

CROP ROTATION IS ONE OF GREATEST NEEDS OF FARMS

Few farmers in Oregon or the western states practice good crop rotations. Throughout the United States in fact use of good crop rotations has advanced but slowly. Yet the importance of using a good rotation is so great, not only in maintaining and increasing soil fertility, crop yields, profits, and in its immediate effect in increasing farm labor efficiency, that its value can hardly be overestimated.

A real crop rotation is a permanent plan for changing the crops from year to year in regular order from field to field over the entire farm so that in the course of a given number of years every field will have received the same sequence of crops, while each year the same acreage of each of the crops is produced by the farm as a whole. A first class crop rotation has many requirements.

Feed and Cash Crops
It should provide the feed crops and cash crops desired. The feed crops include as far as the land permits all of the crops desired for the live stock, such as hay, grain, green feed, silage, forage, pasture, and straw. The cash crops included in the rotation are any field crops raised for sale, such as potatoes, beans, clover seed, vetch seed, field pea seed, cabbage, sauerkraut, and so forth. Uniform amounts of feed and cash crops should be grown each year. This will permit the full use of all equipment and the planning of a definite labor program.

Soil Fertility Necessary
Crops for maintaining or increasing the fertility of the soil should be included. This is accomplished chiefly through the regular and ample use of the legumes, the use of green manures, the return of all barnyard manures and all straws to the soil, and the systematic use of commercial fertilizers or amendments such as lime, where these are profitable.

Maintaining and Improving the Soil
The physical condition of the soil is necessary. This is done chiefly through deep plowing and through occasional deep plowing and through increasing the humus content through the organic matter derived from the roots of stubble of legumes, from manures, straws, and so forth.

Pest Eradication Stressed
Eradication or control of insects, plant diseases, and weed pests should be provided for. The rotation should include any special features needed for combating any of these pests that are prevalent.

The crops should be moved regularly from field to field from year to year, so that each field, when the rotation course is completed, will have received the same treatment as to succession of crops and so forth, so that the entire farm will have received a uniform benefit.

A good rotation provides for the best possible distribution of labor throughout the year, so that as far as possible both "peak loads" and idle seasons will be avoided.

Labor is Reduced
Reduction of labor will result from the use of a good rotation through the elimination of extra plowing, extra preparation of seed beds, or extra field work of any kind, in so far as is possible through careful planning of the rotation order.

The best sequence of crops should be provided so that each crop in the rotation will be preceded by the one which will benefit it most, or permit it to be seeded with the least labor, will leave the land in the best condition for it as to fertility, physical condition and so forth, or that will best take care of the crop enemies, weeds, insect pests and diseases.

Clover should be preceded by wheat or barley or rye, as it may be seeded with these crops at no extra expense for seed bed or loss of cropping season. The small grains should be preceded by an intertilled row crop, so that weeds may be disposed of prior to the growing of the small grains, and also so that cost of seed bed preparation may be reduced, since frequently it is possible to merely disk the intertilled field and seed to grain without plowing.

Legume Crops First
The intertilled row crops such as potatoes, corn, roots, cabbage, kale, and so forth, should be preceded by legume crops or with the use of barn yard or green manures or by legumes and barn manures, as these crops are heavy feeders and require an abundance of humus and nitrogen.

A general crop-and-stock farm, adapted to Lane county is as follows: first year, GRAIN (seeded to clover), used for feed crops of oats, barley, wheat, etc. Second year, CLOVER, cash crop of clover seed. Third year, CLOVER, feed crops of hay and forage pasture. Fourth year, CULTIVATED CROP, (maunured), feed crops of corn, sunflowers, roots, kale, etc., or cash crops of potatoes, field beans, cabbage and so forth.

Red or Alsike Clover
The clover in the foregoing rotation may be either the red clover on the better drained soils, or alsike clover on the more poorly drained soils. Or smooth vetch may be substituted for the clover clover making the rotation, (1) grain, (2) vetch seed, (3) vetch hay, and (4) cultivated crops. Where one fourth of the farm gives too large an area to be handled with available labor and equipment in cultivated row crops, substitution for a portion of this field with vetch grown for seed makes a satisfactory way of reducing the area devoted to row crops.

In this rotation the portion of the clover or vetch cut for hay, or seed, or used for forage pasture will vary according to the amount of livestock to be maintained. In the cultivated crop field, some of the feed crops named will be used for silage and some for green feed, and some for hogging down, while the remainder will be used as a cash crop.

Advantages Given
Some of the advantages of this rotation are as follows: The clover seed is broadcast over the grain in the early spring, usually February or March, thus a cropping season is not lost in getting the clover seeded and no extra preparation of seed bed is required. The clover is cut for seed the first year always, because the crop is free of weeds and grasses that year, thus giving the cleanest seed. After the clover has been cut the second crop year for hay, it is

manured in the fall or early spring, then disked and plowed in the spring and prepared for the cultivated crop that follows.

When the cultivated crop has been harvested it in turn is disked in the fall and seeded at once to grain without plowing and then the grain in turn is seeded back to clover, hence only one plowing of each field is required in the four years rotation.

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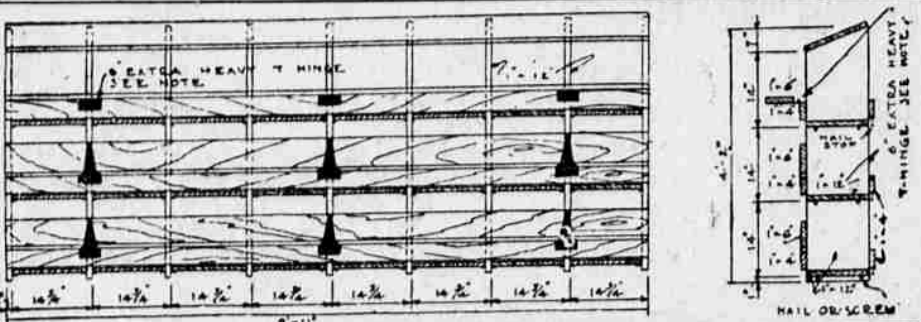
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NEST RACK AND DRY MASH FEEDER EASY TO MAKE

Two Poultry House Essentials Shown in Diagrams; Nest Rack Will Care for 120 Hens; Feeder Provides for 75 Chickens



(By NEA Service)
COLUMBUS, O., March 7.—Two essentials in poultry keeping, especially when new living quarters are built for a flock, are a dry mash feeder and a nest rack.

These have been designed, in simple and practical form, by the Ohio State Agricultural college here, so that anyone can build them with the least effort at low cost.

The dry mash feeder shown here is believed efficient and wasteproof. The feed is easily accessible, and with ample light—which should be provided by sufficient windows both in front and back of the poultry house—the birds naturally will eat more mash.

This means more eggs, for they are produced by the mash consumed rather than the grain. The eggs are produced at lower cost per dozen, not only because of a greater resultant number but because the mash is consumed at a minimum of waste.

The feeder shown here will accommodate 75 birds and will require additional mash about once a week. The box is often built in a V-shape instead of rectangular, as shown. But the rectangular box is easier to build.

Material for the dry mash feeder consists of the following:
4 pieces 2"x2", 1 1/2 ft. long.
2 pieces 1"x3", 2 ft. long.
2 pieces 1"x3", 4 ft. long.
4 pieces 1"x3", 4 ft. long.
1 piece 1"x12", 4 ft. long.
2 pieces 1"x12", 8 1/2 inches long.
2 pieces 1"x2", 4 ft. long.
2 pieces 1"x1", 1 1/2 ft. long.
3 pieces 1"x3 1/2"x3 1/2".
4 lath, 3"x7 1/2" long.
2 1/2" screws, No. 10.
1 lb. 6d nails.

Sanitary Rack
The nest rack is made so that it can be cleaned easily. This is made possible by the construction of removable nest bottoms.

The diagram shown here is for 24 nests, this rack will take care of 120 birds. The photograph is one of a smaller nest rack, but it gives a general idea of the construction.

The nest bottoms rest on nails driven part way into the 1"x12" partitions and can easily be removed for cleaning.

These nest racks are fastened against the wall of the poultry house. They should not be placed underneath the dropping board where they are likely to harbor disease and lice.

Movable Shelf
The hinged door-like shelves or platforms serve two purposes: (1) The nests; (2) In case the birds tend to roost in the nests at night the platforms can be closed up.

Put the hinges on backward so they will not act as brackets. A sloping top prevents the hens

from roosting on top of the nest rack.

Material Needed
Material needed for the rack of 24 nests include:
3 pieces 1"x12"x12" long. Each piece cuts into 3 pieces 4'-2" long.
6 pieces 1"x4"x10" long.

3 pieces 1"x6"x10" long.
4 pieces 1"x12"x10" long, one for the top, and the remaining three to be cut up into 24 nest bottoms, each 14 1/2" long.
1 piece 1"x3"x10" long.
9 six-inch heavy T hinges.
No. 10 screws, 3/4".
2 lbs. 6d box nails.

At the top is a sketch showing the details of a rack of 24 nests for 120 hens. The next photograph is a view of a smaller nest rack, built on the same principle. The other photograph and plans are of the dry mash feeder.

from roosting on top of the nest rack.

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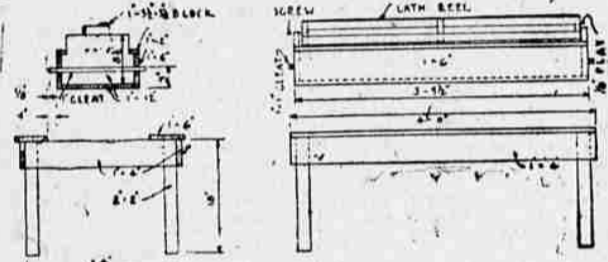
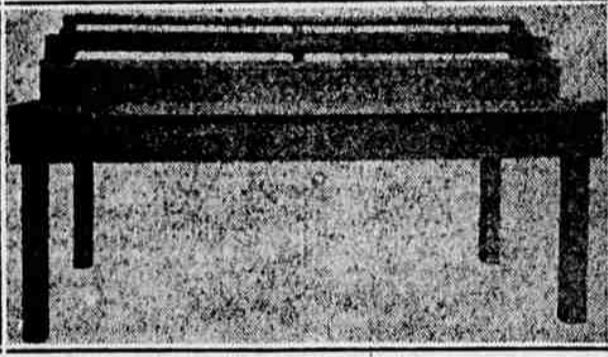
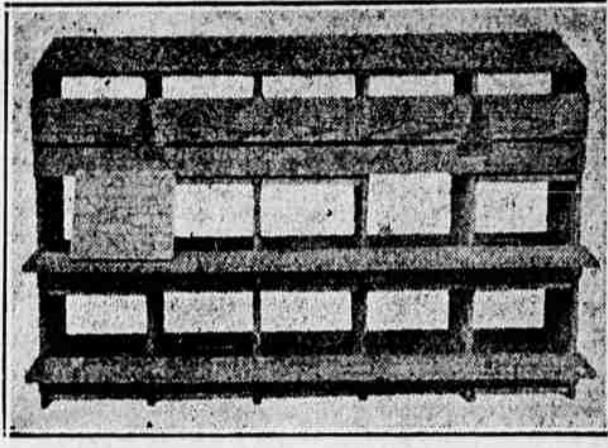
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FOUR FACTORS IN CARING OF BEES HELD IMPORTANT

Success in honey production is not an accident but the result of concentrated efforts. Four factors enter into successful caring of bees—good bees, good equipment, good location, and above all—good management.

To have good bees it is essential that all colonies be frequently re-queened with high grade Italian queens. Queens may be bought from breeders, but it is better for the beekeeper to rear his own queens. Queens that have been transported any great distance are never as good for honey production as those that have never been confined. In selecting the breeding stock the following factors are considered—the workers should be reasonably gentle, of uniform color, industrious and resistant to disease.

Equipment Important
Good equipment is of primary importance. The two essential things in regard to equipment are to have all combs of solid worker cells built from full sheets of foundations, securely wired in standard frames, and to have good waterproof telescope covers for the hives.

Oregon has three different beekeeping regions; regions where alfalfa and sweet clover are grown extensively under irrigation, sections in the mountains where fireweed or willow herb is abundant, and regions where clover, vetch and other cultivated plants are grown. In locating an apiary good roads, good markets, good soil conditions, and good average weather conditions are considered.

Three Main Items
The preparation for winter, proper care during the spring and early summer, and the harvesting of the crop and the re-queening for the coming year are the main items that the word "management" covers.

Good beekeeping consists in having all colonies headed by good queens, and then giving those queens a chance to build their colonies up to maximum strength so they are not handicapped by insufficient stores, lack of room, disease, or any other factor that tends to retard the development of the colony.

Egg Price Problem Solution Explained

(By NEA Service)
CLEMSON COLLEGE, S. C., March 28.—Hatch eggs, preserve eggs, eat eggs, is the warning of D. H. Hall, extension poultry husbandman of Clemson College, here, to avoid a further drop in their market price.

The reason why egg prices are low

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now is because every hen on every farm begins to lay during this season, says Hall. To keep the price from sliding further, Hall suggests:
"1. Hatch all available eggs. Fryers may bring a fair price this spring. Besides, pullets hatched early should lay fall and winter eggs."
"2. Preserve eggs for next winter's use. This can be done by packing them into a galvanized jar of about five-gallon capacity, for each 35 dozen eggs, in a water glass, or sodium silicate solution."
"3. Consume all the eggs you can at home. They are high in food value and there are many ways to prepare them."

Regularity Counts In Poultry Raising

Regularity of management is one of the "little things" that affects egg production.

Chickens are creatures of habit and are accustomed to lay in the same nest every night, roost in the same spot every night, and eat at the same feed hopper.

If there is no regularity of method or care, the hens do not know what to expect, are thrown out of their routine and do not lay as well as they should.

Crowding, together with dampness and soiled condition of the house, will cause lowered production. Cleanliness goes hand in hand with high production.

Other little things that count are ventilation, the care of the feeder, the water supply, the type of feed hopper, and whether or not the mash and grain mixture is appetizing.

DOSES OF VACCINE PROVE POPULARITY

OREGON AGRICULTURE COLLEGE, Corvallis, March 28.—(Special)—Ten thousand doses of hemorrhagic septicemia vaccine, going to all parts of Oregon, have been sent out annually by the bacteriology department of the experiment station the last few years. The vaccine is used mostly on cattle and sheep and sometimes hogs.

This vaccine is particularly effective because it consists of living weakened bacteria made up fresh for each order. Vaccines consisting of killed organisms are not nearly so effective as those made up of the weakened bacteria.

Outbreaks Here
Several outbreaks of hemorrhagic septicemia have occurred at Springfield, Junction City and Eugene in the last few years. It is prevalent in Klamath, Malheur, Coast and Willamette valley counties.

Hemorrhagic septicemia is often wrongly diagnosed because of lack of definite symptoms. Calves often die of the pneumonic type, the symptoms of which are hard breathing and a peculiar cough. At other times they die apparently without cause. It is so named because there is usually hemorrhages somewhere about the body.

Easily Controlled
The disease is very easily controlled by vaccination. The vaccine

may also be used as a preventive with sheep as there is apt to be considerable loss if it once gets a stamp in a flock. Some of the big sheep raisers of Southern Oregon and Northern California make a regular practice of vaccinating their sheep every spring.

The farmer himself can vaccinate the stock after once being shown how by a veterinarian or county agent. It is necessary to a hypodermic needle and the vaccine. The dose is 2 cubic centimeters for large animals and 1 cubic centimeter for small ones. The cost for the vaccine is 1 cent a dose.

Purebred Excel
The Minnesota non-litter contest last year proved the desirability of purebred hogs over the scrub, of 45 farmers whose litters made a total of more pork in 180 days, not had a scrub litter.

\$2481.00 GIVEN FREE
The above amount has been given away by us in prizes. \$2481.00 more will be given away as follows:
First prize—1925 Ford Touring car. Besides this splendid prize we are going to give away 40 other prizes.

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

Rearrange the figures in the above square in such a manner that they will count 15 each way (horizontally and vertically) and send your answer together with your name and address neatly written on a sheet of paper and if your answer is correct we will at once mail you a splendid illustrated prize list describing the prizes and giving full information and rules. In case of tie general appearance, neatness and hand-writing of entry will be considered factors. If correct we will advise you by return mail of a simple condition to fulfill. Don't send any money. You can be a prize winner without spending one cent of your money. Send your answer—act quick!

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It has no superior for market, table, canning or drying. We carry the exclusive seed of this improved strain. Remember, we are improving this variety every year and you get the up-to-date selection, but direct from us each year. We have received many letters of praise for this corn and its good qualities represent 17 years of earnest work on our part. Many of our customers will have nothing else.

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