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## Growing Tobacco in the Home Garden<sup>1</sup>

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Many homeowners wish to grow a few plants of tobacco in their yard or garden for ornamental purposes or for personal use. Tobacco plants are usually no more difficult to grow than many other garden plants, but it is difficult to cure, age, and process tobacco without specialized facilities. As a result of federal legislation in late 2005, restrictions of commercial tobacco production to quota holders are no longer in effect.

Tobacco is a member of the *Solanaceae* or nightshade family. This family includes tomato, pepper, eggplant, Irish potato, and a number of other plants. Tobacco belongs to the genus *Nicotiana*, and almost all commercial tobacco is of the *tabacum* species. The *Nicotiana rustica* species was commonly used by American Indians and may still be used for ceremonial purposes in some areas. There may be small amounts of *N. rustica* planted commercially in Asia. There are a number of other species of *Nicotiana* that serve as ornamental plants.

### Soil Selection

Tobacco should be grown in a sunny location on well-drained soils. Poorly drained soils could result in poor growth and even death of the plants. Tobacco

can be grown on poorly-drained soils if the rows or hills are bedded and ditches or furrows are used to remove excess water. Drought stress could limit growth on excessively drained soils unless irrigation is provided. Lack of sun will result in spindly plants, poor growth and thin leaves. Some types of tobacco such as that used for cigar wrappers are grown under some shade to promote desirable leaf characteristics.

Avoid planting tobacco on soil infested with nematodes and diseases. Do not plant tobacco on the same soil more than once every four to five years. Instead, rotate the tobacco with plants that are not susceptible to common soil-borne pests of tobacco. Grasses would be excellent rotations for tobacco, while tomato, pepper, and similar plants would not be suitable. In addition to soil-borne pests, several virus diseases and insects that attack tomato and pepper also attack tobacco, so try to keep these plants in different areas of the garden.

Soil pH should be about 5.8 for best growth of tobacco. If lime is needed to raise the pH, use dolomite in order to get the magnesium nutrient which is important for plant growth. Poor growth and

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some growth disorders may occur if the soil pH is about 6.5 or more.

## Producing Transplants

It may be difficult to find tobacco seed of the commercial varieties since they are sold only in tobacco-producing areas. However, seed will retain viability over several years if kept under cool and dry conditions. Commercial varieties of tobacco were developed for certain characteristics that may be of little or no importance to home gardeners. There are a number of seed companies that specialize in providing tobacco seed for growing plants in the home garden. A search of the Internet should provide information on such vendors.

Since tobacco seed are very small (300,000 or more per ounce), they should be sown in a greenhouse or in a protected area. The soil should be free of weed seed and disease organisms. A flower pot would be a satisfactory container if only a few transplants will be needed. Sprinkle the seed on the soil surface, then firm the soil surface to insure good seed to soil contact. Pelleted seed may be available, which would allow easier and more uniform placement of seed. Irrigate with a very fine spray, or add water to a saucer under the flower pot. Add water as often as necessary to keep the soil surface moist, but avoid excessive water.

Small amounts of fertilizer will be needed to produce the transplants. A tobacco fertilizer should contain little or no chlorine and most of the nitrogen should be in the nitrate form. Fertilizer manufactured for use on tomato, pepper, and potato should be satisfactory for tobacco.

Seed should be sown about 50-60 days prior to the desired date of transplanting. Transplanting should be after there is no further danger of freezing temperatures. Normally the best transplant is about 6-8 inches in length.

## Transplanting

Transplanting tobacco is very similar to transplanting other garden plants. Bury or remove trash from the soil surface and provide for drainage by bedding the soil. If rows are used, space the plants

about 24 inches apart. Rows should be 42-48 inches apart. Water the plants immediately after transplanting and as needed during the season.

## Fertilization

Fertilizers for tobacco could be the same fertilizers used for tomato, pepper, or potato. As in plant production, the fertilizer should contain little or no chlorine and most of the nitrogen should be in the nitrate form. In general, it would be best to apply the fertilizer in several applications. Some could be applied to the soil before transplanting, but do not place it where it will be in high concentration around the roots of the transplants. The total amount of fertilizer to apply will depend on the grade of the fertilizer, the natural or residual fertility of the soil, losses of soluble nutrients by leaching, and perhaps other factors. The best approach to fertilizing garden tobacco would be to apply fertilizer as needed to keep the plants growing well with a good green color. However, do not over fertilize or the plants may be too big and rank. If adequately fertilized up to the time of flowering, there should be no need to add any more fertilizer after the flowers begin to form.

## Pest Control

Several pests can be problems for tobacco. Avoid nematode and other soil pest problems by proper soil selection and rotation. Weeds can be controlled by hoeing or pulling. The most common insect problems expected would be budworms, aphids and hornworms. Diseases that damage tobacco may include those that attack other plants or they may be specific pathogens for tobacco. Identify the pest problem and consult the appropriate pest control guide for information.

## Topping and Suckering

While some tobacco plants are grown around the home for ornamental purposes, which includes the flowers, plants that are grown for cured tobacco should normally be topped as soon as the flower forms. Topping, or removal of the terminal bud, allows the upper leaves to get larger and thicker than they would in an untopped condition. The top can be removed by breaking it out or cutting it off, preferably before any flowers open.

Soon after the top is removed, and before if topping is delayed, axillary buds or suckers develop at each leaf. The best way for the home gardener to prevent the suckers from reducing yield and quality is to remove them by hand. Suckers should be removed when they exceed about an inch in length. It may be necessary to remove suckers several times.

## Harvesting and Curing

Due to the needs for proper harvesting and curing tobacco, there is very little home or garden production of tobacco for personal use. Another deterrent to home production of tobacco is the need to age the cured tobacco for one to three years or longer. The following suggestions are not based on any experience or research information, but are only the opinion of the writer. However, some producers of home-grown leaf have developed harvesting and curing techniques that are satisfactory for them and often they share their experiences with others.

Tobacco may be cured with heat added or it may be air cured. There does not appear to be any practical means for the gardener to use heat to cure the tobacco because of the facilities that are required. Again, some producers of home-grown tobacco have built curing facilities and may offer them for sale. Tobacco could be cured without heat if a building with good air circulation is available. Temperatures for air curing may range from 60-65°F up to 90-95°F, and the relative humidity of the air should be about 65-70 percent. Proper curing should take a few weeks in order to have good quality. Tobacco that cures too fast will be green and not have good aroma and flavor, while mold or rot may develop if curing is slow. A building that can be opened and closed as needed to control the relative humidity and drying rate is desirable. Curing procedures need to be developed for individual situations.

Harvesting could be accomplished by either removing leaves from the stalk in the field and curing them or by cutting the stalk off at ground level and hanging the entire stalk in the curing facility for the leaves to cure. The leaves would then be removed from the stalk after they have cured. If the leaves are removed in the field, there should be four or five harvests at intervals of 1-2 weeks, starting with the

lower leaves. The first harvest would be at or soon after topping and when the leaves show a slight yellowing. If the entire stalk is cut for curing, it should be about 3-4 weeks after topping. The lower leaves would be partially deteriorated at this time. Provide adequate space between stalks to allow for satisfactory drying of the leaves.

## Aging

All commercial tobacco is aged for a year or more before it is used. Unaged tobacco is harsh and does not have good flavor. For the home gardener, aging will probably be as difficult or even more so than proper curing. Aging may require as long as 5-6 years and does not occur unless temperature and moisture conditions are favorable. If the tobacco is too dry, there is no aging and if it is too moist, there will be decay of the leaves. Unfortunately the proper temperature and moisture content vary widely. The home producer would need the knowledge and skill to properly age the tobacco or be willing to experiment with the tobacco. The same would be true for adding flavoring agents during or after aging and before the tobacco is used.