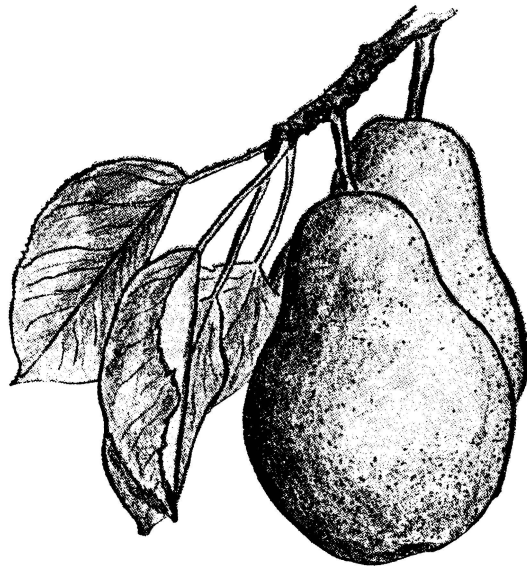


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PEARS FOR VIRGINIA

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Pear production in Virginia has generally been unsuccessful because of susceptibility to fire blight. High-quality pears of the European type such as Bartlett, Clapps' Favorite, Anjou, and Bosc are susceptible to this disease. Pears of the Oriental type are far more tolerant, but their fruit qualities are so low they are suitable only for cooking or preserving. Numerous hybrids have been developed with fruit qualities and fire blight susceptibility intermediate between the European and Oriental types.

SUGGESTED VARIETIES

The following varieties are suggested for planting in Virginia. They include only those of proven merit under Virginia conditions. As pears are generally self-unfruitful, 2 or more varieties should be included in a planting to insure a good set of fruit.

Orient—This is a hybrid pear ripening in early September in Virginia. It blooms several days earlier than Keiffer and has outstanding tolerance to fire blight. The fruit is large, nearly round, and greenish in color with juicy flesh that is firm, and only moderately gritty. It is only fair as a fresh fruit, but the canned product is attractive in appearance and of good quality. The tree is vigorous and productive, with a will-

owy type of growth, becoming almost weeping under a full crop of fruit.

Maxine—This is a hybrid variety which ripens in mid-September. The fruit is large, attractive in shape, and yellow when ripe. The flesh is of average firmness and moderately gritty, with astringent flavor and quality above the average of hybrid pears. It is suitable for eating fresh and rated high as a canned product. The tree is vigorous and productive, appearing to be more tolerant to fire blight than Keiffer.

Seckel—This is a European type which ripens in mid-September. It blooms late, is tolerant to fire blight, and is seldom bothered by insects. The fruit is small, but of excellent flavor and quality. The tree has characteristic dense growth. It comes into bearing late, and although low in vigor in Virginia is usually productive. Of limited value commercially because of the small size of the fruit, it is generally recommended for home use and local markets.

Keiffer—This is an early-blooming hybrid pear which ripens in late September and early October. The fruit is medium to large, developing an attractive color when ripened properly. Its flesh is firm, juicy, and moderately gritty. Although dessert quality is low, the canned product is us-

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ually good. The tree is vigorous, productive, and tolerant to fire blight. It will frequently succeed in climates where other varieties fail.

PROMISING NEW VARIETIES

In 1960 the U. S. Department of Agriculture introduced 2 new pear varieties which appear to be worthy of trial planting in Virginia because of high quality of the fruit and the high degree of tolerance to fire blight.

Moonglow—This variety ripens in early August. The fruit is large and attractive, with soft, juicy flesh nearly free of grit cells. The flavor is mild, sub-acid, and rated good. It has good dessert qualities, but is most promising for processing. The tree is vigorous, upright in growth habit, and heavily spurred. It fruits at an early age and appears to be very tolerant to fire blight.

Magness—This variety ripens the last of August and first of September. The fruit is oval in shape and medium in size. A relatively tough skin makes it somewhat resistant to insect puncture and decay. The flesh is soft, very juicy, and almost free of grit cells. It has a sweet, highly aromatic flavor of good quality when ripened properly. The tree is spreading in growth habit, vigorous, and productive. It has outstanding fire blight tolerance.

GENERAL CONSIDERATIONS

Pears should be planted in deep, well-drained soil in a location as frost-free as possible. Although surviving on soils that are too heavy for most tree fruits, they do not thrive where they may be waterlogged during the growing season. Pear buds and wood are more hardy than those of the peach, but as they bloom early in the season, good air circulation is essential to prevent damage by late spring frost.

More than one variety of pear should be planted to provide for adequate pollination. Most varieties will pollinate each other providing their bloom periods overlap and there is enough insect activity. Bartlett and Seckel, however, do not pollinate each other and a planting of these 2 varieties should include a third variety to insure a set of fruit.

Many pear varieties may now be obtained on either standard or dwarfing rootstock. Trees on dwarfing rootstock, usually Angers Quince (Malling A), have proven satisfactory and can be

found in commercial orchards as well as home gardens. Severity of fire blight infection is usually less on pears on dwarfing rootstock, probably because the growth is less vigorous than that of trees on standard rootstock.

In Virginia, climatic conditions are such that good results can be obtained with either fall or early spring planting. One- or 2-year-old whips, 4' to 5' in height and 9/16" to 11/16" in diameter are satisfactory. Standard trees are usually set 20' apart; trees on dwarfing rootstock, 12' to 15'.

Clean cultivation or mulching is recommended for young trees. In many bearing orchards trashy cultivation during the summer with a winter cover crop of rye or other nonlegume is an accepted practice. Sod or sod-mulch culture, where the sod is kept short and adequate moisture is supplied, has also proven satisfactory.

Fertilizers are applied sparingly or not at all. Where young trees are making from 12" to 15" of new terminal growth, and bearing trees are producing regularly and making 6" to 12" terminal growth annually the use of fertilizers is questionable. A complete fertilizer as required for the sod or cover crop is suggested.

The modified leader-type tree is preferred for the pear. Little pruning of the young tree is necessary after selection of the scaffold limbs. Tipping or heading back the long, leggy shoots slightly will encourage development of side branches. Pruning bearing trees is usually limited to removal of diseased and damaged branches.

Unlike most deciduous tree fruits, pears do not attain their highest quality when allowed to ripen on the tree. They must be harvested when still slightly on the "green side." Although varieties vary with respect to storage life and ripening period, most pears can be stored successfully at a temperature of 30°F. Upon exposure to temperatures between 60° and 70°F. at 80 to 85% humidity for 10 to 14 days, they will ripen to maximum dessert quality.

Fire blight is by far the greatest problem connected with the production of pears. Selection of tolerant varieties, adoption of good sanitary measures, and avoidance of any practice that induces excessive and soft terminal growth are of utmost importance in controlling this destructive disease.

Control of the green apple aphid will aid in control and spread of fire blight. Prune out and

burn the infected portions of the tree and avoid over-stimulation with nitrogen fertilizers.

The use of streptomycin in several sprays during the bloom period has been effective in preventing fire blight infection. Apply at the rate of 60 parts per million just before the center blossoms open, then again at full bloom. Continue at 5-day intervals until the petals have fallen.

It is necessary that a spray be applied at the peak of bloom. If this occurs in less than 5 days from the first spray, adjust the rate of application to maintain the antibiotic level. Use streptomycin at 1/5 the normal rate for each day that has elapsed since the previous spray. For example, if it has been 3 days, use 36 parts per million; 4 days, use 48 parts per million.

To avoid possible reduction of effectiveness, do not combine streptomycin with a fungicide in a spray. Spray to wet only. Over-spraying may cause foliage injury and reduce fruit set.

Preparations containing streptomycin may be purchased at most garden supply stores. It usually comes in small bottles with directions on the label for mixing to obtain the proper concentration.

KEYS TO PROPER USE OF PESTICIDES

Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.

Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock, and away from food, feed, seed, or other material that may be harmful if contaminated.

Dispose of empty containers in the manner specified on the label. If disposal instructions are not printed on the label, burn the containers where smoke will not be a hazard, or bury them at least 18" deep in a place where water supplies will not be contaminated.

SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.

Trade and brand names are used only for the purpose of information and the Virginia Agricultural Extension Service does not guarantee

nor warrant the standard of the product, nor does it imply approval of the product to the exclusion of others which may also be suitable.

SUGGESTED REFERENCES

For more detailed information on cultural practices for pears, contact your county agent or the Agricultural Extension Service, Virginia Polytechnic Institute, Blacksburg.

The following publications are available free of charge upon request:

Bulletin 131—Virginia Spray Bulletin for Tree Fruits.

Circular 638—A Spray Program for Home Orchards.

Circular 725—Pruning Apples, Pears, Cherries, and Plums.

Circular 767—Tree Fruits for Home Use.

Circular 643—How to Control Fire Blight.

NOTES



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