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## Commercial Strawberry Growing in Western Kentucky

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Strawberries as a Cash Crop: Strawberries are a desirable cash crop for western Kentucky where a sufficient acreage is raised in the section to make carload selling possible. One of the outstanding advantages of strawberries as a cash crop is that the grower gets a cash return in June, at a time when ordinarily there is little income. Strawberry picking furnishes profitable employment for the women and children of the neighborhood.

Probable Returns: The average yield of strawberries in western Kentucky is approximately 50 24-quart crates per acre. It should be remembered, however, that the average yield of corn in the same area is about 25 bushels and of tobacco about 700 pounds. The careful grower of strawberries should generally produce from 100 to 150 crates per acre, just as the careful tobacco grower produces much more than the 700 pound average of tobacco. Yields of over 200 crates per acre are not uncommon. The returns per acre, on the average, are considerably higher than from other crops.

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During the past ten years the price per crate above marketing charges has been from \$2.50 to \$5.00, with an average of about \$3.50. With increased acreage of strawberries in Kentucky and competing states, we may reasonably expect somewhat lower prices but, in comparison with other cash crops, the profitableness of strawberry growing is not likely to diminish materially.

Site and Soil: The land for strawberries should be well drained but may be either flat or rolling. Any upland soil that produces good yields of other crops will grow good berries. New ground is especially desirable. It is quite important that the land be supplied with humus so as to add to its water-holding capacity, which is very important during a lack of rain at harvest time.

It is very important that the plants should not be set after sod and preferably not after corn, because of the grubs in the first case, and wireworms in the latter. Strawberries should follow such crops as tobacco. tomatoes, potatoes, soybeans or cowpeas.

Fertilizers: Very little accurate information is available on the fertilizing of strawberries in western Kentucky. Many growers, however, feel that they are well repaid by using 400 pounds of acid phosphate and 50 pounds of either sulfate of ammonia or nitrate of soda, per acre. This may be applied broadcast or with a drill before setting the plants, or drilled in during May or June of the first growing year.

Variety and Planting Date: The Aroma is the standard western Kentucky commercial strawberry.

The plants are put out as early as the weather will permit in the spring, say from March 1st to April 15th, or as soon after this date as possible. Plants may be set as late as May 1st. Nothing is gained by planting in the fall of the year, and this is not followed as a commercial practice.

Care of Plants When Received: If the ground is not ready when the plants arrive it is very desirable that they be "heeled in." Take a bunch at a time, cut the strings, spread the plants in a thin row, in a shallow furrow, then cover the roots firmly with soil at about the same depth that they originally stood in the nursery row. If the ground is dry, water the roots as the bunches are opened.

Planting Distances and Setting: The planting distances for strawberries vary with the individual. A majority of growers have the rows four feet apart with the plants three feet apart in the row. At this distance (4 x 3 feet) it will take approximately four thousand plants to set an acre. The plants should be set on the level and at the same depth that they originally stood before being dug from the nursery row. In setting the plants use any tool, such as a peg, dibble or spade.

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Cultivation: No one factor is quite as important in determining the success or failure of a strawberry crop as that of cultivation. Work with the plow or harrow and hoe should begin soon after the plants are set, and continue at 10-day intervals until about the middle of August. When the land is very dry, extra cultivation should be given. Tools similar to those for cultivating tobacco may be used. Experienced growers find that eight cultivations and three hoeings are about the minimum. By having the plants set on the square, like dark tobacco, for instance, cultivation can be carried on in both directions during the first few weeks, thus saving considerable hoeing.

Mulching: A mulch applied in winter is very beneficial. This mulch serves as a winter protection, and also keeps the berries free from dirt during the ripening period the following spring. A number of materials may be used, such as wheat, rye or oat straw, soybean hay, shredded fodder, etc. As long as good clean straw can be obtained at reasonable prices, the mulching should be one of the regular treatments. Mulching is essential, especially the first harvest year, and practically always pays the second and third years. About one ton per acre will be needed.

Picking and Grading: The acreage should be picked over every day to insure the best quality of berries. Overripe berries sell at a disadvantage. As a commercial practice, from four to six pickers and one packer ordinarily are needed, per acre.

The most economical method of grading is that which is done in the field by the individual picker. The owner or foreman will usually find it advisable to personally supervise the picking.

In order to get a desirable marketable grade, where careless pickers are used, it will be necessary to hand-grade each cup of berries, either by the pan method or by pouring from one cup to another, picking out all defective, soft or overripe berries.

In some sections now shipping berries it is customary to make three grades, fancy, choice, and culls. The quart boxes, commonly called cups, are filled about one-half inch above the top, taking special care to fill the corners and open spaces between large berries so that the whole crate presents the appearance of a solid pack.

Growers in new districts going into commercial berry production will find it profitable to visit the older berry sections during harvest season.

Marketing: With a commercial acreage of strawberries, the selling of the berries should be left to a well organized marketing association. Very few individual growers can successfully market their crops. The berries must be loaded in refrigerated cars the same day they are picked, and must be started to the northern markets before midnight. For further information on marketing strawberries, see Kentucky Extension Circular No. 204.

Care of Strawberry Fields After Picking: There is considerable variation among the best growers of western Kentucky in the methods of handling strawberry fields after the picking season. The following procedure is quite common:

Immediately after the harvesting season is over, a turning plow is used to throw the soil away from the row or on the row, from both sides. If the soil is thrown away from the row a strip six to eight inches wide is left at one side of the old row. If the soil is thrown on the row, like ridging for sweet potatoes, it should not be allowed to stay more than ten or twelve days, as generally strawberry plants will not live when covered more than twelve or fourteen days. This is done in order to kill weeds by covering them for 10 days, with earth. The strawberry plants can survive this process longer than the weeds. In either case a harrow may be used crosswise to level the land. Two or more harrowings will be necessary. Later cultivations will be similar to those of the first year.

Insects and Diseases: No insect or disease of strawberries has been a limiting factor in commercial production during the past several years. The crown borer has made its inroads in a few sections, but where clean plants are set and the fields not allowed to stand over three years, and rotation is practiced, little damage need be expected. The damage from leaf rollers and the several leaf diseases is comparatively small.