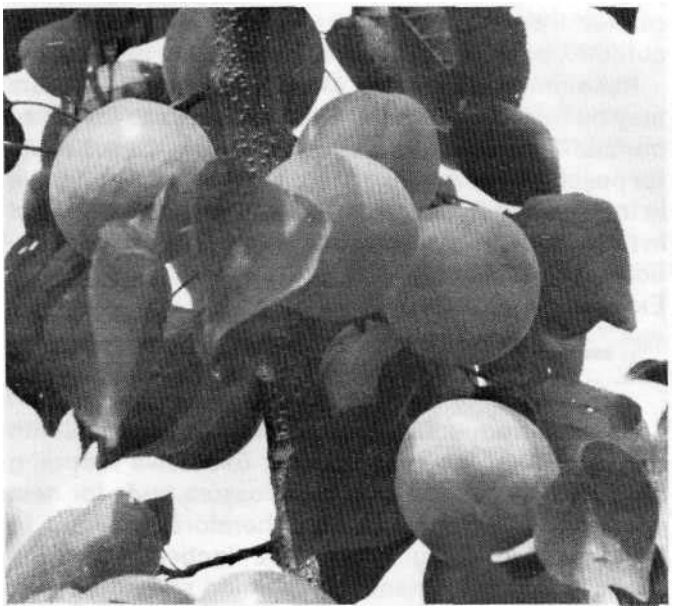
Number 100, 1983 ISSN 0362-0069

New York's Food and Life Sciences Bulletin

New York State Agricultural Experiment Station, Geneva, a Division of the New York State College of Agriculture and Life Sciences, a Statutory College of the State University, at Cornell University, Ithaca

APRICOTS FOR NEW YORK STATE

Robert C. Lamb *and* W. C. *Stiles*



Apricots are a delicious fruit that probably would be grown more commonly if they were less frequently damaged by low winter temperatures and late spring frosts. Like peaches, the dormant blossom buds of apricots are frequently killed by temperatures of -23 C (-10 F) or warmer. Also apricots bloom earlier than peaches and are more frequently injured by late spring frosts.

Varieties grown commercially on the west coast do not bear regularly in New York State. However, a number of new varieties developed by fruit breeders at the Research Stations at Harrow and Vineland, Ontario, Canada, at the South Haven, Michigan Station, and at the Geneva, New York Station may bear regularly enough to form the basis of a sound industry in New York State. Since these new varieties have not been fully tested, growers are advised to start with small trial plantings.

Apricots have not been grown extensively in the state, hence there is relatively little experience or experimentation on which to base cultural recommendations for them.

SITES AND SOILS

Hardy apricot varieties might be expected to do well where the mid-winter temperatures are not too cold for peaches. However, apricots lose resistance to low temperature when exposed to warm spells, even more quickly than peaches, and will not do well where winter temperatures fluctuate widely. Furthermore, apricots are the first fruit crop to bioom in the spring and are susceptible to injury by late spring frosts. A site with good air drainage is essential if this type of injury is to be minimized.

Apricots perform best in light textured, well-drained soils. Like peaches, they will not tolerate poorly-drained soils where water stands in the spring or where there is a shallow, impervious layer in the subsoil. Apricots are susceptible to *Verticillium* wilt and should not be planted where tomatoes, peppers, potatoes, raspberries or strawberries have been grown in the previous three or four years.

NURSERY STOCK AND PLANTING

The best rootstocks for apricots are apricot seedlings. Myrobalan rootstocks have been used quite extensively, but apricots on this rootstock are subject to delayed incompatibility and frequently break off at the bud union three orfouryears after planting. Peach seedlings have also been used as rootstocks for apricots, but trees on peach seedlings are not as long lived as those on apricot seedlings. *Prunus besseyi* is frequently used as a dwarfing stock for apricots, and results in a half-sized tree quite suitable for home garden use.

The best type of tree to plant is a one-year-old whip. Spring planting is recommended. A standard-sized, mature apricot tree will probably occupy an 8 x 8 m (25 x 25') area, but since many apricots in New York State are short lived, closer spacings are frequently used.

TRAINING AND PRUNING

At planting, the apricot tree should be pruned to a

whip and headed at 30 inches. If the trees to be planted are especially vigorous with a good root system, well spaced and wide angled branches can be cut back to leave 2-4 inch stubs to form the first scaffold branches.

In early summer, 3-5 shoots should be selected as scaffold branches. These should be well spaced both around the trunk and vertically, and form wide angles with the trunk. The remainder of the shoots can be rubbed off. If the crotch angles are narrow (less than 45°) they can be widened by a using spring-type clothes pin. The clothes pin is clipped to the trunk about 1/2-inch above the shoot base so that the shoot is forced away from the trunk to form a wide angle.

Little further pruning is necessary until the trees start to bear, except to keep the leader and scaffold branches in balance. After the tree starts to bear, it must be pruned to keep it open for adequate penetration of light and sprays. Apricots form blossom buds both on one-year-old shoots and on short spur-like branches. These spurs bear a large proportion of the fruit and should not be cut off or allowed to become shaded out. The trees can be trained to a modified leader headed back at about six or seven feet.

SOIL MANAGEMENT AND FERTILIZER

Since apricots are susceptible to winter injury, soil management and fertilizer practices should be planned to increase hardiness as well as maintain high yields. Apricots can be grown under a clean cultivation cover crop system or a system of sod in the row middles with herbicide strips along the tree row. If they are grown under clean cultivation, the cultivation should start early in the spring and a cover crop should be planted by July. If grown under a sod-herbicide strip system, the sod should be mowed f reqently, especially before harvest.

At planting time, 2 to 3 gallons of a starter solution, prepared by dissolving 3 pounds of a water-soluble 20-20-20 fertilizer in 50 gallons of water, should be applied in the planting hole after the roots have been covered with soil.

For the first three or four years after planting, apricots should have a complete fertilizer such as 10-10-10 applied early in the spring at a rate of 1/2 pound per year of age of the tree. Therefore, a tree which has been in the orchard four years would require 2 pounds of fertilizer.

Older trees may require only a nitrogenous fertilizer. One quarter pound of ammonium nitrate per year of age of the tree is suggested as an average application up to a maximum of 3-3 1/2 pounds for large bearing trees. Since the fertility of soils varies widely, the condition and vigor of the tree and the color of the foliage are the best indications of fertilizer requirements. Annual terminal shoot growth should be 12-18 inches and the leaf color should be a good dark green on bearing trees. Leaf analysis provides the best means of monitoring nitrogen levels in the tree as well as determining the need for other nutrients. On this basis, a level between 2.6 and 3.5 per cent in the leaf sample indicates an adequate supply of nitrogen.

Current recommendations for commercial tree-fruit production, leaf, and soil analyses should be employed to determine needs and application rates for other elements.

DISEASES AND PESTS

Apricots are quite susceptible to a number of diseases and insect pests and cannot be grown successfully without a thorough spray program. Diseases to which they are susceptible include brown rot, Rhizopus rot, bacterial spot, peach scab and Cytospora canker. Insect and mite pests of apricot include plum curculio, peach tree borer, and European red mites.

Recommendations for the control of these pests may be found in Cornell Recommendations for Commercial Tree Fruit Production, following the schedule for peaches. For home orchardists the peach schedule in Information Bulletin 124, Disease and Insect Control in the Home Orchard, may be followed. These publications are available from your county Cooperative Extension Office.

THINNING

Apricots frequently set excessively heavy crops with the result that the fruit is small. Excessive cropping also predisposes the tree and blossom buds for next year's crop to winter injury. Therefore, thinning to leave only one fruit every 1-2 inches along the branches is recommended. Thinning should be performed at the time of pit hardening, or just after the June drop. Eliminating clusters of fruit helps in the control of disease by allowing better coverage of the fruit with fungicide sprays. Thinning can be done by hand, or with a pole tipped with a short length of hose.

HARVESTING

Apricots are a soft fruit and should be picked with care. The purpose for which they are intended will determine, at least in part, how and when they are picked.

A tree ripe apricot is a highly flavorful fruit and has proved to be very popular in fruit stands. For this purpose apricots should be picked after all green color has disappeared from the fruit. It may be necessary to make at least two and often three pickings in order to obtain uniformly ripe fruit. The fruit should be picked directly into relatively small containers that can be used for marketing.

Apricots intended for processing should probably be harvested somewhat sooner than those intended for fresh use. The processor may specify a stage of

maturity and type of container to be used for such fruit. Even for this purpose, at least two pickings may be necessary.

VARIETIES

Most of the apricot varieties that appear to be suitable for New York State are relatively new and commercially untested. These are listed and described in Table 1. Not all of these have fruited in the Geneva Experiment Station orchards and in these cases the characteristics are taken from the description published by the introducer. Some of these characteristics are subjective evaluations that may vary somewhat according to the opinion of the evaluator. Since date of bloom and date of harvest will vary according to location, the dates in Table 1 have been adjusted to reflect when these varieties would be expected to bloom or ripen at Geneva on the basis of their relationships to other varieties. In spite of such limitations in regard to performance under Geneva conditions, the characteristics listed in the table should be helpful guides in selecting some of the newer varieties for trial.

The data in Table 1 are briefly explained as follows: "Date ripe" and "date of bloom" are the average dates of these occurrences adjusted for Geneva. "Productivity", for the varieties grown at the station, is the average of the crop estimates on a scale of 0-5 with 0 being no crop and 5 being overloaded. "Size" is the cheek to cheek diameter in mm. "Attractiveness" is a subjective rating based on a scale of 1-10 with 10 being the most attractive. "Shape" is described. "Firmness" is a subjective estimation of that characteristic on a scale of 0-10 with 10 the firmest. Similarly, "quality" which includes flesh texture, juiciness and flavor is rated from 1-10. "Fruit cracking" is the tendency for the fruit to crack when it is wet by rain at time of ripening. "Pit adhesion" describes the ease of separation of the flesh from the pit. "Kernel" describes whether the kernel is sweet and edible or bitter and poisonous. "Self-fertile" means that it will set fruit with its own pollen and does not require that another variety be present for cross-

Table 1. Characteristics of Apricot Varieties

Variety	Date Ripe	Productivity	Fruit Size mm	Attractiveness	Shape	Firmness	Quality	Fruit Cracking	Pit Adhesion
*Harcot (5)	7/20	Moderate	50	8	Oval	Firm 8	Good 9	Slight	Free to semi-cling
Earliril	7/21	2.2	45	5	Oblate	Sl. soft 5	Good 7	-	Free to semi-cling
*Skaha (4)	7/24	Productive	Large	Attractive	-	Moderately firm	Good	No	Free
Sundrop	7/26	2.9	42	8	Round-oval	Sl. firm 7	Fair	No	Free
*Velvaglo (2)	7/26	Productive	50	Attractive	-	Sl. soft	Fair to good	No	Free
Sungold	7/26	2.6	34	6	Oval	Soft	Fair 5	No	Free
Goldcot	7/27	2.9	42	6	Oblate	Sl. soft 5	Fair 5	Slight	Free
Alfred	7/29	2.6	39	7	Oval	Sl. soft 5	Good 7	No	Free
Veecot	7/29	2.3	45	8	Roundish	Firm 9	Good 7	No	Free
*Hargrand (7)	7/29	Moderate	60	6	Oblate-round	Firm 8	Good	Slight	Free
Blenril	7/29	1.8	45	5	Oblate	Medium	Good	Slight	Free
*Goldrich (3)	7/29	Productive	65	Attractive	Oval	Firm	Good	-	Free
NY 544	8/1	3.0	41	8	Oval	Firm	Good	No	Free
*Rival (3)	8/1	Productive	Large	Attractive	Oval	Firm	Good	-	Free
Traverse	8/2	3.1	45	6	Oblate	Med-firm	Fair 6	None	Free
*Harogem (6)	8/3	Productive	45	Very attractive	Ovate-round	Very firm	Good	Medium	Free
*Vivagold (1)	8/5	Moderately productive	53	Attractive	-	Firm	Good	None	Free to semi-cling
Moorpark	8/5	1.4	45	6	Oblate	Soft	Good	Yes	Free to semi-cling
*Harlayne (8)	8/6	Productive	40	6	Oblong	Firm	Good	Moderate	Free

Variety	Kernel	Date of Bloom	Self-Fertile	Hardiness	Disease Resistance		
					Perennial Canker	Brown Rot	Bacterial Spot
*Harcot (5)	Sweet	4/20	-	Medium hardy	Resist.	Resist.	Resist.
Earliril	Bitter	4/28	Slightly	Medium	-	-	-
*Skaha (4)	-	-	No	Hardy	-	-	-
Sundrop	Bitter	4/27	No	Hardy	-	-	-
*Velvaglo (2)	-	4/29		Hardy	-	-	-
Sungold	Bitter	4/28	No	Very hardy	-	Suscept.	-
Goldcot	Bitter	4/28	Yes	Hardy	-	-	-
Alfred	Bitter	4/30	Yes	Very hardy	-	-	Resist.
Veecot	Bitter	4/29	-	Medium hardy	-	-	Suscept.
*Hargrand (7)	Bitter	4/29	Yes	Very hardy	Resist.	Resist.	Resist.
Blenril	-	4/30	Yes	Fair	-	-	Suscept.
*Goldrich (3)	-	Early	No	Hardy	-	-	Moderate
NY 544	Bitter	4/28	-	Very hardy	-	-	-
*Rival (3)	-	Early	No	Hardy	-	-	-
Traverse	Bitter	4/30	-	Hardy	-	-	-
*Harogem (6)	-	4/29	-	Medium	Resist.	Resist.	Suscept.
*Vivagold (1)	Sweet	4/28	-	-	-	Moderate	Moderate
Moorpark	Sweet	5/1	Yes	Tender	-	-	-
*Harlayne (8)	Bitter	4/27	Yes	Hardy	Resist.	Resist.	Resist.

*Have not yet fruited at Geneva. Descriptions are taken from the references cited.

pollination "Hardiness" is a rating of the resistance of the blossom buds and woody tissues to injury by low winter temperatures. "Disease resistance" is the observed reaction to perennial canker, brown rot, and bacterial spot of these varieties. A dash under a given heading means that no data are available.

A suggested succession of varieties for trial including 'Harcot', 'Sundrop', N.Y. 544, and 'Harlayne' should provide high quality apricots over a three-week period.

1. **Bradt, O.A. and E.T. Anderson. 1979. Vivagold apricot. *HortScience* 14:82.**
2. **Bradt, O.A. and E.T. Anderson. 1979. Velvaglo apricot. *HortScience* 14:83.**
3. **Fogle, H.W. and Tom Toyama. 1972. Roza, Sungiant and Rival Introduced. Wash. St. Agric. Expt. Station Circ. 545.**
4. **Lapins, K.O. 1975. Skaha apricot. *Fruit Varieties Journal* 29:21.**
5. **Layne, R.E.C. 1978. Harcot apricot. *HortScience*** 13:64-65.
6. **Layne, R.E.C. 1979. Harogem apricot. *HortScience*** 14:759.
7. **Layne, R.E.C. 1981. Hargrand apricot. *HortScience*** 16:98.
8. **Layne, R.E.C. 1981. Harlayne apricot. *HortScience*** 16:97.