



Laws of *kilei ilan*: permitted and prohibited scion and rootstock combinations for fruit trees, citrus trees, ornamental trees, and vegetables (update: *Tevet 5785*-January 2025)

## Kilei Ilan (grafting): scion and rootstock combinations for trees and vegetables

- The *kilei ilan* prohibition includes grafting scions from different species onto one rootstock (multi fruit).
- The **trees bolded and marked with an asterisk\*** are often grafted in a forbidden manner. For trees not bolded, there is no known prohibited grafting.
- The information below relates to trees produces in large nurseries. Some small planters perform non-standard grafts at times; it is difficult to predict the possible grafting pairs and the chart below should not be relied upon.
- For a list of halachically supervised nurseries, click [here](#).
- The tables below are based on an article written by Rabbi Yoel Friedemann, published also in *Hilchot Ha'aretz*, and available on this website, [here](#). Changes and updates have been made to the lists. Latest update: *Tevet 5785*-January 2025

Table 1: Scions & Rootstocks for Fruit Trees

Fruit (variety)	Permissible rootstocks (Preference 1)	Permissible rootstocks (Pref. 2)	Only a non-Jew may graft & plant (Pref. 3)	Forbidden rootstocks
<b>Almond*</b>	Bitter almond (Alnem)	Peach X Almond (GF-677, Hansen, GF-749, GF-557)	GN-15	Peach (Baladi, NemaGuard, GF-305)
Annona (sweetsop)	Annona (cherimola)			
Apple	Apple (Malus, Hashabi 13-4, M106, M9, MM109)			
<b>Apricot*</b>	Apricot (Raanana, Klabi, Canino)			Peach X Plum (Myron, 29 X 27, Citation), Plum (Marianna), Peach X Almond (GF-677), Peach (GF-305)
Avocado	Mexican avocado (Schmidt); West Indian avocado (Degania, Zrifin, Ashdot, Fairchild)			



Fruit (variety)	Permissible rootstocks (Preference 1)	Permissible rootstocks (Pref. 2)	Only a non-Jew may graft & plant (Pref. 3)	Forbidden rootstocks
Carob	Seedlings / carob			
<b>Che – Chinese Mulberry*</b>	Seedlings			Maclura pomifera (Osage orange) <sup>1</sup>
<b>Cherry and sweet cherry*</b>	Sweet cherry (Mazzard)		Colt <sup>1</sup> , Mahaleb, Gisela <sup>1</sup> , MXM <sup>1</sup> , MM2 <sup>1</sup>	
<b>Chinese date (Jujube)*</b>	Seedlings			Sour plum <sup>1</sup> (Ziziphus spinose)
Date	No grafting can be performed			
Feijoa	Seedlings / cuttings / feijoa			
Fig	Cuttings / fig			
Grapevine	Grapevine (Richter, Paulsen, Ruggeri)			
<b>Guava*</b>	Seedlings / cuttings / guava			Psidium cattleianum <sup>1</sup>
Kiwi	Cuttings / kiwi (Hayward)			
<b>Loquat*</b>	Loquat			Quince (BA29, A, C, Sydo) (For heavy soils)
Lychee	Cuttings / lychee (Mauritius, Floridian)			
Macadamia	Cuttings / macadamia			
Mango	Mango (13/1, 49, Saber)			
Mulberry	Seedlings / cuttings / mulberry			
Olive	Cuttings / olive			



Fruit (variety)	Permissible rootstocks (Preference 1)	Permissible rootstocks (Pref. 2)	Only a non-Jew may graft & plant (Pref. 3)	Forbidden rootstocks
<b>Peach* and nectarine</b>	Peach (Nemaguard, Baladi, 198/12, GF-305)	Peach X Almond (GF-677, Hansen, GF-749, GF-557)	GN-15	Almond (Alnem), Plum X Peach (Ferciana)
<b>Pear,* nashi pear*</b>	Pear (OHF, Pyrus betulifolia)			Quince (BA29, A, C, Sydo)
Pecan	Cuttings / pecan			
Persimmon	Persimmon (Virginiana, Kaki, and Lotus)			
<b>Pistachio*</b>	Pistachia vera		Pistacia atlantica	Pistacia chinensis X Pistacia atlantica (UCB1) <sup>1</sup>
<b>Plum*</b>	Plum (Marianna, Myrobalan; Marianna is used more for European plum)	Peach X Plum (Citation)	Peach X Plum (Myron, Ferciana)	Peach X Almond (Hansen, GF-677, GN-15; used for Japanese plums); Almond (Alnem; used for European plums), Peach (GF-305)
Pomegranate	Cuttings			
Quince	Quince (A, C, BA29, Sydo)			
Strawberry Guava	Seedlings / cuttings / strawberry guava			
Walnut	Cuttings / walnut			
<b>Wampi*</b>	Seedling / wampi			Citruses

<sup>1</sup> Rootstock under investigation



Table 2: Scions &amp; Rootstocks for Citrus Trees

Fruit (variety)	Permissible rootstocks (Preference 1)	Permissible rootstocks (Pref. 2)	Only a non-Jew may graft and plant (Pref. 3)
Etrog	No grafting <sup>2</sup>		
Grapefruit,* pomelo,* sweetie*	Poorman, Yuma Ponderosa, Kinkoji	Citrumelo	Bitter orange, Volkameriana, Troyer
Lemon,* finger lime,* lemonquat,* lime*	Macrophylla, Rough lemon, Volkameriana, Nordic Citrus limettioides (Palestinian sweet lime)	Citrumelo	Bitter orange
Orange,* clementine,* mandarin,* kumquat*	Bitter orange, Volkameriana, Cleopatra, Rangpur, Rough lemon, Zhuluan	Troyer, 812, 4934, 639, 44/12, 811	C-35

Table 3: Scions &amp; Rootstocks for Ornamental Trees Known to be Grafted in a Forbidden Manner

Fruit (variety)	Permissible rootstocks	Forbidden rootstocks
Callery pear	Callery pear	Quince (A, C, BA29, Sydo)
Green olive tree (Phillyrea latifolia)	Green olive tree	Olive
Purple-leaf cherry plum	Plum (Marianna, Myrobalan)	Peach X Almond (GF-677, Hansen)
Ornamental cactus		Pitaya and Cubiu varieties

<sup>2</sup> While some permitted grafting an *etrog* tree onto a lemon tree, the fruit produced by such trees are forbidden for use in the *arba minim*.



Table 4: Scions & Rootstocks for Vegetables Generally Grafted

Vegetable (variety)	Permissible rootstocks	Forbidden rootstocks
Cucumber	None	Pumpkin (TZ, Tetsukabuto, AQ-1)
Eggplant	Under investigation	Tomato (Beaufort, Fortamino)
Melon	Melon (MRS-2)	Pumpkin (TZ, Tetsukabuto, AQ-1)
Pepper	Under investigation	Eggplant, Tomato
Tomato	Tomato (Fortamino, Beaufort)	
Watermelon	Watermelon (in development; not yet commercial)	Pumpkin (TZ, Tetsukabuto, AQ-1)



Watermelon seedling grafted onto a pumpkin rootstock. The clip connects the pumpkin (bottom of the stem and the lower section of the stem) and the watermelon (the upper section of the stem).