three times a day, and sow and pigs should be allowed to run out each day for exercise, and to eat grass or grit at pleasure. The pigs at three weeks old may learn to drink warm milk from a low, flat trough, placed in an enclosure in the pen where they can go under the partition and help themselves. At four weeks they will take considerable milk in this way, and should have it renewed at least three times a day. If weaned at six weeks, they should have warm milk five times a day for the first week, in small quantities, just what they will clean up each time. In a few days a little shorts and ground oats may be added to the milk, and increased in quantity gradually as they grow older, adding barley meal to the mixture, and they should not be closely confined, but have the run of a yard, or better, of a grass plot. In preparing for exhibition it is not unusual to give new milk, which, of course, is fattening; but pigs can be made to fatten along rapidly on skim milk fed at blood heat, which need not require heating on a stove, but may be heated by adding hot water as a matter of convenience. If the pigs have learned to eat before weaning at six weeks old, and the distance is not more than a hundred miles or a day's run by express, it is as well to ship at that age as to keep them a week or two longer after weaning; but if the distance is such as to require a two or three days' journey, they will stand it better at eight to ten weeks of age. Our practice has been to wean the whole litter at once, but to let the sow with her litter once a day for two or three days, and we think there is less danger of injury to the sow's udder by this method, as each pig has its teat, and if one or two are left with the sow, they will probably only suck the teat they have been used to, while all will be secreting milk and some are liable to go wrong. Pigs that have been well nourished should weigh from 40 to 50 pounds at six weeks old.]

Creamery Problems.

A. NEILSON, York Co., Ont.:—“1. How many pounds of butter can be made from a gallon of cream containing 40% fat? 2. Give method of computing amount of butter that can be made from cream or milk when percentage of butter-fat is known.”

[Cream containing 40% fat will weigh about 9.35 lbs. per gallon, and will therefore contain 3.84 lbs. butter-fat (9.35 x .40). Allowing for slight loss of fat in the buttermilk, and for additions to the fat of water, salt, etc., when manufactured into butter, this 3.84 lbs. fat should make about 4.4 lbs. of butter (3.84 + 15% of 3.84 = 4.4). This 15% is usually known as the over-run or the amount of butter over and above the amount of fat. I have allowed the same per cent. of over-run for cream as I usually allow for milk. This is not absolutely accurate, as there is loss of fat in skim milk in the latter case (the milk), and not in the former (the cream), to be considered. It is, however, near enough for the purposes of this question.

2. An illustration will best do this:

Pounds milk.	Per Cent. of Fat.	Pounds Fat.
250	3.5	8.75 (250 x 3.5%)
Pounds Fat.	Pounds Butter.	
8.75	10.06	(8.75 + 15% of 8.75)

Many do not know that 3.5 and 3.50 mean exactly the same, and I have met men who were in great perplexity over this very matter.

I would say that while I have been able to make regularly 15% of over-run during winter months, in actual creamery work, I have never been able to make as much of an over-run in summer months.

F. J. SLEIGHTHOLM.

Western Dairy School.

NOTE.—We trust Mr. Sleightholm will, in a future issue, discuss and shed some light on this particular point, which is important to dairymen.—EDITOR.]

Books on Dairy Cattle and Poultry.

Z., York Co., Ont.:—“1. Can you tell me the publisher, date of publication and price of Dr. Linsley's ‘Jersey Cattle in America’? Any information as to the scope and character of the book would also be welcome. 2. Can you tell me anything of the scope, character and practical value of ‘The Jersey, Alderney, and Guernsey Cow; Their History, Nature and Management,’ by Willis F. Hazard; Orange, Judd Co., \$1.50? 3. What is the best and most practical book or books, suited to Ontario, on poultry keeping: (a) For a guide to raising pure-breds for sale as breeding and exhibition birds; (b) For producing poultry and (especially) eggs for market on a fairly large scale? 4. Can valuable poultry be sent to distant shows without an attendant without undue risk?”

[1. The date of Dr. Linsley's ‘Jersey Cattle in America’ is 1885, and the publishers Burr Printing House, 18 Jacob St., New York. The price is not stated in the copy before us. It is a large volume of 702 pages, 8 x 11 inches, besides a general index of 40 pages, is profusely illustrated, containing no fewer than 70 well-executed portraits of famous animals of the breed, representing the different types of the leading families as they are known in America. There are also about 60 other illustrations, including charts, drawings, diagrams, plans, and implements. It treats upon the history of Jersey cattle; the principles of breeding; dairy farming and management of stock; the dairy; the Jersey in America, with butter records of cows up to date of publication, in divisions of one year, 30 days, and 7 days, respectively, the latter in groups, showing from 14 lbs. up to 46 lbs. 12½ ozs. in a week. The scale of points for Jerseys, and the Guernon escutcheon theory and other indications of superior milk production, together with treatises on feeds and feeding, manuring, draining, irrigation, barn building, etc., are also included. 2. This book is not in our library and we cannot give the information desired. 3. The Poultry Manual, by F. L. Sewell and Mrs. Ida E. Tillson, the latter a former contributor to the FARMER'S ADVOCATE, is a complete work suited to Canadian conditions. Price 50 cents at this office. There are other small booklets on the proper management of poultry, food, etc., but they apply more to southern and warmer latitudes. The reports of the Ottawa and Guelph Experimental Stations give considerable information, although experimental and subject to modification from year to year. A regular series of articles, by a competent authority, is commenced in the Poultry Department of this issue of the FARMER'S ADVOCATE, and will be continued till the whole ground of the subject is covered. 4. If the intending exhibitor is acquainted with the superintendent of the poultry department it is generally considered safe to consign birds to him with a request to have them properly cared for. It is customary for a number of exhibitors to send their birds in care of one attendant and divide the expense *pro rata*. As a rule exhibitors prefer to see their own birds placed and shown to best advantage.]

The Storing of Ice.

H. J. D., Peterboro Co., Ont.:—“My ice house is built with double walls. The inside one is made of 2x4 inch scantling and sheathed. The space between is filled with sawdust. There is a space of two feet between the ceiling and the roof. I left a space of four inches between the ice and walls, which was filled with sawdust. There was also about a foot of sawdust beneath the ice and seven inches above it. There is a hole in either end of the building above the ice for ventilation. I put in sixty blocks of ice, and it was all gone by Aug. 4th. What is wrong with the ice house? What is best to pack between the blocks of ice (I used snow mixed with water), and is fresh sawdust for packing necessary each year?”

[There are a few important points to remember in storing ice. The first one is to protect the ice from any currents of air touching its sides or bottom; another is to have perfect drainage, and a third is free circulation of air above. It is also important that the ice be packed with the least possible space between the blocks. The spaces should be filled with smashed ice. It is well to put in the ice on a freezing day, so that the whole mass will be frozen together, and the space between the ice and walls should not be less than eight inches when sawdust is used. Fresh sawdust is not necessary so long as it is dry and not commencing to decay. It should be well packed down. The best covering to use is long straw, two feet deep, because when sawdust is removed to take out ice, warm portions from the top may be turned back on the ice, whereas straw is rolled back and replaced as before. Again, a deep covering of sawdust is apt to heat and thus melt the ice, and also when it becomes damp its insulating properties are in a measure destroyed. It would appear that the trouble has been lack of drainage, too little space between the ice and walls, the blocks not closely packed, too little covering above, and too little ventilation. It is highly im-