History Of Growing And Curing Tobacco In North Carolina Is Reviewed By Tobacco Specialist

For Many Years Flue-Cured Tobacco Has Been One Of The Chief Cash Crops For This State; Peak Of Production In In 1930

CONTROL PROGRAM INCREASES PRICE

Flue-Cured Tobacco Grown In Virginia, North And South Carolina, Georgia And Parts Of Florida

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For many years flue-cured tobacco has been reasonably profitable and one of the state's main cash crops. The peak year in production was 1930, which amounted to 585,990,000 pounds. The average poundage for the five highest years, 1927, 1928, 1929, 1930, and 1933 was 518,299,000 pounds.

The price began to decline in 1930 and continued to do so until the fall of 1933 when the growers with the aid of the government agreed to co-operate together to control production. This was when the adjustment program began to affect the price. The price was raised considerably in 1933 after an agreement with the manufacturers to bring the price to a satisfactroy level, provided the crop was sufficiently reduced to take out the surplus. The surplus was taken out in 1934, and in this state alone the growers received $122,142,000. The growers will also receive a total of $12,454,459.48 for equalization, rental and adjustment payments, which will be paid in addition to the splendid increase in prices.

In 1932 sales amounted to $35,428,000. It is true that the quality of tobacco over the entire belts in 1934 was 50 or 60 per cent better than 1932 and there was some increase in the consumption of manfactured tobacco.

This is a splendid example of what can be accomplished by cooperation of tobacco growers with the Government in a control program. A control acreage program is the only method in which fair exchange value can be expected from tobacco or any other commodity, and the growers of flue-cured tobacco can have a control program so long as the majority of the growers are willing to cooperate.

Tobacco is in a relatively better position than cotton so far as foreign markets are concerned. Flue-cured tobacco is grown in a relatively small area, which includes northern Florida, parts of Georgia, South Carolina, North Carolina, and Virginia. Flue-cured tobacco is best grown on soils that have a previous subsoil about 6 or 8 inches from the surface soils. Extremely sandy soils with a sub-soil of 2 or 3 feet or the heavy clay soils are not as satisfactory for growing tobacco, considering the average production and quality for each year under normal conditions.

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The above mentioned territories for growing flue-cured tobacco have the advantage over most of the foreign markets in that the seasons and soils are a little better adapted for growing flue-cured tobacco with the quality and aroma that is now demanded by the smoking public. The quality factor is one thing that the above mentioned territories must use every possible means to develop, if they expect to hold their portion in the production of flue-cured tobacco that they have in the past.

The following are factors that greatly influence the quality of flue-cured tobacco and should be practiced by all growers in order to obtain the best results:

Tobacco Varieties

Varieties are very essential. White Stem Oronoco, Virginia Bright Leaf, Bonanza, and Gold Dollar are the types that have proved to give the growers the best yield and quality of cigarette tobacco. In any type of tobacco, the selection of the seed plants in the field is very important. A broad leaf with the fibers not too large and alternating along the mid-rib, and the leaves properly spaced on the stalk always gives better results than the narrow type of tobacco, such as Willow Leaf, or to go to the other extreme, a variety known as Big Gem. Big Gem has an extremely broad leaf and the fibers join at the mid-rib and extend out through the leaf in an opposite direction making a larger angle between the mid rib than the above varieties. This causes the leaf to break easily in case of wind.

Tobacco Fertilizers

Fertilizers should be made of the very best materials. The nitrogen should be derived from ¼ nitrate nitrogen, ¼ ammonia nitrogen, ¼ cottonseed meal, and ¼ from blood, fish of tankage. Urea which analyzes 46 per cent nitrogen is also a good source of nitrogen for tobacco. The phosphate should come from superphosphate. The potash should not exceed 2 percent muriate of potash and the remainder from sulphate. If no magnesium limestone has been used on your soil in recent years, it will be profitable to insist that your tobacco fertilizers carry at least 2 percent available magnesium oxide. Most soils of the state require at least 5 to 6 percent potash to give the most profitable results, however, there are some soils where 8 percent is necessary.

Under average soil conditions the rate of application should be from 800 to 1,000 pounds per acre. The producer in all cases should know the productivity of his soil to the extent that he can make his application of fertilizer to the best advantage, considering the growth and quality necessary for the best market demand. We would recommend on light colored less productive soils of the Coastal Plain and Piedmont sections a 3-8-6. On the heavy more productive soils a 3-10-6. Where tobacco follows a legume crop a 2-10-6 should be used.

Under most soil conditions best results are given when the fertilizer is applied in the drill a week to ten days prior to transplanting. On the light, sandy soils that leach readily during heavy rains, two applications of fertilizer should be applied,—two-thirds of the fertilizer before transplanting and one-third about 20 days after transpalnting.

The second application should be applied as close to the plant as possible without injuring it. In all cases, the fertilizer should be mixed thoroughly in the drill. The soil should be ridged so that when the tobacco is transplanted it will be above the level of the soil. The young, transplanted plant will live much better if planted on a bed rather than on a small ridge. Tobacco plants should also be kept above the level of the ground with the middles scattered to take care of the excess water.

Spacing Tobacco

Early tobacco should be planted closer together, by all means, because early planting has a tendency to make small growth, leaves which generally cure out as leafy tobacco but not as valuable as a thin, bright, luggy cigarette type of tobacco. We find that the closer we space the thinner the tobacco will be when cured. I would suggest that the maximum distance between hills be 24 inches, and on very fertile soils 18 to 20 inches, and the rows should be 4 feet wide.

Tobacco Cultivation

The following plan has given us a net return of more than $60 per acre as compared with faulty cultivation.

1. The first cultivation of tobacco should begin as soon as the plant shows signs that it is taking root. The best practice is to cultivate lightly and break the crust around the plant with a hoe.

2. Continue cultivating about every week to ten days until about a week before you are ready to top the tobacco. In the second cultivation begin putting the soil to the plant in order to make it put out a new roof system higher up the stalk, which is the normal way the tobacco plant roots.

3. Each time the tobacco is cultivated, as much soil as possible should be put around the plant with the siding furrows, but keep in mind, at all times, these two precautions: First, so adjust the plow that it does not disturb the root system of the plant that has already developed; Second, do not leave the row in such condition that you cannot put more soil to the plant at the next cultivation.

4. It is very essential to scatter the middle each time the tobacco is sided. If the middle of the row becomes hard and the tobacco doesn't look as if it is growing as it should, one of the best methods to scatter the middle is to use a one-horse turn plow with the second size moldboard (or wing) and scatter the middle with two furrows. This really breaks the soil in the middle of the row and makes it ideal for root development when the plant reaches maturity.

5. At each cultivation more soil should be added to the plant in order to fully develop the root system. When the last cultivation is completed, (which should be about one week prior to topping), the row should be built up around the plant so it will have developed the maximum root system and will at the same time protect the plant from extreme wet or extreme dry conditions and will have put all the available plant food from the middle of the row in reach of the root system of the plant so it will develop early and the plant will not be so easy to take second growth as if cultivated flat.

Budworms

Budworms are generally very bad from the time tobacco is 6 inches high until it is topped and the most effective control method known is this: Mix together, thoroughly 2 pounds of arsenate of lead to 50 pounds of corn meal; then drop what you can hold between your thumb and two front fingers into the bud of each tobacco plant. The first application should begin when you see the first sign of budworm, then follow with a similar application in about two weeks and you will have controlled practically all your budworms and the majority of the early hornworms as well. One peck of this mixture is sufficient for an acre of tobacco.

Topping

Topping is very essential for the production of high quality cigarette tobacco. Tobacco should be topped leaving the right amount of leaves on the plant that will fully develop and mature. In order to top correctly the producer will have to take into consideration the fertility of the soil, the amount and kind of fertilizer used, and the seasonal conditions. For instance, it may be necessary to top some plants in the field 18 to 20 leaves high. Other plants in the poorer part of the field 10 or 12 leaves high. Flue cured tobacco should be topped just as soon as the tobacco shows signs of buttoning. Flue-cured tobacco should never be allowed to blossom before topping. When tobacco has reached this stage, the stalk has gotten so hard that the plant is injured when the top is broken out and the top of the plant never develops as it should. If it were possible to do all of the topping while the top of the plant is so tender you could break the top out with your two fingers, the development of the plant would be much better.

Harvesting

Harvesting should begin as soon as the lower leaves have developed and begin to ripen. The lower leaves can be pulled when they appear a little greener than you would pull any other leaves on the stalk because they generally develop a little more rapidly than the other leaves. It is generally necessary, under normal conditions, to prime tobacco at least once a week. Special care should be exercised in order to select the most uniformly ripe tobacco. Tobacco should not be crowded on the stock or in the barn. Three large leaves to a bundle and not to exceed 26 to 30 bundles to the sticks placed on the tiers 6 to 8 inches apart will give the most uniform cures because they are not crowded to the extent that the tobacco will damage due to the lack of air.

Tobacco Curing

There are three distinct periods in the curing of flue-cured tobacco. Namely: (1) the yellow stage, (2) setting the color, and (3) drying the leaf and stem. Yellowing starts when the leaf is primed off the stalk. A fire is started as soon as the tobacco is hung in the barn, and the temperature raised in the barn five to ten degrees higher than the outside temperature, usually from 85 to 100 degrees Fahrenheit. This temperature is maintained until the leaf is fairly yellow, requiring from 24 to 36 hours. The temperature should then be raised 4 to 5 degrees each hour, depending upon the rapidity with which the green is fading, until 120 to 125 degrees Fahrenheit has been reached. By this time, the leaves should be a pale yellow. This last raise will toughen the tobacco so that it will stand higher heat. Hold this temperature until the tips of the leaves begin to dry, then raise the temperature 4 to 6 degrees until 135 to 140 degrees Fahrenheit has been reached. Hold this temperature until the leaf tissue is dry. During this period, the color will be fixed. As soon as the leaf is dry, raise the temperature from 5 to 10 degrees each hour until 180 to 190 degrees Fahrenheit has been reached. This heat may be held until the leaf stem is dry in all parts of the barn. The time required to cure a barn varies from 84 to 96 hours.

This outline for curing is general and should be variously modified as good judgment dictates. Weather conditions, the amount of sap in the tobacco, and other factors may necessitate prolonging or shortening any one of the stages. Approximately 4,000 to 5,000 pounds of moisture or sap must be removed during each curing of green tobacco. During the first stages of curing the humidity in the barn is high and ample ventilation must be provided. If the humidity gets very high during the yellowing stage the ventilators should be opened enough to let the excess moisture escape. When the leaf drying stage has been reached, the ventilators, both bottom and top, should be open. "Sponging" will result if the moisture is not removed as fast as it is given off. If the temperature is raised too high, while the humidity is very high, a greenish brown to greenish black color will develop, known as "scalding," and the leaf tissue adjoining the main stem becomes a mottled brown to dark brown color. When a temperature of from 165 to 170 degrees Farenheit has been reached the humidity should be low and the ventilators closed. Sometimes it may be necessary to raise the temperature above 140 degrees to make the leaf dry as it should. — A condition known as "run" may develop during the latter part of the leaf drying stage if the temperature is allowed to drop several degrees.

After the tobacco is thoroughly cured, the fires are out, and the temperature has gone down, the barn doors are opened in order that the tobacco may come in "order or case," so that the tobacco can be removed from the barn without breaking. Frequently, it is necessary to wet the floor of the barn in order to hasten the softening of the cured leaf. The barn is emptied and refilled each week during the rush of the curing season.

When the tobacco is removed from the barn, it is carried to the pack house and packed in long pile or windrow where it is left for a few days. It is then packed in a square coop with all leaves turned inwardly and the butt of the leaves showing on the outside. Tobacco so cooped should have enough moisture in it so that it will straighten out nicely and undergo such changes as are necessary for the improvement in color. On the other hand, if it is in too high order when packed, it may damage. Tobacco packed in this way may then be left until the grower is ready to grade and market it.

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With a force of eight sales people, Mann's Store is one of the leaders in this section and carries a complete line of ladies' and men's ready-to-wear as well as children's clothes.