



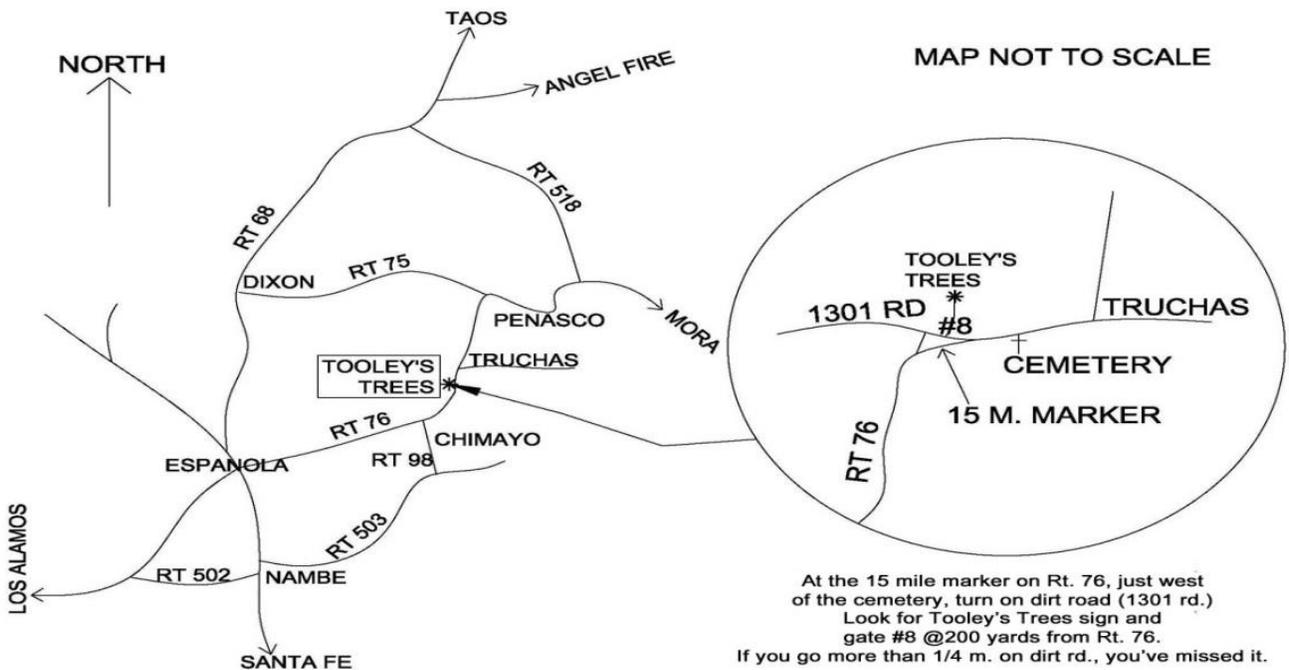
www.tooleystrees.com

2022 SPRING CATALOG

We offer a unique alternative to large commercial growers at great prices.

☐☐Quality☐ Beauty☐ Toughness ☐

SUPPORT LOCAL AGRICULTURE



TOOLEY'S TREES & KEYLINE DESIGN
P.O.BOX 392 1301 RD. #8
TRUCHAS, NM 87578
(505) 689-2400 E-mail: info@tooleystrees.com
NM Nursery License # 6241
www.tooleystrees.com

Tooley's Trees is a retail and wholesale nursery in Truchas, NM, on the highroad between Santa Fe and Taos, at 7,960'. Focusing on varieties that are drought tolerant and adapted to high pH, we grow species trees, shrubs, and grafted fruits. We grow our trees and shrubs in native soil contained in fabric bags and rootmaker pots. Our stock is grown with organic methods and we practice holistic orchard management. These practices are time consuming and labor intensive, but result in healthier plants, soils, water quality and beneficial insect populations.

We will have many heirloom and uncommon varieties of grafted apples, apricots, plums, pears and cherries in the late summer or fall but have limited inventory of fruit trees for this spring. Some of them may be new to you but are an opportunity for you to grow varieties that have all but disappeared from our markets. Our grafts are on rootstocks carefully selected to match climate and soil types in this area. Our species trees and shrubs are easy to care for and will provide screening, habitat and food for wildlife and yourself.

We believe in selling small caliper trees with well-developed root systems. The fabric root bags we plant in are key factors in building a fibrous root structure. Smaller caliper trees establish more quickly with less transplant shock, and grow more vigorously in difficult sites than large caliper trees.

All our plants are healthy and true to name. Their survivability depends on their care once they leave this farm. No other warranties are implied. But if you have questions, please contact us by phone or email.

Thank you for your support, and for buying local,



Gordon Tooley and Margaret Yancey

HOURS FOR RETAIL SALES:

April 1 through May 29- Fridays, Saturdays and Sundays from 8-5.

Closed Easter Sunday.

We will be closed for the summer, re-opening in September.

WE DO NOT ACCEPT CREDIT CARDS. CASH OR CHECK ONLY PLEASE

TREE AND SHRUB PLANTING GUIDELINES

The most common reasons for plant failure are planting too deep and over amending the soil.

THE ADVANTAGES OF FABRIC ROOT BAGS

- Plants grown in fabric bags are healthier and grow faster than plastic container grown stock.
- Containers are more susceptible to problems of inadequate or excess water and fertilizer.
- Roots often circle in pots.
- Plants grown in root control/rootmaker bags have fibrous roots.
- The tough fabric of the bag prunes the root structure so shock is reduced when the tree or shrub is transplanted.
- 90% of the plant's root structure remains intact in the bag.
- Traditional field digging can cut away too much of the root structure.
- At the nursery it is easier to keep bagged stock from drying out or tipping over than containerized stock.

INSTRUCTIONS FOR PLANTING FROM ROOT BAGS

Remove the bag before planting the tree.

Cut the fabric from top to bottom and peel it away.

Occasional roots may be caught in the fabric – cut these with hand pruners.

Do not jerk the fabric away from the root ball.

SITE PREPARATION

Dig shallow planting holes two to three times as wide as the root ball. Wide, shallow holes encourage horizontal root growth that trees and shrubs naturally produce. Trunk flare should not be below grade. In well-drained soil, dig holes no deeper than the trunk flare. In poorly-drained clay soil, dig holes two to four inches shallower so that trunk flare is higher than grade. This will help prevent crown rot.

Don't dig holes deeper than trunk flare or put loose soil beneath roots, because loose soil will settle over time, leaving trees and shrubs planted too deep. Widen holes near the soil surface where most root growth occurs. Score walls of machine-dug (auger, backhoe) holes to remove glazing.

Backfill holes with existing unamended soil. **Do not incorporate organic matter into backfill for individual planting holes.** This can cause problems with water movement and root growth between the root ball, planting hole, and surrounding soil. Backfill with soil, then water thoroughly to settle out air pockets. Then water again. Cover any exposed root ball tops with mulch, but keep the mulch 2" away from the trunk flare. Spread any soil amendments you like to use around the tree on the surface of the soil, under the

mulch. Soil builds from the top down so the amendments will do your plants more good spread in a wide area than dumped in the planting hole.

TREE CARE AFTER PLANTING

Remove tags and labels from trees and shrubs to prevent girdling branches and trunks. Make a map of planted area.

Good follow-up watering helps promote root growth. Drip irrigation systems and water reservoir devices facilitate efficient watering. Mulch, but don't over mulch, newly planted trees and shrubs. Two to three inches of mulch is best; less if a fine material, more if coarse.

Keep mulch from touching tree trunks and shrub stems. This prevents disease, insect and rodent problems if using organic mulches, and bark abrasion if using inorganic mulches.

Don't use black plastic beneath mulch around trees and shrubs because it blocks air and water exchange.

Only stake trees with large crowns or those situated on windy sites or where people may push them over. **Stake for a maximum of one year.** Allow trees a slight amount of flex rather than holding them rigidly in place. Use guying or attaching material that won't damage the bark such as wide cloth straps. Wrap the strap once around the trunk at half the height. Use 2 wood stakes, not metal. To prevent trunk girdling, remove all guying material after one year.

Most trees should not have their trunks wrapped. Wrapping often increases insect, disease, and water damage to trunks.

*****VERY IMPORTANT PROTECTION FOR YOUR TREES*****

For protection against small animals or equipment damage, install guards or a circle of 1/4" hardware mesh fencing to protect the trunk. Be sure the guards or mesh are loose-fitting and permit air circulation. Remove plastic guards in spring.

For protection against larger animals (like deer) install a large ring of field fencing to keep the animals from nibbling at the leaves and young branches.

TREE PRUNING

Pruning is a very intuitive process. "Touch Trees". Feel that trees are living organisms; get to know your subjects. They all have different growth patterns to observe. Work with the natural form the trees possess.

Be a good investigator, take your time, pay attention to details, do a good job, educate yourself.

Why to Prune

- Control size and develop strong tree structure
- Reinvigorate old wood to productive wood
- Decrease vigor, issue new responses at cut site
- Increase fruit spurs and thin fruiting wood
- Open up canopy for better light penetration and air circulation
- Remove weak crotch angles
- Remove competing branches
- Remove co-dominate branching, crossing, and dead branches
- Remove interior non fruiting and marginal fruit sites(fruit spurs growing below branches)
- No sealers or paint on any cut surface ever
- Pruning influences fruit quality and balances vegetative growth with fruit load

General Rules

- Never remove a branch or twig without having a reason to do so.
- Don't remove lower branches too early, lower branches aid in trunk flair, good anchorage, and branch development
- Seedling trees usually need less or very little pruning to maintain a natural habit
- Clonal rootstock tend to need more maintenance due to tendencies to produce more branches that want to grow vertical
- Spur types need very little training, thinning, or heading
- Pruning is a dwarfing process, increases vegetative growth, stimulates wood replacement, and reinvigorates tired, low productive wood
- Pruning reduces yield, removal of wood with flower buds reduces potential fruit,
 - Yields are less but quality is improved by size.
 - Weight load to scaffold is reduced- especially important in young trees
- Never top an established tree to lower size!
- Pay attention to natural tree shapes, try to work with what the tree wants to do.
- In most cases you can follow up with pruning that complements natural branching rather than making them do what they may not want to do.
- Tool hygiene; clean, sharp, keep off the ground, wipe or spray with 90 percent alcohol, approved bactericides and fungicides, or 5% bleach and water
- Cut or chip the cut branches and twigs into small pieces to create Ramial wood mulch. Remove all diseased wood.

Types of Cuts

Pruning is: thinning, heading , bench cuts, notching to increase or decrease bud vigor

- Thinning cuts: removal of competing branches and twigs, opens up light and air

- Heading cuts: reduce apical dominance, reduce length, control height and width, send new vigor to the next 3 to 5 buds below the cut to direct growth to spurs
- Never make flush cuts, they callus improperly and increase decay surface area
- Avoid stub cuts, final cuts should be at collar or branch bark ridge

Timing of Pruning

- Things that flower first, get pruned last; late in the dormant season or very early in the spring before bud break
- Heavy pruning in the growth flush, and before leaf drop in the fall should be avoided
- No more than ¼ of the trees canopy should be removed per season
- Young trees can respond to heavy pruning better than established trees
- Trees don't heal, they seal. Cutting wood at any time stimulates cell activity at the cut site to compartmentalize cell walls to seal out infection
- Early winter pruning can cause winter damage and interrupt dormancy clock, even causes some species to break bud too soon. It should be avoided.

Dormant Season Pruning

- Dormant pruning stimulates wood replacement, don't remove a branch unless you have a reason and make yourself aware of the response the tree will make at that site
- Very late winter or early spring is the preferred time to prune. This can aid in preventing premature bud break, fruit loss, and winter damage.
- Pruning delays fruiting, unpruned trees will flower and fruit sooner
- One to four year old trees should not be pruned too much in winter for these reasons
- Stone fruits (apricots, plums, cherries, peaches, nectarines) sometimes experience limb die back or gummosis caused by the fungus *Eutypa lata* or *Cytosporina*. It is safer to prune these in early summer during periods of low humidity.

Summer Pruning

- Summer pruning encourages spur formation and can lessen water sprout competition in trees that are heavily pruned or have an umbrella formation
- Summer pruning reduces canopy and root growth due to loss of leaf surface, can affect trunk flair and retard vigor in young trees, and delay fruiting
- Summer pruning stiffens branches so use caution when pruning narrow crotch angles that will eventually be pushed out with limb spreaders, since this can cause included bark which is more prone to splitting
- One to four year old trees should not be pruned too much in summer for these reasons
- Summer pruning can help bring biennial croppers into a more annual cycle
- Summer pruning is preferred for stone fruits

ADDITIONAL RESOURCES

'The Apple Grower', 'Mycorrhizal Planet' or 'The Holistic Orchard'- Michael Phillips. We encourage everyone to read these. They cover all aspects of tree care, healthy orchards and wildlife habitat. Also check out and support: www.GrowOrganicApples.com for a wealth of helpful information- not just on apples.

Alex Shigo – Anything he published

'Physiology of pruning fruit trees'- publication number 422-025, Virginia Tech cooperative extension

Cornell Cooperative extension publication #112

NMSU cooperative extension bulletins

'Encyclopedia of Organic Growing'- Rodale press

'The Pruning Book' or 'Grow Fruit Naturally' Lee Reich

'Organic Orchardng'- Gene Logston

'Fruit, Berry and Nut Inventory' Seed Savers Exchange

'Growing Food in the Southwest Mountains' Lisa Rayner

'Will Bonsall's Essential Guide to Radical, Self-Reliant Gardening' Will Bonsall

'Call of the Reed Warbler' Charles Massy

For more information on tree planting, look at the International Society of Arboriculture's website:

<http://www.treesaregood.org/treeowner/plantingtree.aspx>

SPECIES TREES & SHRUBS

***Acer tataricum*/Tatarian Maple**

Zone 3. 15'-20'. Width comparable to height. A large multi-stemmed shrub or a small rounded wide-spreading tree. Dark green in summer, yellow and red in fall. Tolerant of adverse conditions including drought and high pH. Good where a small tree is desired. Local beekeepers tell us that the bees love its early season flowers.

***Picea pungens*/Colorado Spruce & *Picea pungens glauca* /Colorado Blue Spruce**

To 100', Zone 2. Foliage bluish-green or silver. Broad dense narrow pyramid with horizontal stiff branches to the ground. Is more drought tolerant than other *Picea*. Native to the southwestern states.

***Picea schrenkiana 'tianshanica'*/ Schrenk Spruce**

Zone 4. Introduced from Central Asia in 1877. Height: 80 ft Spread: 20 ft. Annual growth rate less than 12 inches. Schrenk Spruce is native to Asia and it is relatively rare in landscapes. The crown is pyramidal to somewhat oval. The horizontal branches do not develop the drooping habit that is typical of other spruces. The bark is purplish-gray and flakes off to reveal orange-brown new bark.

***Populus x acuminata*/Lanceleaf Cottonwood**

25' to 45'. Zone 3. Upright form with broad spreading crown. Introduced into cultivation in late 1800's. Good alternative to Aspens for lower elevations. Greenish, yellowish bark. Fairly fast growing, hardy, cottonless shade tree.

***Prunus tomentosa*/Nanking Cherry**

10', Zone 2. Bark is shiny, reddish-brown and exfoliating. Leaves are dark green, flowers are pinkish in bud, changing to white and fragrant. One of the earliest flowering prunus species. The fruits are scarlet, ripening June through July. Good windbreak filler, drought tolerant.

***Rhus trilobata*/Skunkbush or 3 Leaf Sumac**

To 6', Zone 2. Medium, informal shrub, clumping habit makes a natural low hedge. Brilliant yellow to red fall color. Very drought tolerant. Refreshing drink can be made from the berries.

***Ribes rubrum 'Red Lake'*/Red Lake Currant**

Zone 2-6. Superior strain of *Ribes rubrum*. Compact clusters are medium to large, 4" long with 8-10 berries. Long stems for easy picking. Large ½" diameter dark red berries. Excellent for jellies, preserves, tarts and muffins. Makes sparkling red jelly. Strong, vigorous, upright bush with dense foliage; 4'-6' tall and 2'-5' wide. Early bearing; produces fruit on two-year and older wood. Long ripening season; holds well on the bushes. Remains productive in partial shade. Excellent bird forage and windbreak plant. Ripens during July.

***Ribes rubrum 'Pink Champagne'*/Pink Champagne Currant**

Zone 3-8. Red x white currant cross. Compact bush produces large clusters of light pink berries. Not as tart as red currants. Good for fresh eating, cooking and preserving. Resists mildew, rust and aphids. Easy to grow. Sun or part shade. Ripens in July.

***Sambucus nigra*/Samdal Black Elderberry**

Zones 3-8. This is one of several newer elderberry varieties from Denmark. Plants are vigorous, producing long shoots from soil level one growing season and bearing fruit the next. These are removed after bearing and replaced by the current year's growth. This makes the plant easy to prune and manage as a bush. Large fruit clusters with good flavor ripen in August each year. Berries have high anthocyanin content. Both varieties, or another *S. nigra* cultivar, are required for cross pollination.

GRAFTED APPLES

We try to have a large selection of heirloom and newly developed grafted apples to offer you. We do much of the grafting here on the farm and select rootstocks and scion wood that should be productive in Southwestern soils and in this climate. These apples may be less well known, but merit attention in the trade. In addition to adding unique trees to your landscape, you help to preserve diversity and the unusual characteristics of these fruits by planting these trees. The majority of these apple trees are grafted on EMLA 111 rootstocks. These provide long lived semi-dwarf trees that are well anchored and perform well in most sites. EMLA 111 will generally produce 15'-20' trees. We also have some varieties on Standard rootstock; Malus Antanovka. Please enquire as they change from year to year. Mature tree size is a combination of the characteristics of the rootstock and the variety, as well as the quality of the soil and care given to the tree.

 Baking  Fresh eating  Processing  Cider  Storing

MOST OF THIS SPRING'S APPLES ARE ONE YEAR WHIPS

Albemarle Pippin(Newton Pippin) Apple

Does not owe its success to good looks. Medium sized, squat, yellowish green fruit, usually russeted around the stem. Ripens yellow, unless over fertilized. Rich aromatic, crisp, coarse, creamy yellow flesh; refreshing piney tartness. High quality; dessert and processing. Excellent for cider. Great keeper; develops full sugar and rich flavor in March. Large, vigorous, early bearing, self fruitful tree. Tends to bear biennially. Susceptible to scab, notably on clay soil. Heat resistant. Requires good soil and full sun. Ripens during October. 700 hours chilling. Zone 5. Originated in Newtown, Long Island in early 1700's.

Annie Elizabeth Apple

Deep maroon blooms. Green-gold skin flushed orange-red with many short red stripes. White flesh has sharp flavor with an underlying sweetness. Excellent for stewing and baking. Highly vigorous. Ripens early to mid-October. Originated in England around 1857.

Centennial Crabapple

Wealthy x Dolgo crab. Oval, bright scarlet over yellow fruit. Crisp, juicy, white flesh. Sweet, almost nutty flavor. Good for canning, jelly or fresh eating. Small, compact, natural dwarf tree with horizontal branches. Heavy crops of red flower buds, snowy white blossoms, 1.5 to 2" fruit. Highly scab resistant. Midseason bloom makes it an excellent pollinator for all other apple varieties. Ripens in mid-August. Zones 3-9. Introduced by the U of Minn in 1957.

Chestnut Crabapple

Malinda x Siberian Crabapple. Large cooking and dessert crabapple. Attractive, reddish bronze fruit. Crisp, juicy, sweet flesh with a pleasing nutlike flavor. Excellent fresh. Vigorous tree is upright but a little weeping. Large white blossoms with good shape and aroma; medium pollen producer. Fruit hangs well and ripens over a long period. Annual bearer. Cedar apple rust resistant. Hardy to -50 degrees F.

Claygate Pearmain Apple

Good size, brown russeted fruit with beautiful splash of crimson in the sun. Crisp, juicy, yellowish flesh. Rich sugary flavor like the Ribston Pippin. Good keeper; excellent bearer. Ripens late. Zone 6. Fine old English apple found growing in a hedge in the hamlet of Claygate in Surrey before 1820.

Connell Red Apple

Red sport of Fireside. Macintosh x Longfield. Large, round, solid red fruit. Sweet, mild, perfumed flesh retains its parent's distinctive flavor; better color. Smaller percentage of small apples. Excellent for eating fresh or cooking. Remarkable keeper, holding its juice and crisp texture into April. Tree is a heavy annual bearer. Ripens in October. Hardy to Zone 4. Discovered in Dunn County, Wisconsin. Introduced in 1957. Susceptible to Fire Blight.

Crimson Beauty Apple

Fameuse family. Red striped fruit. Juicy, white flesh. Nice tart flavor. Good for sauce and cooking. Productive, early bearing tree. Ripens very early, about 8-10 days ahead of Lodi. Hardy to -50 degrees F with occasional winter injury.

Crimson King Apple

English Cider apple which is also excellent for fresh eating. Bright crimson skin. Tart flavor. A light fruity cider is produced from the acidic, non-astringent juice. Triploid. Ripens November. First propagated by John Toucher of Bewley Down, Somerset, England, late in the 19th century.

Deacon Jones Apple

Possible seedling of Yellow Belleflower. Yellow skin with red. Yellow, firm, juicy flesh with mild flavor. Stores well. Late season ripening. Zones 3-6. Originated in PA around 1892.

Liberty Apple

Most disease resistant apple ever developed. Medium to large, bright, shiny, McIntosh type fruit with 90% red blush. Crisp, juicy, light yellow flesh. Sprightly flavor. Good for eating fresh, cooking, canning, or desserts. Stores until February. Flavor intensifies in storage. Hardy, spreading, vigorous, heavily spurred, productive tree; annual bearer. Sets heavy fruit loads, resulting in small fruit; requires thinning. Resistant to scab, fire blight, mildew and cedar-apple rust. No spraying needed. Ripens early October. Requires 800 hours of chilling. Hardy in Zones 4-8. Released from the New York Station in 1978.

Macoun Apple

McIntosh x Jersey Black. Size and shape like McIntosh; more striped with deeper red coloring. Dark purplish red blush over green background. Firm, aromatic, white flesh. High quality, all purpose, dessert apple. Good for local markets, not for shipping. Medium size, vigorous, hardy, spur type, productive tree. Upright habit; needs training to develop a spreading top. Must thin to maintain fruit size and annual bearing. Very resistant to fire blight. Blooms late. Ripens several weeks after McIntosh. Requires 600 hours of chilling. Hardy to zone 4. Developed at the Geneva Station. Introduced in 1923.

Maiden's Blush Apple **& drying**

One of the oldest American apples. Flat, perfectly round fruit. Thin, tough, smooth, waxy, yellow skin with crimson blush. Crisp, tender, white flesh with maybe a slight yellow tinge. Fine for cooking, eating fresh, drying or making cider. Vigorous grower; bears early and annually. Subject to scab. Long harvest period. Ripens from mid-August to mid-September depending on location. Hardy to -50 degrees F with occasional winter injury. Original tree traces back to New Jersey prior to 1817. Susceptible to Fire Blight.

Muscad de Bernay Apple

Bittersweet type hard cider apple from Normandy, France. Zone 5-9. Requires cross pollination, ripens midseason. Fair storage. From Normandy, France.

Northern Spy Apple

Large, round, often flattened greenish yellow fruit flushed and striped pinkish red with a delicate bloom and occasional russet patches. Fine grained, rather firm, very tender, crisp, juicy yellowish flesh. Tart, aromatic sub-acid flavor. Excellent all purpose apple, good keeper. Very large, vigorous, productive, upright tree; tends to bear biennially. Blooms late Requires pollination. Ripens late October. Zone 3-9. Seedling discovered about 1800 in East Bloomfield, New York.

Sops of Wine Apple

Old English cider and culinary apple. Medium to large fruit. Greenish yellow skin overspread with purplish red, mottled and splashed and sometimes striped with dark carmine. Soft, fine grained, juicy, yellowish flesh is often stained with pink or flecked with red. Aromatic, mild, subacid flavor. Highly regarded for cooking, cider and apple wine. Good dessert apple as well Fair storage ability. Medium to large tree bears early and reliably. Requires cross-pollination. Mid-season bloom. Ripens August -September depending on location. Introduced 1832. Hardy zones 5-9.

Starkey Apple

Thought to be a seedling of Ribston Pippin. Not to be confused with Stark. Large fruit striped and splashed with bright red over a yellow background. White flesh. Among the best for winter storage. Hardy, regular bearer. Ripens in early October. Reaches its best flavor near Christmas. Zones 4-5. Originated in Vassalboro, Maine on the farm of Moses Starkey around 1820.

Virginia Crabapple

AKA Hewes. Small fruit, 1.5". Dark green skin covered with dull, purple-red and many large white dots. Translucent, yellow flesh with strong, musky flavor. Produces a clear dry cider which is excellent on its own and used in cider blends. Productive tree is a good pollinator. Ripens September to October. Good keeper. Zones 3-7. Exact origin date is unknown. One hundred year old Hewes crab trees were discovered in Virginia in 1817.

Wickson Apple

Newtown(Albemarle Pippin) x Esopus Spitzenburg. Excellent cider apple. Small yellow and red fruit up to 2 in. diameter. Very sweet, up to 25% sugar, but a pronounced acid tang. Highly flavored juice. More crab than apple. Hardy to Zone 3. Albert Etter named this fruit after E.J. Wickson, distinguished California pomologist. Introduced in 1944.

Winthrop Greening Apple

Late summer-fall apple that was popular throughout central Maine as late as 1920; now all but unknown. Flat-oblate fruit measures 3-1/4 " across. Light green skin is washed with red-orange and small greenish dots and ribs of russetting, usually with a patch of russet radiating from the stem. Interesting sweet flavor. Crunchy flesh with medium-low acidity. Shy bearer. Hardy to Zone 4. Originated on the Ichabod Howe farm, Winthrop, Maine before 1800.

GRAFTED TART CHERRIES

Tart cherries are natural dwarves and can be planted on 10' centers. Sweet cherries will be quite large and should be planted on 15' to 20' centers.

Mesabi – Pie or Tart Cherry

Zone 4. Self fertile. Long stemmed, red fleshed fruits with sugar content half way between pie cherries and Bing. Pyramidal tree grows to 12'. Fruit resembles Meteor but pit is smaller. Blooms early May.

Meteor – Pie or Tart Cherry

Montmorency x Russian variety. Large, oblong, bright red fruit resembles Montmorency. Tart, juicy, meaty flesh, colorless juice and a small, free pit. Natural genetic dwarf grows 8' to 12' tall. Moderately spreading with large, heavy, dark green foliage that shields fruit from sun scald and birds. Leaf spot resistant. Spur-type. Self-fruitful. Bears quite early. Blooms and ripens a week later than Montmorency in late June. Hardy to -50 degrees F.

GRAFTED PEARS

Allow for at least 15'-20' diameter spacing for mature Pear trees. These pears are on either OHxF 333, or OHxF 87 rootstock -12' to 18' at maturity.

Clapp's Favorite Pear

Very large, elongated, long necked, lemon-yellow fruit with dull red cheek and russet specks. White flesh is high quality, fine grained, very sweet and highly flavored. Dessert and fresh eating pear that is also good for canning. Not a keeper. Should be picked when full size but still green; do not leave on the tree. Fruit will break down at the core if picked too late. Strong, sturdy, very hardy, vigorous tree. Susceptible to fire blight. Ripens early August. Annual bearer. Hardy to Zone 4.

The Long Term Benefits of Keyline Design

- Build resiliency into permanent landscapes
- Improve infiltration of precipitation
- Increase moisture retention
- Support habitat by increasing diversity
- Improve perimeters
- Break up hard pan and compaction
- Improve root zone and capillary activity
- Encourage soil building and reduce loss through wind and water erosion
- Reduce salinity problems
- Increase soil productivity by increasing soil biology. Biologically fertile soil has better structure and reduces runoff
- Stabilize soils and perimeters

Description of Tools Used

New Holland TM 175 Tractor and Yeomans plow with 5 26" shanks, coulters, crumble roller and 5 shank pot seeders for cover crops. A laser level will be used to locate keypoints and keylines.

Truax No Till Drill with 3 seed boxes to meter fluffy seed, large or heavy seed and tiny seed. 18 coulters incise the soil before the seed drops into 18 planter wheels. 18 packer wheels close the seeded openings making for good contact between seed and soil. The seed is effectively and efficiently metered with this tool which can also be used for interseeding to increase diversity in established grasslands.

Dixon Imprinter and V Ditcher also available.