Horticultural News

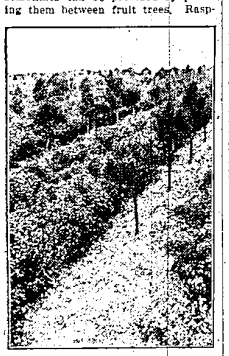
SMALL FRUITS IN ORCHARDS

Currants and Gooseberries Do Better If Grown Where There Is Partial Shade.

(Prepared by the United States Department of Agriculture.)

It is possible to plant between apple trees, when set 32 feet apart, smaller growing trees, such as the peach or plum, placing one between each two trees in the row, as well as planting a row in the center of the spaces between the tree rows. This is a temporary arrangement, however, specialists of the United States Department of Agriculture say, since the apple trees will eventually need all the space. Before crowding begins the interplanted trees should be removed.

Currants and gooseberries commonly do better, especially in the southern limits of their range, if grown where there is partial shade. This sometimes can be provided by planting them between fruit trees. Raspberries and blackberries are sometimes planted between trees, but the practice is not advised unless the soil is naturally moist and fertile.



Bush Fruits Growing Between Rows of Trees in a Newly Set Orchard.

Vegetables may also be grown between trees while the latter are small and do not shade the ground very much. Some of the early maturing vegetables may even be grown between rows of strawberries during their first season. One or more rows of strawberries may be planted in the middle of the space between two rows of trees and continued for a time.

TO DESTROY CURRANT WORMS

Insects Are Readily Eradicated by Use of Arsenic in Liquid or Dust Form.

The imported currant worm when full grown is about three-fourths of an inch long, green throughout, but yellowish at the ends. Young larvae are covered with black spots, and the head is black. These worms attack both currants and gooseberries, appearing on the plants shortly after the leaves are out in the spring and feeding at first in colonies, but later scattering over the plants. Currant worms are voracious feeders, and quickly strip the plants of foliage; hence, treatment should be given promptly upon their discovery. Another brood of larvae appears in the early summer, and some seasons there may be a partial third brood. These insects are destroyed readily with an arsenical (such as arsenate of lead paste at the rate of two pounds, or in powder form at one pound, to fifty gallons of water), sprayed or dusted over the plants. Effort should be made to destroy the first brood and prevent later injury. In treating the second brood when the fruit is ripening, powdered hellebore should be used, diluted five to ten times with flour or air-slaked lime, or as a spray, one ounce to one gallon of water.

DUSTING IS MOST EFFECTIVE

Saves Much Time and Permits Much Greater Rapidity of Operation—Also Is Cheaper.

Is dusting more effective than spraying in controlling fruit diseases and pests? This is a much mooted point among orchardists everywhere, but, according to figures presented by H. H. Whetzel of Cornell university, dusting appears to have a slight edge over the liquid method.

Not only is dusting a little cheaper, but it also saves much time and permits much greater rapidity of operation. The results obtained from the use of dust appear to at least equal those following the use of spray, and in many cases to excel them.

One of the most promising dusting mixtures was finely ground dehydrated copper-sulphate mixed with hydrated lime. Another successful mixture was eight pounds dehydrated copper sulphate, four pounds arsenate of lime and 88 pounds hydrated lime.

In figuring cost of materials, there is very little difference between dusting and spraying, but when the time saved in dusting is figured, the latter method must be counted as much cheaper.

TURKEYS SPREAD GAPEWORM PEST

Demonstrated by Experiments Carried on at Washington and on Nearby Farms.

OLD CHICKENS NOT INFECTED

Losses Can Be Greatly Reduced by Keeping Young Chickens on Ground That Has Not Been Exposed to Contamination.

(Prepared by the United States Department of Agriculture.)

Turkeys are probably the natural hosts of the gapeworm—a serious pest among young chickens—and are an important factor in their spread. This has been demonstrated by a zoologist of the United States Department of Agriculture as the result of experiments and other investigations carried on at Washington, D. C., and on farms in several localities in Maryland.

Many Turkeys Harbor Gapeworms.

During three winter seasons beginning in December, 1916, a total of 635 chickens and 679 turkeys were examined in the Washington city market. No gapeworms were found in the chickens, but 22.5 per cent of the turkeys were found to be infested. From 1 to 8 worms were found in each of the infested turkeys. A report of these investigations has been published by the department in Department Bulletin 939, "The Turkey as an Important Factor in the Spread of Gapeworms."

In view of the complete absence of gapeworms from a large series of adult chickens and their common occurrence in a similar series of adult turkeys, it would appear, the bulletin says, that adult chickens are poorly adapted as hosts of gapeworms. That turkeys above 3 years of age may harbor gapeworms is established by the fact that a turkey which was kept at the department's experiment station at Bethesda, Md., for three years after it was brought there was found after its death to be infested with a pair of worms.

In the perpetuation of gapeworms from year to year on infested poultry farms the two chief factors, according to the bulletin, appear to be turkeys

For Best Results With Turkey Flock Give Them Free Range.

and contaminated soil. Whether, in the absence of turkeys from a farm, gapeworm affliction among chickens will regularly disappear has not been definitely established, but it seems probable that it may often do so. Gapeworms among chickens appear to be more prevalent on farms where turkeys frequent the chicken runs than on farms where there are no turkeys. Available evidence indicates that gapes has a tendency to disappear on farms following the removal of turkeys.

From experiments recorded in the bulletin, it has been found that chickens, unlike turkeys, are readily susceptible to infection with gapeworms only while they are young. They become less susceptible as they grow older. Adult chickens are seldom likely to spread infection, for in those instances in which gapeworms develop in adult chickens the parasites are likely to live only a short time.

Methods of Avoiding Loss.

Losses from gapeworms can be greatly reduced, if not altogether avoided, according to the bulletin, by keeping young chickens on ground that has not been exposed to contamination within at least a year by chickens with gapes or by turkeys, and by excluding turkeys from it during its occupancy by chickens. As gapeworms appear rarely to occur in adult chickens, brood hens may be associated with young chickens with little risk of infection. The simplest means of preventing or reducing losses from gapes appears to be the exclusion of turkeys from farms where chickens are raised.

BIG SAVING OF FARM LABOR

Hitching Third Horse to Two-Horse Walking Plow Enables Man to Plow Much More Land.

By hitching a third horse to a two-horse walking plow a man can plow at least a quarter acre more land each day, say specialists of the United States Department of Agriculture. This makes a difference of about 5 acres in 20 days, or a saving of from two to three day's work—a big item during a busy season, especially a short spring.

INCREASED AVERAGE OF PUREBRED SIRES

Progress in "Better Sires—Better Stock" Campaign.

Altogether 431,139 Head of Domestic Animals and Fowls Have Been Enrolled by Owners—Greatest Activity in Ohio.

(Prepared by the United States Department of Agriculture.)

A noticeable increase in the number of purebred animals listed in the "Better Sires—Better Stock" campaign is the principal development during the first three months of 1921. The result has been to raise the general average of purebreds for the whole campaign 1½ per cent. Altogether 431,139 head of domestic animals and fowls have been enrolled by their owners.

Of that number 22,605 are purebred sires and the remainder are females of various breeding, but all were bred

The Use of Scrub Animals on Any Farm Is an Expensive Practice.

to purebred males, according to the owners' pledges. Although the number of purebreds, as noted, increased noticeably, more scrubs also were listed than in any previous quarterly period, thus helping to accomplish one of the main objects of the campaign, which is to grade up inferior animals by the use of good purebred sires.

The greatest activity during the current year, so far as enrollments are concerned, has occurred in Ohio, with Nebraska second. In justice to other states it may be added that several, from which only a few pledges to use only purebred sires were received, have been active in other branches of the work, particularly in the procurement and distribution of purebred sires of good quality. Kentucky and numerous other states, including West Virginia, Minnesota, Wisconsin and Virginia, are launching aggressive drives against inferior sires, particularly scrub bulls.

A feature of interest during the first quarterly period of 1921 was the dispatch of five emblems of recognition to far-off Guam, our island outpost in the Pacific, thousands of miles beyond Hawaii.

PRESERVING SOIL MOISTURE

Pernicious Practice of Permitting Water to Escape From Soil Should Be Discouraged.

The practice that prevails in some irrigation localities of letting the natural moisture escape from the soil, with the idea that more water can be applied when it is needed, is most pernicious and should be discouraged, say specialists of the United States Department of Agriculture. If the moisture that gets into the ground in the form of precipitation or as irrigation water is retained by the soil it will enable the soil organisms to act upon the plant foods, rendering them available for plant growth. There is a feeling of safety in having an unlimited supply of water for irrigation purposes, but it should be remembered that irrigation costs money and labor; precipitation is nature's gift.

PERSONAL VISIT TO MARKET

Grower Enabled to Acquaint Himself With Distributors and Improve Marketing Practices.

Many times a personal visit to the market will more than repay the shipper for the cost of the trip, says the United States Department of Agriculture. Points that seem trivial to the producer often are very important to the dealer. Such a visit enables the grower to acquaint himself personally with the distributors, to select trustworthy representatives, to learn the difficulties of the "man at the other end," and to improve his marketing practices.

POTATO STORAGE A SUCCESS

Much Depends on Quality of Tubers, Temperature, Moisture and Size of Piles.

Successful storage of potatoes, says the bureau of markets, United States Department of Agriculture, is dependent on such factors as the quality of the tubers stored, the temperature at which they are held, the moisture content of the air, the size of the storage piles, and the exclusion of light. The proper temperature ranges from about 35 to 40 degrees Fahrenheit.

MUST BE PRACTICAL FARMER

Not Worth While to Send Carpenter to Tell Tailor How to Put a Coat Together.

Men who act as field agents must be practical farmers. There is no use in sending a carpenter to tell a tailor how to make a coat, even if the carpenter happens to be pretty well read up on coats.—Dr. Seaman A. Knapp.

FARM POULTRY

AIM FOR HEALTH AND VIGOR

Appearance and Action Taken Together Are Fairly Reliable Guide for Selection.

Only by continuous selection for health and vigor is it possible to build up a flock that will produce fertile eggs, strong chicks capable of making quick growth, and pullets with sufficient stamina to withstand the strain of heavy egg production. The appearance of a bird is not always a sure indication of its vigor, but appearance and action taken together are a fairly reliable guide for picking out vigorous birds, say poultry specialists of the United States Department of Agriculture.

The comb, face, and wattles should have a good, bright color; the eyes should be bright and fairly prominent, and the head should be comparatively broad and short, having a fairly short, well-curved beak, and showing no tendency to be lop, "snaky," or "crow-headed."

The bird should be alert and have a strong, vigorous carriage; the legs

Single Comb White Leghorn Cockerel—One of Foundation Birds Used at Government Poultry Farm, Beltsville, Md.

should be set well apart and strongly support the body, giving no indication of weakness or a knock-kneed condition. The bone, as seen in the shank, should be strong and not too fine for the breed, while the toes should be strong, straight, and not too long. The plumage should be clean and smooth, as a lack of condition often accompanies soiled, roughened plumage. The condition of flesh should be good, as a very thin bird is usually in poor health. Sick fowls, or fowls that have apparently recovered from sickness, should never be used for breeding if it can be avoided.

FEEDS FOR GROWING CHICKS

In Addition to Grains Growth of Young Fowl Can Be Hastened by Supplying Milk.

As soon as chickens will eat whole wheat, cracked corn, and other grains, the small-sized chick feed can be eliminated. In addition to the above feeds the chickens' growth can be hastened if they are given sour milk, skim milk, or buttermilk to drink.

Growing chickens kept on a good range may be given all their feed in a hopper, mixing two parts by weight of cracked corn with one part of wheat, or equal parts of cracked corn, wheat and oats in one hopper, and the dry mash in another. The beef scrap may be left out of the dry mash and fed in a separate hopper, so that the chickens can eat all of this feed they desire. If the beef scrap is to be fed separately it is advisable to wait until the chicks are 10 days old, the poultry division of the United States Department of Agriculture advises, although many poultrymen put the beef scrap before the young chickens at the start without bad results.

Chickens confined to small yards should always be supplied with green feed. Fine charcoal, grit, and oyster shell should be kept before the chickens at all times, and cracked or ground bone may be fed where the chickens are kept in small, bare yards, but the latter feed is not necessary for chickens that have a good range.

LOSSES FROM FERTILE EGGS

Table Given by Department of Agriculture Shows Infertile Product Is Superior.

The following table, compiled by the United States Department of Agriculture, shows that the loss of fertile eggs are computed to be nearly twice as great as of infertile eggs:

	Fertile Eggs Per Cent	Infertile Eggs Per Cent
On the farm	2.0	15.5
At country store	1	4.0
Transportation to packing house	1.4	4.7
Total	4.5	24.2

LOCATION FOR BROOD COOPS

Should Be Placed on Spot Where Grass Is Green and Tender and Removed Frequently.

Brood coops with run should be placed on ground where the grass is green and tender, and, as fast as it is eaten off, the coop and run should be moved to a place where the grass is plentiful, say specialists of the United States Department of Agriculture.

CONTAINERS FOR FARM PRODUCTS

Public Sometimes Defrauded Because of Many Types and Sizes Now in Use.

STANDARD WILL REDUCE COST

Relatively Few Styles and Sizes Would Satisfy All Demands of Trade—Hamper Is Especially Popular in the East.

(Prepared by the United States Department of Agriculture.)

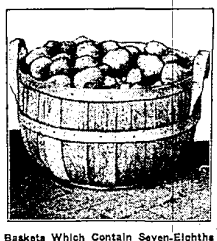
To eliminate fraud in the marketing of fruits and vegetables by the substitution of short measure packages at full-measure prices is one of the principal objects of specialists of the United States Department of Agriculture now making a study of the hundreds of different types of containers in use. For example, baskets which contain seven-eighths of a bushel are frequently used as bushel baskets, it being difficult to detect the short measure. In Farmers' Bulletin 1196, from the bureau of markets, just published by the department, the specialists discuss the need for standard containers for fruits and vegetables and describe how the public is sometimes defrauded because of the many types and sizes of containers now in use.

Multitude of Sizes Increases Cost.

The serious lack of uniformity of containers increases the cost of marketing, say the specialists, because of the greater expense of manufacturing a large number of unnecessary styles and sizes and by breakage in transit, which is sometimes directly attributable to the difficulty of loading odd-sized containers. There are in common use at present about 40 sizes of cabbage crates, 20 styles of celery crates, 30 lettuce crates or boxes, 50 styles and sizes of hampers, 15 styles and sizes of round-stave baskets and marketing baskets varying in size from 1 to 24 quarts, whereas relatively few standard sizes would satisfy all demands of the trade. In many cases the 6-quart market basket, the 14-quart peach basket, the ¾-bushel bean hamper, and the 5-peck lettuce hamper are confused with peck, half-bushel and 1½-bushel baskets.

No Standard Hamper.

The federal standard barrel law and the United States container act, which establish standard containers, have done away with a large number of unnecessary sizes of barrels, berry boxes and grape baskets, and have awakened a widespread demand for the application of the same principle to other containers, says the bulletin. At present there is no standard hamper, which is one of the most widely used types of containers, especially popular in the eastern and central states. Almost 30,000,000 of these baskets are



Baskets Which Contain Seven-Eighths of a Bushel Are Frequently Used.

used annually. The sizes of hampers which are recommended by the bureau of markets of the Department of Agriculture as being sufficient in number to satisfy all legitimate requirements of the trade are as follows: 8-quart, or 1 peck; 16-quart, or one-half bushel; 32-quart, or 1 bushel; 48-quart, or 1½ bushels. It is suggested that the latter be made in two styles to meet the preference in various parts of the country.

The round-stave basket, for which there is no standard, is popular in all regions except the southern and Middle Atlantic states and on the Pacific coast. About 20,000,000 such baskets are manufactured annually. The sizes which are recommended as standards by the bureau of markets are the same as those recommended for the hamper, except for the elimination of the 8-quart size. The splint, or veneer, baskets, for which there are also no standards, are well known to the public as market baskets. The sizes which are proposed by the bureau of markets are five in number—4, 8, 12, 16 and 24 quart.

WORK DONE BY SPECULATORS

Shippers Overlook Fact That Middlemen Are Doing Things Producers Fail to Do.

Many persons opposing the operations of speculative shippers overlook the fact that this type of middlemen is doing—however inefficiently and extravagantly—the things that producers have failed to do for themselves. Carefully organized, efficiently managed, loyally supported, co-operative organizations can perform the services rendered by these men in a more satisfactory manner, and in so doing shorten the distance between the farm and the consumer.

SIDE LINES INSURE AGAINST BAD CROPS

Many Stories of Achievements Reported From South.

Case Cited of Arkansas Woman, With Co-operation of Husband, Sold $1,200 Worth of Milk, Butter and Eggs in Year.

(Prepared by the United States Department of Agriculture.)

Numerous little stories of big achievement are encountered in going through the reports to the United States Department of Agriculture from home demonstration agents in the South. In estimating the money value of the returns reported in the various activities of the clubs it is necessary, of course, to remember that account seldom is taken of the land value, interest on investment, board and lodging, and such things, although credit for labor at the current rate of pay is set down in most cases.

However, the value of the achievements rests upon something more important than money—the fine commu-

Farm Woman Feeding Her Flock.

nity effect, the leadership developed, the general all-round rise in agricultural morale. It is impossible not to be deeply impressed by the work reports of some of these southern women and girls, results accomplished, very often, under conditions of unusual difficulty and discouragement.

An example of what may be accomplished under the stimulus of the home demonstration work and with encouragement and co-operation in the home is afforded by the case of Mrs. Jim Dorris of Bear, Ark., who enjoys the hearty co-operation of her husband in the work she is doing. With from three to six cows this couple sold, from January 1 to December, last year, $458.85 worth of milk and $495.75 of butter, and from 69 hens $240.80 worth of eggs. This $1,200 from side lines, coming in through the years, is important on any farm, and in many cases is a form of insurance against crop failures.

WINDBREAKS SAVE MOISTURE

Farming and Living Conditions More Favorable in Regions Where Trees Are Planted.

When the prairie regions of the Middle West were first developed the lack of trees was severely felt. The clear sweep of the winds across the plains was a great hindrance to agriculture, for the soil was dried out quickly by evaporation, grain was lodged, and orchards injured by the force of the wind. Windbreaks were the only remedy and thousands of miles of them were planted along roads and farm division lines. The effect of this planting, although felt only gradually, was very distinct; farming and living conditions became more favorable throughout the whole region.

CUT LETTUCE FOR SHIPMENT

Far Less Decay Developed in Transit When Two or Three Lower Leaves Are Removed.

Carefully cut lettuce, with the two or three lower leaves and all diseased leaves removed, develops far less decay in transit than the commercially cut lettuce in experimental shipments from Florida to northern markets, says the United States Department of Agriculture.

POTATOES IN ROTATION PLAN

Specialists Advise Interval of Two or More Years Between Crops for Best Results.

Specialists state that it is best to grow field potatoes in a regular rotation, keeping an interval of two or more years between the potato crops because of the liability of disease carrying over from one crop to the other.

QUALITY AND HONESTY COUNT

Farmer Can't Make No. 1 Hog Out of No. 2 Animal by Selling It Through Cooperative Market.

You can't make a No. 1 hog out of a No. 2 merely by selling it through co-operative marketing. Quality and all-round honesty will continue to be the most compelling virute of all right-thinking men and women.