

ROOT-KNOT OF COTTON AND OTHER CROPS



ROOT-KNOT SHOWN ON A COTTON PLANT.

(Prepared by the United States Department of Agriculture.)

Root-knot of cotton and other crops is caused by minute nematodes, or worms, which bore into the roots and live there. The irritation of their presence results in the formation of irregular swellings, or galls, varying in diameter from the size of a pin to that of a pea...

How Root-Knot is Spread. Root-knot may be carried from one field to another by any agency which will transfer some of the nematodes or their eggs in exactly the same manner that will disseminate drainage water...

Sandy Soils Most Subject to Root-Knot. Root-knot is essentially a disease of light soils. Although the disease may occur on heavier soils than will, yet it is not, as a rule, serious on soils containing a large proportion of clay.

Root-Knot Attacks Many Farm Crops. Unlike wilt, root-knot attacks a very large number of plants, many of which are important farm crops. Those subject to root-knot injury may be divided into two groups, according to their degree of susceptibility.

- Bean, soy, Bear, lima, Beet, Cantaloupe, Carrot, Celery, Clover, bur, Clover, crimson, Cowpeas (all varieties except Iron, Brabham and Monetta), Cucumber, Eggplant, Fig, Lettuce, Okra, Peach, Peas, Pomegranate, Potato, Salaty, Squash, Strawberry, Tobacco, Tomato, Watermelon.

Plants less severely injured by root-knot are the following: Alfalfa, Asparagus, Beans, snap, Cabbage, Clover, sweet, Collard, Cotton, Mulberry, Onion, Pea, garden, Potato, sweet, Radish, Spinach, Strawberry, Sugar cane, Vetch, common, Vetch, hairy.

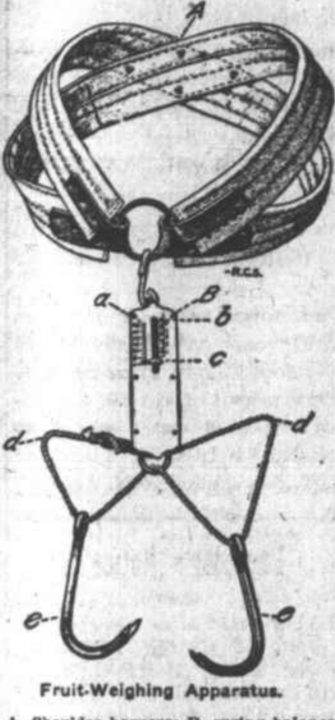
Some Farm Crops Resistant to Root-Knot. Fortunately, a few farm crops are largely or entirely immune to root-knot. By employing these in suitable rotations, nematodes may be starved out on infested fields, so that successive crops may be raised.

LIVE STOCK-FRUIT-DAIRYING-GARDENING-FIELD CROPS-SILOS-PIGS

FARM AND FIELD Making the Farmers' Business Profitable TOLD IN AN INTERESTING MANNER EXPRESSLY FOR OUR READERS

APPLES PICKED FOR MARKET

Time of Gathering Fruit Varies Considerably With Variety—Grading Is Most Essential. Apple marketing plans should comprehend picking methods, grading and sizing methods, kind or kinds of packages to use, types of pack if box packages are contemplated, shipping methods and facilities, storage and methods of marketing the fruit to the best advantage.



Fruit-Weighing Apparatus.

Through proper grading one New York firm received two years ago a minimum of \$3.56 a barrel for its fruit and as high as \$6 a barrel for the best grades.

PROPER GROWTH OF CALVES. Puzzling Question to Gray Heads in Calf Business—Much Depends on Ration Furnished.

How fast should my calves grow? is a puzzling question even to gray heads in the calf-raising business. This will depend to a large extent on the kind of ration fed, but in order for any ration to be considered a definite success the calves should show a gain of at least a pound a day each day for the first six months.

MORE MULCHING IN GARDENS. Roots of All Plants That Lie Just Under Surface Suffer From Freezing and Thawing.

It would be greatly to our advantage to do more mulching in our gardens and about our shrubs and fruit trees. Roots of all plants that lie just under the surface suffer from the alternating freeze and thaw of our broken winters.

SET-OUT ORCHARD IN FALL. Generally Not So Much Pressure and Hurry of Work—Rains Will Settle the Soil.

PRUNE SMALL BUSH FRUITS. Work May Be Done on Currants and Gooseberries Soon as Leaves Fall, or in Spring.

Currants and gooseberries may be pruned as soon as the leaves fall; or the work may be left until early spring. Cut back one-third of this year's growth, and thin out surplus, diseased or unhealthy shoots.

Avoid Fall Planting. Fall planting of fruit trees is not to be recommended in localities where the winter temperature drops far below zero.

Join With Neighbors. Join with your neighbors in buying spraying materials and thus get the benefit of wholesale prices.

GIVING MILK TO DAIRY CALF

Guesswork in Apportionment Is Expensive in More Ways Than One—Good Rule Is Given. "Guesswork in apportioning milk to the dairy calf is expensive both from the fact that irregular amounts often cause digestive troubles and because more milk than necessary is frequently fed."

A general rule is to feed one pound of whole or skimmed milk to each eight pounds of live weight, rarely feeding in excess of 12 pounds of either. The schedule of feeding used by the Illinois Experiment station, Urbana, Ill.



Splendid Dairy Type.

pounds of whole milk to a Jersey calf the first two days; six to eight pounds from third to twenty-eighth day; three to four pounds of both skim milk and whole milk from twenty-eighth to thirty-fifth day; eight to ten pounds skim milk from thirty-fifth to fifty-sixth day, and ten to twelve pounds from fifty-sixth to ninety-first day.

INCREASE OF POULTRY URGED. Demand Can Be Met Most Effectively by Introduction of Better Stock and Methods.

(From the United States Department of Agriculture.) An appeal to poultry raisers to increase their production of poultry, meat, and eggs has been issued by the American Association of Poultry Inspectors and Investigators in Poultry Husbandry, which met recently at Amherst, Mass.

BUTTER MAKER SHOULD KNOW. Must Handle Cream and Churn in Such Manner That He Will Make Best Quality of Butter.

The farm butter maker should know how to handle his cream and churn in such a manner that he will make the best quality of butter from it. The cream must be ripened evenly and then churned at the proper temperature.

BARREL CHURN IS EXCELLENT. Permits Concussion of Cream Against Sides Separating Fat Globules—It Is Best Way.

It has been found that the type of churn that permits concussion of the cream against the sides of the churn is best, because that is the easiest and best way to separate the fat globules of cream, so they may be collected. A good example of this type is the barrel churn which is commonly used in some modified form.

Purebred Bull Improves Herd. Almost any purebred bull with good milking ancestry will improve a herd of grade or scrub cows. That does not infer that the best bull is not desirable.

No Profit in Bad Hay. Not a bit of profit in feeding bad hay to a good cow. Results show how the cow is fed, so be careful.

Identification Marks. Marks for identification should be plain without disfiguring the animal.

RAISING GUINEA FOWLS IS PROFITABLE



GUINEA FOWLS STEADILY INCREASING IN DEMAND.

From the United States Department of Agriculture.) Guinea fowls, which have suffered unpopularity with farmers because of pronounced propensities for noise-making during the sleeping hours of humans, are likely to rise above this objection in view of the steadily increasing demand for their delicious flesh, in the opinion of a poultry specialist of the United States department of agriculture.

The increasing demand for guinea fowls, the specialist says, comes from hotels and restaurants in the large cities, which are always eager to buy prime young stock. These they particularly like to use as a delicacy in banquets and club dinners, guinea being a good substitute for game birds such as grouse, partridge, quail, and pheasant.

Develop Private Trade. Guinea fowl raisers who are near the large Eastern markets and who have developed a trade among private customers are now receiving prices that make this industry very profitable.

Removing Feathers. If the guinea fowls are to be marketed with the feathers on, all that should be done is to bleed them by severing the vein in the roof of the mouth, allowing them to hang head downward until bleeding is complete.

SEE TO REPAIRS IN AUTUMN. Get After Leaks and Cracks Before Cold Weather Sets In—Dampness Is Worst Enemy.

Nothing is more detrimental to a leaky hen house on a rainy day; the hens huddle in the light spots; the drip, drip of the rain splashes and spreads; the indescribable smell of the damp droppings permeates the air.

FINISH POULTRY FOR MARKET. Most Satisfactory Method is to Confine Fowls in Small Crates Where Feeding Is Easy.

The most satisfactory method of finishing chickens for market is to confine them to small crates where exercise will be restricted and to feed heavily for ten days or two weeks on a wet, sloppy mash made with milk.

WOMEN MAKING MOST MONEY. Get Bigger Returns From Intelligent Care of Flock Than Men Get From General Farming.

No one will gainsay the statement that there are some enterprising farm wives and daughters who are making more clear money every year from the intelligent care of a flock of purebred birds, and sometimes mongrels, than the husband and father from his general farm work.

ROAD BUILDING

TIME FOR DRAGGING ROADS

Much Depends on Character of Road Material—No Exact Rule Will Fit All Cases.

If clay is mixed with water and "puddled" and then allowed to dry a hard, almost waterproof, and nearly dustless material is formed. If a smooth, well shaped road could be constructed of this material it would never become very muddy or very dusty, and would be an ideal earth road.



Dragging Road in Fall.

being puddled by the horses' hoofs and wagon wheels, can be smoothed out and properly shaped before drying then the ideal is attained, and this smoothing and shaping is the work accomplished by the road drag.

Marketing Guinea Fowls. The marketing season for guinea fowls is during the latter part of the summer and throughout the fall. At this time the demand in the city markets is for young birds weighing from one to two pounds each. At about two and one-half months of age guinea fowls weigh from one to one and one-half pounds, and at this size they begin reaching the markets in August.

SURFACING THE FARM ROADS

Materials Ordinarily Used in Building Roads Are Too Expensive—Few Good Suggestions.

Many of the materials ordinarily employed in road construction will be found too expensive for use in improving the farm roads. One or more of the following will, however, usually be found available and within the means of the farmer for surfacing his roads and paths: gravel, mixtures of sand and clay, cinders, brickbats from old buildings, brickyard waste and quarry waste.

IMPROVE ROADS AND DRIVES

Where Any Considerable Amount of Hauling Is Necessary Surface Improvement Is Needed.

Roads and drives immediately around the farmyard and barns which are used very frequently are usually of sufficient importance to warrant some surface improvement. Very light or extremely sandy soils cut up badly in dry weather, while certain heavy and absorbent soils become very sticky and soft during the rainy season.

\$300,000,000 Lost Yearly

The farmers of the United States have been allowing \$300,000,000 in real money to escape from their pockets each year because of poor roads, according to the testimony of experts who made a survey of the effect of bad roads upon markets for the department of agriculture.

Work in California

The state of California has voted \$15,000,000 to be spent in perfecting the state highway system, and not a single county failed to give the empowering measure a majority.

Keep Machinery at Work. Maybe your neighbor could make good use of some farm implement that you have stored away in a shed, or you could use an improved machine of his part of the time. Keep all available machinery at work during daylight hours.