

Best Practices for Planting Tree Fruit

Remember that successful replanting requires careful planning, attention to detail, and patience. Below are the recommended practices and resources to use to help ensure a successful replant project.

PRE-PLANNING

Removal

- Evaluate the orchard being removed and thoroughly examine any variations within the block. Identify areas of weak growth, record observations, and assess soil profiles.

Pathogen Considerations

- Replant disease can develop when the same or closely related fruit trees are repeatedly planted in the same field. Soil pathogens like fungi, oomycetes and nematodes, can build up in the previous crop, causing newly planted trees to gradually decline.
- Sanitation is crucial during removal. Remove as much of the old roots as possible to reduce the risk of spreading disease to the new orchard and inhibiting new tree growth.
- If disease was present, burn or compost all old trees and roots.
- Before replanting, consider planting a cover crop or leaving the field fallow for at least one growing season.

- Planting in laneways vs overtop of the same row has been shown to reduce the impact of replant disease.
- Selecting a tolerant rootstock also reduces the impact of soilborne pathogens. For apples, most Geneva series rootstocks are tolerant to replant disease, whereas Malling series rootstocks are more susceptible.
- For more information, please visit: [Apple Replant Disease | WSU Tree Fruit](#)



Cherry Planting 1

Soil Testing

- Complete soil nutrient testing within three years before replanting, ideally after the previous field has been removed. If the area under the trees has been managed differently than the drive rows, consider taking more than one sample.

- Amend the soil with lime or sulphur to adjust the pH as needed at least 6 months prior to planting. Aim for a soil pH of 6.0 at time of planting, as annual fertilizer inputs will lower the pH over the life of the orchard. Optimal fruit tree growth occurs in soils with slightly acidic pH, between 6.0 and 7.0.
- Test the soil for phosphorus and potassium prior to planting and apply fertilizer based on soil test results.
- Agricultural soils ideally have 3-6% organic matter. If levels are low, consider adding compost, manure, or planting a cover crop.
- For information on tree fruit nutrition, please visit: [Soil Sampling for tree fruit orchards | WSU Tree Fruit](#)
- For information on submitting soil samples for nutrient analysis in BC, please visit: [Nutrient Testing Laboratories | Province of BC](#)



Cherry Planting 2

Site Preparation

- Fruit trees prefer soils with good drainage that also retain enough moisture between irrigation cycles, such as sandy loam or loam soils.
- Disk site to remove cover crop/vegetative cover.
- Deep rip to 36”.
- Disk or cultivate to smooth surface.
- Apply soil amendments or fumigate as needed.

Install Irrigation

- Install irrigation before planting. Check that the system is functioning and able to water new trees immediately after planting. This reduces plant stress, eliminates large air pockets in the soil, and helps trees settle in.
- Consider upgrading irrigation systems, such as laying wires when sub-mains are exposed for future automation or re-designing irrigation zones.
- Check out the Environmental Farm Plan and Beneficial Management Practices programs for potential funding towards upgrading irrigation: [Beneficial Management Practices Program | Investment Agriculture Foundation of BC](#)
- Depending on where your farm is located, you may require a water license. For information on applying for a water license, please visit [Front Counter BC: Water Licence - New - Authorization Guidance - Natural Resource Online Services \(gov.bc.ca\)](#)

Cover crops

- Plant a cover crop following removal of the old field and before replanting the new field to protect against soil erosion and improve soil structure.
- Some cover crops (e.g. mustard) can also be used as a biofumigant to reduce pathogens in the soil.
- Select a cover crop suitable to the time of year, growing conditions and desired plant characteristics. For information on growing cover crops in BC, please visit: [Cover crops | Province of BC](#)

REPLANTING

Nursery Stock

- Purchase trees from a reputable commercial nursery who have well-documented propagation techniques such as pathogen testing source material, sanitization of tools and facilities and good documentation practices.
- Visually inspect nursery stock upon pickup to ensure there are no signs or symptoms of disease like cankers. It is better to delay planting than plant infected material.
- When trees arrive, keep them cool and the roots moist. Do not store them with fruit as they are ethylene sensitive and may start to push.
- Trees should be planted as early as possible following delivery. Desiccation of the roots is the primary cause of early tree death.
- To prevent the spread of Little Cherry Virus and X-disease (Western X), nurseries should only propagate from healthy mother trees. Free testing is available at

the B.C. Ministry Plant Health Lab to confirm propagation material is disease-free: [Plant Health Laboratory - Province of British Columbia](#).

- For testing dormant nursery trees, submit root samples to the B.C. Ministry Lab or another accredited lab and refer to the following guide for proper sampling procedures: [X-disease phytoplasma Sampling Recommendations](#).

Pollination Plans

- Most apples, pears and cherries (except for self-fertile varieties) require cross-pollination, making it essential to interplant compatible pollinizer varieties to achieve good fruit set.
- All fruit trees require a strong bee population at the time of bloom to meet the crop's pollination needs.
- For information on selecting compatible pollinizer varieties at the time of planting and determining the right number of hives per acre once the orchard is in production, please visit: [Varieties and Pollination | BC Tree Fruit Production Guide](#)



Peach Planting

Planting

- When planted, the graft union should be at least 4-6 inches (10-16 cm) above the soil surface.
- It is important that the graft union not touch the soil to prevent scion rooting, which would prevent the rootstock from controlling the growth and development of the tree.
- Water as soon as the trees are planted. This reduces plant stress, eliminates large air pockets in the soil, and helps trees settle in.
- Excess moisture can lead to root rot. Use soil moisture sensors during the growing season to guide irrigation and ensure your trees get the right amount of water without overwatering.

Alleyway vegetation

- Plant a cover crop in the alleyways to reduce weed pressure, increase traction for equipment, improve water retention and percolation, and to mitigate the impacts of extreme heat. Information can be found at [Cover crops | Province of BC](#)



Apple Planting

MONITORING AND MAINTENANCE

Pruning

- Prune newly planted fruit trees to promote healthy growth. Pruning restores the balance between the root system and foliage and compensates for fine roots lost during transplanting.
- As a rule of thumb, remove at least a quarter of the potential leaf area – remove all branches below 20 inches (60 cm), cut back the leader to about 30-35 inches (80-90 cm) and remove undesirable shoots.
- Always remove limbs with poor crotch angles, limbs too low to the ground and large limbs approaching the calliper of the central leader. For well-developed trees, cut limbs you wish to keep back to 2 or 3 buds.
- For more information please visit: [Pruning fruit trees | ontario.ca](#)

Weed management

- Control established perennial weeds prior to planting.
- Protect trees from herbicide damage through painting, or with tubes or milk cartons.

ADDITIONAL RESOURCES

- [BC Tree Fruit Production Guide](#)
- [Orchard Establishment | WSU Tree Fruit](#)