



Apple Academy



Connie Kratzke
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Tips for Growing Apples in Minnesota: Planting Apple Trees

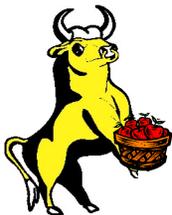
Planting apple trees is really no different from planting other types of trees!

First, choose a location that receives a full day (eight hours) of direct sunlight. Try to select an area that is fairly level. Low spots are too chilly and hilly sites are too exposed. Make sure you have enough space, as discussed in my handout on apple tree selection.

Put down a tarp or pull up a wheelbarrow. Place the soil removed during the hole digging process on or in the tarp or wheelbarrow. Doing so will make life much easier when it is time to back fill around the trees' roots. If digging is difficult, the soil is probably heavy and compacted. If digging is a breeze, the soil may be a little too light and sandy. In either case, adding peat moss will help. Peat improves the drainage and porosity of clayey soils and increases the water holding capacity of sandy soils. Make a mixture using 2/3 of the existing soil and 1/3 peat and back fill with this mixture. **DO NOT** replace the soil completely with luscious top soil. While trees may thrive for a couple of years in their happy little homes, they will go into extreme shock when their roots grow beyond the utopian area. Unless the existing soil is obviously too firm or fine, it should be left alone completely. Dig holes that are twice as wide but no deeper than each root mass.

Positioning the trees in their holes is very important. The graft should always be a couple of inches above ground. Container trees should be planted at the depth they were in their pots. When planting bareroot trees, make sure that the portion of the trunk that flares out, just above the roots is above ground. I mentioned what would happen if the bud unions were buried in my article on selection. Positioning trunks below the soil line is much worse. Roots will sprout from the buried portion of the trunks and encircle them. These roots will strangle and kill trees within a couple of years.

Inspect all portions of the trees. Prune off any dead or damaged roots and branches. Carefully spread the roots out evenly in all directions. Do not wind the roots around the hole to get them to fit. Either prune them a little or dig a bigger hole. Carefully firm the soil around the roots. It may be helpful to use a dowel or stake to tamp the dirt between the roots. Leave a *slight* depression for water, as one would at the top of a flower pot. This will help keep mulch in place as well. Yes, mulch is necessary. It helps keep the soil at a consistent temperature and moisture. Apple trees are shallow rooted, so the mulch will also help prevent winter injury. Mulch even protects trees from human damage caused by mowers and weed whips! Put down a few inches of shredded or chipped wood or bark. Gently pull the mulch back from the trunks about an inch to prevent mold growth.



Kahnke Brothers Tree Farm

HWY 212 West and Boone Road– 1 mile west of Plato, MN

10603 Boone Road, Plato, MN 55370

PHONE: 320-238-2572 • FAX: 320-238-2574 • www.kahnkefarm.com

Open SATURDAYS ONLY: May 1st–November 1st: 8AM–3PM

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Now that the trees are situated, its time to water. Established trees use about 1" of water per week. Trees that are just getting started need to be watered thoroughly and deeply at least twice a week. Root feeders, soaker hoses and drip bags all work great for this. Hoses work just fine too if the operator is patient! It is important to completely saturate the entire root system with each irrigation. Watering every day is BAD! Saturated roots are not forced to grow in search of water. Remember, wherever there is water there can't be air. Eventually, wet roots will become rotten roots and then you have to start all over. Once trees are established (within two to three years), put the hose away. Only water during periods of extended drought that occur after the fruit has formed. Apples prefer drier soils. This is especially true of trees on dwarf rootstocks.

Let the trees decide when they eat. Over fertilization can cause an insurgence of succulent growth that is extremely appealing to insects. Too much of a good thing may even delay or reduce fruit production. All trees go through an awkward stage before they become the ravishing beauties you see in the catalogs. This period of adolescence can last a couple of years. Give your trees some time to come into their own. After that, examine the color and density of their foliage. Pay attention to their annual growth as well. Young, non-fruiting trees that are acclimated to their surroundings should grow over a foot each year. Once they begin producing, they should grow eight inches or more each growing season. If established trees seem pallid, sparse or stunted, it's time to feed. Before applying anything, its best to have a basic soil test. The University of Minnesota Soil Testing Laboratory conducts these tests, which run about \$15. Soil sample bags with detailed instruction sheets are available here at the farm. On the included sheet, there is a spot to request a fertilizer recommendation for the specific crop being grown. Be sure to check "tree fruits" and write apples in beside it. When the results arrive and its time to purchase fertilizer, look for a slow-release, granular preparation and apply it right away in the spring. Never exceed the rate or frequency suggested by the package or test.

The time it takes for trees to begin fruiting depends on their age and rootstock. At Kahnke Brothers Tree Farm, we start with bareroot trees that are two years old. Some of these trees will fruit the same year that we plant them in their containers. Others require a little more patience. Trees on dwarf rootstocks produce fruit at a younger age than semi-dwarfs. Standard-sized trees are the slowest. Transplant shock will delay fruit production regardless of which trees you choose. While all newly planted trees experience shock, careful planting and watering will minimize the negative effects. Some varieties adjust to their surroundings more rapidly than others, but environmental and cultural factors don't discriminate. DO NOT try to stimulate fruit production with fertilizer. Unfortunately, its just not that easy!

Young apple trunks need protection in the winter to prevent sunscald and rodent damage. Sunscald is a cellular explosion caused by drastic temperature fluctuations on sunny winter days. It can result in large wounds that provide pathways for insects and diseases. Use white wraps to reflect the sun's heat away. Choose a material that breaths or allow space for air circulation. Extend the wraps from the base of each tree to their lowest branches. Corrugated dryer/drain tile tubing works very well if it is split up one side. This material can be reused year after year and usually keeps rodents at bay. However, ravaging rabbits are a force to be reckoned with. For maximum bunny control, surround each trunk with a loose-fitting tube of hardware cloth. Bury the tube at least an inch into the ground and make sure that it extends well beyond the snow line to prevent tooth/bark contact.



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