**Tree Science Applied to Buying, Planting, Pruning and Care of Fruit Trees**

(March 2018 APFGA Member meeting - notes taken on Deb Hinchey’s talk)

**Definitions**

* **Bare root** – less than about 2-inch trunk diameter, comes without soil around roots
* **Whip** – plant has no branches yet, just buds
* **B & B** – balled and burlapped, for larger plants usually greater than 2 inches. Soil comes with and the root ball is wrapped in burlap
* **Sport** – a mutation from the plant (for example, a bud sport or fruit sport that is a variation from the main plant it comes from). If the mutation produced desirable fruit, , a scion from the sport would be valuable
* **Seedling** – a plant that is produced from seeds; that is, a plant produced from pollination. Will have traits that are a mix of the parent and the pollinator
* **Graft** – a clone of an existing plant, via the graft of scion wood. The graft can be a select limb onto a mature tree, or an entirely new tree if the scion is grafted as the main trunk onto rootstock

**SELECTING A PLANT**

All plants, including fruit trees, have traits via genetics. The environment will also affect your plant.

**Traits**: Taste, production timing (e.g. early or late), pollinator or fruit producer, hardiness, fruit size, disease resistance

Site (**environment**): soil, water, sun exposure, wind, climate zone

* A trick to evaluate your Anchorage yard for warmth and sun exposure is to see where the snow melts off first

**PARTS OF A TREE**

Each plant, including fruit trees, consists of three parts:

* Roots
* Trunk (interstock; scaffold)
* Branches (scion; laterals)

When planting new trees, we should be focusing on the roots. Most roots will eventually be contained in the top foot of the soil (rarely grow deep tap roots). The root hairs are thin fuzzy growths on the roots which are one cell thick, and are the sites for absorption of water and nutrients. Mycorrhizae are fungi that have a symbiotic relationship with the plant, which aids in mineral absorption.

**PLANTING NEW PLANTS**

In-ground planting should occur in spring or late autumn, so as to cause least amount of damage to very fragile root hairs during growing season.

Should take off enough dirt from trees and shrubs before planting, to see if the roots need pruning or training to grow in a better way.

Spread the roots apart if the plant roots have girdled (circled around).

Wash just enough (and gently!!!) to see what the roots are doing and correct by unwinding, pruning, and/or cutting vertically through the outermost pot-bound roots. Washing or teasing off the potting medium (soil) should only be done when first planting the purchased tree or shrub. Ideally, all roots should radiate from the center.

Trim roots

Hydrate the roots before planting in ground (stick in container full of water).

New plants should be planted such that the root flare (has bark) will remain above ground. Plant a little higher to take soil settling into account.

*Repotting*: Don’t overpot –Raintree Nursery recommends replanting in a pot no bigger than one inch from the existing pot (one inch all the way around, or 2 inches larger in diameter)

*Repotting*: Use Pro-Mix or similar potting soil.

Dig the hole the plant is to be planted in - about the size of the roots.

Save the soil for backfilling.

Make a cone in the center of hole for supporting the roots, and then spread the roots out around the cone in all directions.

Roughen up sidewalls of hole (use digging fork or pick implement, if you have one)

Backfill the hole with the same soil you excavated to about half way and fill with water (plunging the end of the hose into the soft soil to settle it in and around the roots. Repeat with rest of soil. If you back fill with better (or highly amended) soil, you are making a pot out of the hole you dug… roots won’t grow across from one soil type to another type.

Stick hose without nozzle into soil and water to settle the soil. *DON’T COMPACT THE HOLE BY STEPPING ALL OVER THE FINISHED SURFACE – YOU ARE FILLING IN VALUABLE AIR SPACES.*

Pruning in late winter/early spring will stimulate the lower (back) buds to sprout. Pruning in summer will slow down growth and not get the strong back-budding growth that the winter pruning will stimulate.