

# United States Department of Agriculture Special Page

Bulletins and Special Articles Issued by the Government, of Interest to the Northwest; Suggestions Covering a Wide Range of Activities; Result of Federal Investigations, Etc.

## Change Foot-and-Mouth Quarantine Radically

TWO orders just signed by the Secretary of Agriculture make radical changes in the quarantine regulations for the foot-and-mouth disease. All the territory east of the Mississippi and north of Tennessee is now included in the quarantined area and no shipments of livestock, except for the purpose of immediate slaughter, will be permitted from this area to the South or West. Stock owners, however, in the States of Virginia, West Virginia, Vermont, Maine and the District of Columbia may ship out their stock upon affidavit that it has been on their farms for a certain length of time and has not been exposed to any risk of contagion.

This step the authorities believe to be necessary for the protection of the South, Southwest and West, which have not as yet been affected by the disease. The recent discovery of a few cases where cattle, shipped from areas where the disease had existed, carried it to previously uninfected sections, such as four counties in Kansas, convinced the department that no precautions will make such shipments absolutely safe.

The new measure, it is said, should confine the disease to the regions in which it has already made its appearance and in which the work of eradicating it will be pushed as before. All of the large slaughtering centers are within this area and very few shipments for immediate slaughter are expected to be made out of it.

Under the new regulations territory within the area now quarantined, which was formerly free, is designated as restricted territory. In this restricted territory livestock may be moved freely to other points within the same territory, but cannot pass beyond the limits of the quarantined area, except for immediate slaughter.

The regulations governing the area known respectively as closed, exposed and modified, remain practically the same as before. From the modified area livestock can be shipped for immediate slaughter to points within the quarantined area and from exposed area as well, after a preliminary inspection and certification by Federal authorities. No stock may be shipped out of the closed area for any purpose and can only be shipped into it for immediate slaughter.

## Farm Mechanics for High School Pupils

THE Department of Agriculture will shortly issue Farmers' Bulletin 638, entitled "Laboratory Exercises in Farm Mechanics for Agricultural High Schools." The purpose of the author, Daniel Scoates, professor of agricultural engineering, Mississippi Agricultural and Mechanical College, is to supply high school teachers with practical suggestions for teaching boys who are to be farmers the best and most economical methods for doing some of the more common mechanical work of the farm.

The bulletin, which is elaborately illustrated, gives, in its 26 pages, 42 practical exercises. The first five exercises have to do with the use of rope on the farm and show the best way of tying knots and making hitches and splices used in hitching animals and in tying up farm produce. The next four exercises deal with hitching up horses, fitting collars and repairing harness.

Four exercises on the handling of gas engines and repair of belting, deal effectively with the use of power. Later exercises have to do with the practical study and repair of different kinds of field and farm machinery run by engine or horsepower. There is also a series of exercises having to do with farm buildings, dealing with such things as concrete posts, feeding floors, hog houses, drop nests, gates, fencing, painting and whitewashing.

The bulletin closes with a series of exercises on farm surveying, terracing, irrigation and drainage, and road dragging. The materials used in the exercises are such as are to be found on farms near the school-houses, or such as can be readily constructed, from the working drawings and diagrams, by the teacher and pupils. The bulletin should be of great practical service to high school and other teachers in the rural districts. It may be had free on application to the Division of Publications, Department of Agriculture, Washington, D. C.

## Natural Brooding of Chickens

WHILE it is still Winter weather the poultry raiser is considering the raising of Spring chickens for the market, and among other important problems are those of brooding. Brooding with hens, according to the United States Department of Agriculture's specialists, is the simplest and easiest way to raise a few chickens and is the method which is used almost exclusively on the average farm. Artificial brooders are necessary where late Winter or very early chickens are raised, where only Leghorns or other non-sitting breeds of poultry are kept, or where large numbers of chickens are raised commercially.

Successful natural rearing of chickens requires convenient facilities, regular attention, and often tries one's patience, while artificial methods require a larger investment, close attention, and more care, but are more commonly used where large numbers of chickens are raised.

Many poultry keepers who are able to secure good egg yields and fair hatches make a failure of brooding chickens, either in raising only a small percentage of the chickens hatched or in failing to rear strong, vigorous birds which develop into good breeding stock. Brooding is still in the experimental stage, and no one system has given perfect satisfaction.

### Rearing Chickens With Hens.

Sitting hens should be confined to slightly darkened nests at hatching time and not disturbed unless they step on or pick their chickens when hatching, in which case the chickens should be removed as soon as dry, in a basket lined with flannel or some other warm material, and kept near a fire until all the eggs are hatched; or the eggs may be removed and placed under a quieter hen, whose eggs are hatching at the same time. An incubator may also be used to keep the earliest hatched chickens warm, in case they are removed from the nest.

If the eggs hatch unevenly, those which are slow in hatching may be placed under other hens, as hens often get restless after a part of the chickens are out, allowing the remaining eggs to become cooled at the very time when steady heat is necessary. Remove the eggshells and any eggs which have not hatched as soon as the hatching is over.

Hens should be fed as soon as possible after the eggs are hatched, as feeding tends to keep them quiet; otherwise many hens will leave the nest. In most cases it is best that the hen remain on the nest and brood the chickens for at least 24 hours after the hatching is over.

### Brooding Incubator Chicks.

Hens are often used to raise incubator-hatched chicks and to take the place of the artificial brooder, a practice that is in operation on many poultry farms. A few eggs are put under the hen four or five days before the incubator is to hatch. In the evening following the hatch of the incubator, after the chickens are thoroughly dry one or two are put under the hen, and if she is found to mother them properly, the next evening as many more are added as she can brood or care for properly. Hens will successfully brood 10 to 15 chickens early in the breeding season, and 18 to 25 in warm weather, depending upon the size of the hen.

This method of handling chickens does away with the artificial brooder, and where one has only a small number of chickens to raise it is a very easy manner in which to handle them, and also a good method when it is desired to raise separately special lots of chicks.

It should be borne in mind, in adding chickens to a hen which already has some to brood, that it is best to add those of the same color and age as the ones already with her, as the hen will often pick the later arrivals if they are of a color different from the ones she is already brooding. As a rule this transferring should take place at night, although with a quite docile hen it can be done in the morning.

### Sanitary Necessities.

Powder the hen with a good insect powder before moving her and the chickens to the brood-coop. The hen should be dusted every two weeks or as often as necessary until the chickens are weaned. If lice become

thick on the chickens, or if they are troubled with "head lice," a very little grease, such as lard or vaseline, may be applied with the fingers on the head, neck, under the wings, and around the vent. Great care should be taken, however, not to get too much grease on the chickens, as it will stop their growth and in some cases may prove fatal.

The brood coop should be cleaned at least once a week and kept free from mites. If mites are found in the coop, it should be thoroughly cleaned and sprayed with kerosene oil or crude petroleum. From one to two inches of sand or dry dirt or a thin layer of straw or fine hay should be spread on the floor of the coop. Brood coops should be moved weekly to fresh ground, preferably where there is new grass.

Shade is very essential in rearing chickens, especially during warm weather; therefore, the coops should be placed in the shade whenever possible. A cornfield makes fine range for young chickens, as they secure many bugs and worms and have fresh ground to run on most of the time, due to the cultivation of the ground, and have abundant shade at the same time.

Toe punch or mark all the chickens before they are transferred to the brooder or brood coop, so that their age and breeding can be readily determined after they are matured. Farmers frequently keep old hens on their farms and kill the younger hens and pullets, because they are unable to distinguish between them after the pullets have matured.

### Brood Coops.

Chickens hatched during the Winter should be brooded in a poultry house or shed while the outside weather conditions are unfavorable; after the weather becomes settled, they should be reared in brood coops out of doors. Brood coops should be made so that they can be closed at night, to keep out cats, rats and other animals, and enough ventilation should be allowed so that the hen and chicks will have plenty of fresh air. Details and specifications for building a good coop are given in the Department's Farmers' Bulletin 574, "Poultry-House Construction," page 13, which is to be had on application.

The hen should be confined in the coop until the chicks are weaned, while the chickens are allowed free range after they are a few days old. Where hens are allowed free range and have to forage for feed for themselves and chicks, they often take them through wet grass, where the chicks may become chilled and die. Most of the feed the chicks secure in this manner goes to keep up the heat of the body, whereas feed eaten by those that are with a hen that is confined produces more rapid growth, as the chicks do not have so much exercise.

### Confine Hens.

Then, too, in most broods there are one or two chicks that are weaker than the others, and if the hen is allowed free range the weaker ones often get behind and out of hearing of the mother's cluck and call. In most cases this results in the loss and death of these chicks, due to becoming chilled. If the hen is confined the weaklings can always find shelter and heat under her, and after a few days develop into strong, healthy chicks.

The loss in young chicks due to allowing the hen free range is undoubtedly large. Chickens frequently have to be caught and put into their coops during sudden storms, as they are apt to huddle in some hole or corner where they get chilled or drowned. They must be kept growing constantly if the best results are to be obtained, as they never entirely recover from checks in their growth even for a short period. Hens are usually left with their young chicks as long as they will brood them, while some hens frequently commence to lay before the chickens are weaned.

Farmers and fruitgrowers of the country are losing over \$1,000,000,000 a year by reason of the ravages of insects. Cottongrowers of Texas are losing \$50,000,000 a year by reason of the ravages of the boll weevil. And all because the quail and the prairie chicken, the natural enemies of that bug, are becoming practically extinct.

## American Sparrow Is Well-Behaved Species

WHILE one naturally thinks of the English species when the word "sparrow" is mentioned, there are some 40 species of sparrows in North America which are helpful rather than harmful and should be encouraged rather than discouraged; at least, this is the opinion of the United States Department of Agriculture's investigator, whose "Some Common Birds Useful to the Farmer" has just been issued as Farmers' Bulletin No. 630.

While the English sparrow is noisy and obtrusive, the American species are unobtrusive both in song and action. These native sparrows, although so seldom noticed by the majority of people, may probably be found in nearly every part of our country, although not more than a half dozen forms are generally known in any one locality.

The American varieties resemble the English sparrow in general, although a few are more brilliant. A California species has a red head, as have several species in the East, which are not so common. The snow bird is a sparrow which is particularly common in Winter. It is a slate color with a white breast.

While American sparrows are noted seed eaters, they do not by any means confine themselves to a vegetable diet. During the Summer, and especially in the breeding season, they eat many insects and feed their young largely upon the same food. Examination of stomachs of three species—the song sparrow, chipping sparrow, and field sparrow—shows that about one-third of the food consists of insects, comprising many injurious beetles, as snout beetles or weevils, and leaf beetles.

Many grasshoppers are eaten. In the case of the chipping sparrow these insects form one-eighth of the food. Grasshoppers would seem to be rather large morsels, but the bird probably confines itself to the smaller species; indeed, the greatest amount (over 36 per cent) is eaten in June, when the larger species are still young and the smaller most numerous. Besides the insects already mentioned, many wasps and bugs are taken. As a whole the insect diet of the native sparrows may be considered beneficial. There are several records of potato-bug larvae eaten by chipping sparrows.

Their vegetable food is limited almost exclusively to hard seeds. This might seem to indicate that the birds feed to some extent upon grain, but the stomachs examined show only one kind, oats, and but little of that. The great bulk of the food is made up of grass and weed seed, which form almost the entire diet during the Winter, and the amount consumed is immense.

## Distributing Cultures for Leguminous Seeds

IN distributing cultures for inoculating leguminous seeds, the United States Department of Agriculture has determined to adhere to last year's practice and to limit the supply that will be sent to one planter to two bottles. Each bottle contains sufficient culture to inoculate thoroughly one bushel of seed. The limitation is made necessary by the probability that the funds available for the distribution of cultures will prove inadequate to furnish them in unlimited quantities.

Planters who have had no previous experience in the use of cultures and do not understand exactly what methods are necessary for successful seed inoculation should write to the department for information and for application cards. All requests for cultures must be transmitted upon these application cards. Preference will be given to advance requests, and farmers are urged to apply to the Department for the culture at the earliest possible date, and at least two weeks before the probable date of sowing the seed.

Planters are also requested to plant a small quantity of uninoculated seed on a portion of the same field with the inoculated seed. This, it is said, will materially aid the department in making observations and comparisons which will prove valuable to planters in the future.

No man ever lived long enough to do all the things his wife wanted him to do.