Most farms in the eastern part of the Eleventh Federal Reserve District have some wooded areas that are either commercial timberlands or lands undesirable for annual crops. On these areas, trees are used for various purposes such as saw timber, fence posts, firewood, pulpwood, telephone poles, and crossties, and their sale for these purposes often provides supplementary income to the individual farm operators. The importance of woodlands as a source of income may be overlooked because of the many years required for the trees to grow to the desirable size. Income from this source may be placed on an annual basis if farm operators adopt and follow consistently proper woodland management practices.

Management practices for individual farms depend on many factors, such as the kind of woodland owned and the uses that are or can be made of the trees. Nevertheless, there are certain well-established facts and principles regarding woodland management that have been set forth in the publications of the United States Forestry Service.

An important management problem involves the system of cutting to be followed. One system which may be adopted is that of clear-cutting, in which the complete stand over an area is removed. The chief defects of this system, as pointed out by the Forestry Service, are that natural regeneration often does not follow and that a large portion of the trees cut are removed at a loss when they might have been left to add valuable growth. An immediate cash income is obtained at the sacrifice of larger returns at a later date. It is worthy of note that the forest regions of this country in which this system has been followed generally have the most seriously depleted forests.

An alternative system is that of selection or partial-cutting, in which trees of merchantable size are removed, either individually or in groups, with a minimum of interference to the growing trees. The maximum annual income from woodland can be obtained only through the maintenance of a succession of size classes, which permits the harvesting of the larger trees each year. Under this system, young stock develops on the same ground occupied by the larger trees or in small openings, with little or no assistance or cost. The proper arrangement of cutting among the larger trees aims to maintain on every division of the woodland a growing stock of trees which through continued growth will be capable of providing each year an adequate net income after the payment of all operating costs. This income may not be taken annually on every acre, since the cut may be rotated over the area once every 5 to 20 years.

Other important advantages are derived from this system of management. Where the selection system is used, fire is less likely. The heavy shading provided by a well-developed woodland area reduces the inflammability of forest litter, thereby decreasing the likelihood of fires as well as the amount of damage when they occur. Larger trees are not so easily damaged by fire and can maintain a considerable rate of growth for the stand even if some smaller trees are occasionally killed. Fire is more easily controlled as wind velocities are diminished by the larger trees, and the low crowns of the young trees do not occur over large continuous areas.
Another advantage of the selection system is that the cutting of trees of various sizes and types can be regulated according to market demand for them. A woodland organized on this basis is like a warehouse from which the owner can select goods to meet varying demands for different classes of materials. At one time, saw timber may be in heavy demand; at another, pulpwood from thinning the groups of smaller trees may be sold. The owner may from time to time need lumber, fence posts, firewood, or even bean poles.

Experience has shown that through proper management the growing stock of trees can be developed so as to improve the volume and quality of production without impairing the periodic cut. In fact, tests have shown that both the annual cut per acre and the average size of the trees can be increased. The latter point is of importance in increasing financial returns, due to the higher unit value of large trees. The movement of the value of the individual tree as it grows from one diameter to another is due not only to the fact that the larger tree contains more wood but that the larger tree is more cheaply logged and milled, proportionately, and its lumber is of greater value.

There are some offsets, however, to the increase in the value of trees that results from added growth. If the cutting of the timber is deferred beyond the period when trees reach the minimum cutting-size, the cost of production should include a compound interest charge based on receipts that would have been obtained from earlier cuttings. Also, taxes on standing timber may absorb part of the gain resulting from increasing the value of trees. Thus, finance, as well as care of forest trees, requires a flexible lower limit to size of trees cut.

The rate of earnings to be expected from trees left standing is the principal guide in choosing trees for cutting. When the woodland is very deficient in growing stock, it may be desirable to raise the minimum size-limit for cutting. If, on the other hand, there is a surplus of growing stock, more small trees should be taken to permit an increase in the growth of the remaining stand. It should be a general policy that defective trees or those indicated for removal to thin the stand should be taken if they can be marketed without loss.

Growing stock limits applicable to this region are variable, and in any given case they should be established only after investigation. Even then, adjustments will be necessary from time to time. These adjustments should be based on the principle of retaining a growing-stock investment sufficient to make the earnings of a woodland property as large as possible. In the final analysis, maintaining a sufficient growing stock is a matter of thrift—saving a sufficient number of trees to provide for a higher rate of continued woodland productivity.

**FARM MANAGEMENT**

**Treatments for Yellowing Alfalfa**

Suggestions for curing the yellowing of alfalfa caused by mineral deficiencies in the soil are made in a recent press release of the Louisiana Extension Service. It is pointed out that discoloration, often attributed to weather conditions, may be caused either by such mineral deficiencies or by fungus diseases. It is sometimes difficult to determine the cause without a soil test or a study of the plant for signs of disease. In periods of dry weather, potash and boron are less available to the plants, which may cause deficiency symptoms. Where the soil is known to be amply supplied with potash, yellowing probably is a result of a shortage of boron. A boron deficiency causes yellowing of the upper leaves of the plant and of the joints at the upper end of the main stems. To overcome the deficiency, boron may be applied—15 to 20 pounds per acre. While boron is usually applied in February or March, it may be applied after the first alfalfa cutting.

**Farmers Urged to Order Insecticides**

Farmers needing insecticides are advised by the United States Department of Agriculture to purchase or place orders as soon as possible for the material they will need to com-
bat insects during the current plant-growing season. While the supply of many insecticides probably will be sufficient to meet the needs this year, there are several which may be in short supply. Early orders, it has been pointed out, will help suppliers to anticipate the demand. Prices of most insecticides appear to be fairly well stabilized, but important exceptions are the declining prices of DDT and insecticides containing this chemical and the rising price of lead arsenate.

July Prairie Hay Gives Highest Feed Value

The feeding value (total digestible nutrients, or T.D.N.) of forage plants changes continually as the plants grow to maturity, but the highest feeding value per pound is not always obtained simultaneously with the maximum growth of the plants. Prairie hay, for example, varies in feeding value per pound and tonnage according to the time of year it is cut. Studies have been conducted by the Oklahoma Agricultural Experiment Station to determine the proper time for cutting prairie hay to secure the best combination of tonnage and feeding value per pound. The results of these studies, reported in Experiment Station Bulletin No. B-320, entitled The Yield and Feeding Value of Prairie Hay as Related to Time of Cutting, show that June cuttings have the highest feeding value per pound. July cuttings, on the other hand, have the highest average yield in tons per acre, with T.D.N. per pound ranking next to June hay. Consequently, July cuttings give the best combination of tonnage and feeding value per pound and the greatest yield of total digestible nutrients per acre.

Caution Urged in Use of Insecticides on Vegetables

Farmers, home gardeners, and others who are using or planning to use insecticides this spring and summer should understand the proper use of the materials and should use them cautiously, according to advice of the Louisiana State University Extension Service. It is pointed out that much remains to be learned about the effects of some of the new bug killers, and care must be taken to avoid damage to crops, injury to livestock, and danger to the consumer. For instance, benzene hexachloride is very effective for some purposes, such as control of insects on cotton, but because of its persistent musty odor it should not be used on foodstuffs or edible portions of treated crops. In addition, not much is yet known about the residual effect—that is, the duration of some harmful effects—of some of the newer materials, such as chlordane, chlorinated camphene, benzene hexachloride, tetraethyl pyrophosphate, and parathion. Parathion and tetraethyl pyrophosphate are unusually hazardous, and special precautions should be taken to avoid exposure in handling them. If the foliage or fruits of plants are to be used as food, these insecticides should not be applied unless the residue can and will be removed from the edible parts. Farmers are urged to read the caution labels carefully in order to determine how, when, and for what purposes a specific poison should be used and, also, the dangers involved in its use.

COMMODITY NOTES

Wheat Outlook

As the season of wheat harvest gets under way, Southwest farmers are concerned about the outlook for wheat prices in the months ahead. The opinion of the United States Department of Agriculture is that domestic wheat prices are not likely to fall much below the loan level following harvest and are expected to average above that level for the marketing year as a whole. The Department forecasts a winter wheat production of 895 million bushels. This crop, plus an average size spring wheat crop, would yield more than 1,100 million bushels. Such production has been exceeded only in 1946 and 1947.

Interim loan rates at selected terminals have been announced recently by the Department for the 1948 crop. The rate for No. 1 hard winter wheat is $2.28 per bushel at Galveston and $2.20 at Kansas City. Final rates will be announced after July 1.
Vegetable Outlook

Farmers are well started on another year of relatively high production and prices for most fresh and processed vegetables, potatoes, sweet potatoes, dry beans, and dry peas, according to the United States Department of Agriculture. Demand for vegetables is expected to continue strong throughout the year. Changes in prices received by farmers from month to month are expected to reflect primarily the normal seasonal movement and differences from last year in production. According to the Department of Agriculture, acreage intentions and average yields suggest that production of commercial truck crops will be larger this summer than last and that the potato crop next fall will exceed the 1947 harvest, while crops of sweet potatoes, dry edible beans, and dry field peas probably will be smaller than last year.

Outlook for Eggs

In recent months farmers have received higher prices for eggs than were received during the same months last year, and the United States Department of Agriculture predicts that higher prices are likely to continue throughout the year because of smaller production and the continued strong demand. It is said that if farmers carry out their intentions to plant feed grains and if yields are about average, the relation between egg and feed prices in the last half of 1948 will be more favorable to producers than in the last half of 1947.

1947-Crop Loan Cotton to Be Pooled
August 1; Interim Loan Rate Set on 1948 Crop

The U. S. Department of Agriculture announced recently that 1947-crop loan cotton, including American Egyptian, still under loan on August 1, 1948, will be pooled on that date by Commodity Credit Corporation for producers' accounts. Producers may either sell their "equity" in the loan cotton or redeem the cotton from the loan and then sell it in the open market. The Department of Agriculture is urging producers to give serious consideration to marketing the loan cotton before it is placed in pools. At present market prices, farmers should be able to dispose of most of this cotton at prices that will net them good profits above the amount of loan and charges against the cotton.

The Department of Agriculture has announced an interim loan rate of 27.50 cents per pound for 1948-crop middling 7/8-inch cotton, gross weight, at average locations. Final rates will be announced in August.

TECHNOLOGICAL DEVELOPMENTS

Vaccine for Poultry Disease Developed

Poultry raisers who have experienced losses because of the dreaded Newcastle disease can find hope in the reports that two live-virus vaccines have been developed. According to preliminary tests, these vaccines are wholly effective in immunizing chickens against the disease. One vaccine, developed at the University of Massachusetts, has protected more than 90 percent of the birds vaccinated, and the immunization has lasted more than six months. The other vaccine, developed at Rutgers University in New Jersey, also shows promise of being successful against this disease. These vaccines will not be available commercially, however, until they have been tested and approved by the Bureau of Animal Industry.

There are at least two killed-virus vaccines now on the market, but they are not as effective as live-virus vaccines. Two or three "shots" are required to immunize chickens with these vaccines.

The Newcastle disease is difficult to diagnose absolutely without laboratory examination, but some symptoms of the disease are readily detected. In a laying flock, hens lose their appetites and egg production drops rapidly. Heavy breeds that normally produce brown eggs may begin laying white ones. Chickens may cough or sneeze and may show nervous symptoms, such as twisting their heads. Experiments with the new vaccines, however, show that chickens can recover completely in about six weeks.