

Grafting: A Revolutionary Technique for Fruit Tree Cultivation

As gardening enthusiasts seek more productive and resilient fruit trees, grafting has emerged as a game-changer in horticulture. This age-old technique, which involves joining two plant parts to grow as one, has gained popularity for its ability to combine desirable traits from different plants, resulting in healthier and more fruitful trees.

The Science Behind Grafting

Grafting involves the careful joining of a scion (a young shoot or twig of a plant) and a rootstock (the lower part of the plant that includes the root system). The process begins with selecting compatible scion and rootstock species. The scion is typically chosen for its superior fruit quality, while the rootstock is selected for its disease resistance, hardiness, and adaptability to soil conditions.

The scion and rootstock are precisely cut to match their vascular tissues, which are then bound together with grafting tape. This ensures the alignment of the cambium layers, the part of the plant responsible for growth. With proper care and environmental conditions, the two parts fuse, allowing nutrients and water to flow seamlessly, fostering the growth of a new, productive tree.

Benefits of Grafting

Disease Resistance: Grafting allows the combination of a disease-resistant rootstock with a high-quality fruit-bearing scion, reducing the risk of pest and disease issues.

Improved Fruit Quality: Gardeners can graft scions from trees known for producing superior fruits, ensuring a higher yield of top-quality produce.

Faster Maturity: Grafted trees often mature faster than those grown from seeds, enabling earlier harvests.

Space Efficiency: Dwarf rootstocks can be used to control the size of the tree, making it possible to grow fruit trees in smaller gardens or even containers.

Genetic Diversity: Grafting preserves genetic diversity by allowing the propagation of varieties that may not reproduce true to type through seeds.

Popular Grafting Techniques

Several grafting methods exist, each suited to different plant species and conditions. Some commonly used techniques include:

Whip and Tongue Grafting: Ideal for young rootstocks and scions of similar size, this method involves making matching cuts on both parts and joining them tightly.

Cleft Grafting: Suitable for older trees, this technique involves splitting the rootstock and inserting one or more scions into the cleft.

Budding: A single bud from the scion is inserted into the rootstock, commonly used for citrus and stone fruits.

The Carter County Extension Office currently has apple and pear rootstock for sale.

- ⇒ *Apple—Malling 7A:* Size 60 to 70% of standard, it performs best on deep, well-drained soil and is somewhat drought tolerant. While most trees on M.7A are self-supporting, staking for the first four to five years is suggested. M.7A is prone to burr knots and suckers badly but is resistant to fire blight and crown rot.
- ⇒ *Pear—Old Home x Farmingdale 87:* semi-dwarf, fire blight-resistant, compatible with most pear varieties

Grafting has revolutionized fruit tree cultivation, offering gardeners a powerful tool to enhance the quality and productivity of their orchards. By understanding and mastering this technique, enthusiasts can enjoy a bountiful harvest of diverse and delectable fruits, all while ensuring the health and longevity of their trees. With the support of local extension offices, gardeners have access to high-quality rootstock and expert guidance, making the journey of grafting even more accessible and rewarding.



Apple & Pear Rootstock Order Form

Now is the time to order rootstock for spring grafting. (These are not ready to plant fruit trees, but rootstock that will require grafting. You will need to provide your own scion wood. See attached article for more information.) Grafting demo sessions will be held to help those who order learn to graft their own rootstock. Grafting tools will also be available for check-out. For more information on grafting visit <https://tinyurl.com/c69wpd55> and <https://youtu.be/kYgMEEPq9I4>.



**Cooperative
Extension Service**

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Phone: (606) 474-6686
extension.ca.uky.edu
facebook.com/CCESAG

OFFICE USE ONLY: Date: _____
Amount Paid: _____
Check #: _____ Cash: _____
Received By: _____

Orders will be taken until February 1st or until sold out. Please pay with check or exact change. Make checks payable to: Carter County Ag Council

Rootstock should arrive the first week of March. All rootstock will need to be picked up at the Carter County Extension Office. Refunds will not be issued due to late pickup. Prices include tax.

Purchaser Information

Name: _____ Phone: _____

Address: _____

Email: _____

QUANTITY	ITEM	UNIT PRICE	TOTAL
	Pear (Pyrus Old Home x Farmingdale 87 3/16"-1/4") Rootstock	\$2.00	
	Apple (M7A 3/16") Rootstock	\$2.00	
		Total Due:	

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