

Preventative Maintenance

- by Randy McCool

At this time of year, the equipment shop at Carlton Plants must keep the harvest equipment repairs and maintenance a top priority. This is also the time of year when we must think about repair and maintenance of our field equipment which we use to prepare the fields for spring planting.

It is hard to think about planting when we are only mid-way through our harvest, but the maintenance department typically will service and prepare equipment two or three months in advance of the coming season.

Our preventative maintenance program starts by bringing every piece of equipment through the shop before it is sent to the field.

We can perform routine service and inspect the units in an attempt to catch and repair any problems before they become costly breakdowns. When a piece of equipment is serviced annually, we grease all of the regular fittings and repack the wheel bearings. We always use new wheel seals to keep out moisture and dirt. At this time, we also check the tires for proper air pressure and tire condition.

Next, we look at the hydraulic hoses and cylinders for obvious leaks and cracked or rubbing hoses. The unit is then checked for all safety equipment. Every piece of equipment must have a 'Slow Moving Vehicle' sign in good condition. Also, additional lighting and reflectors are installed if the size of the implement can cause any safety concerns when transported on a public road.

Lastly, we examine the ground engaging parts. This includes plow shares, disc blades, cultivator points and rototiller blades. These items wear out from the normal abrasions of the soil.

We evaluate these pieces to determine if they will last through an entire planting season. If they will not, then we change them prior to the start of the season. It seems that we are always racing against the weather and therefore, any down time we can avoid usually will offset the cost of replacing tillage parts before they are completely worn out.

When it is time to replace tillage parts, we 'hardface' the part whenever possible. This process builds up the point or tip with special welding rod which creates a much harder surface and extends the life of the part. Many plow shares and tiller blades can be ordered with this 'hardsurfacing' process already completed. These parts will cost more initially, but usually will extend the life of that part by 50 percent or more saving time and labor costs in the long run.

Before we are finished with an implement, we inspect the hitch. The lift arms, hitches and or drawbar pins are carrying all of the weight of the implement. These parts should be checked closely for cracks and wear. We replace any of these parts that are not up to our standards. A broken pin or hitch can cause serious damage to the implement and the tractor and is potentially dangerous to the operator. This area is even more critical when transporting equipment on busy public highways.

So, even if it is the middle of winter, it is a good time to prepare your equipment for spring. We will all be anxious for that time to come and life will be easier knowing our equipment will be ready and waiting.



Hardfaced subsoiler shanks & points



Used Hardface cultivator point

New Hardface cultivator point



Disc Inspection

Carlton Plants LLC Field Reps



WEST COAST STATES & B.C.
Joe Dixon, Hort. Sales & Serv. LLC
13780 NW Berry Creek Road
McMinnville OR 97128
Ph: 800-442-1459
Fx: 800-442-1460



INTERMOUNTAIN/ROCKIES
Steve Carlson
5621 Mt. Audubon Place
Longmont CO 80503
Ph: 800-442-1458
Fx: 800-442-1462



NORTHERN MIDWEST
Gary Bills
6600 26th Street
Sioux Falls, SD 57110-3927
Ph: 800-442-1457
Fx: 888-909-1312



SOUTHERN MIDWEST
Tim Wommack
7038 Maryland Avenue
St Louis, MO 63130
Ph: 800-489-8733
Fx: 314-721-0899



EASTERN MIDWEST
Marion Hageman, Hort. Sales LLC
1952 Barnhart Rd.
Troy OH 45373
Ph: 800-442-1455
Fx: 800-442-1456



COASTAL NORTHEAST
Ed Gregan
10 King Arthur Drive #123
Niantic CT 06357
Ph: 866-991-8307
Fx: 866-991-8308



NORTHEAST
Will Steller
25 Emmons Rd.
Hoosick Falls NY 12090
Ph: 800-865-6484
Fx: 800-865-6489



SOUTHEASTERN
Dennis Niemeyer
195 Macedonia Lake Rd.
Saluda, NC 28773
Ph: 800-525-3597
Fx: 800-525-3598

2008 Winter Nursery Trade Shows



Mid States Hort Expo
Western
Great Lakes Expo
Minnesota Green
MANTS
Indiana Green Expo
Mid Am
Idaho Hort Expo
Green & Growin'
C.E.N.T.S.
Pro Green Expo
Iowa
Nor Cal
Great Plains Expo
New England Grows

January 3-4
January 6-8
January 7-9
January 9-11
January 9-11
January 14-15
January 16-18
January 17-18
January 17-19
January 21-23
January 23-25
January 25
January 31
February 3-4
February 6-8

Booth 735
Booth 913
Booth 617
Booth 1032
Booth 809
Booth 617
Booth 934
Booth 302
Booth 1415
Booth 2058
Booth 752
Booth 5
Booth 404
N/A
Booth 1706

14301 SE Wallace Rd
PO Box 398, Dayton, Oregon 97114-0398
Phone (503) 868-7971 • (800) 398-8733
FAX (800) 442-1452



Plantline



January 2008

A Newsletter from Carlton Plants LLC



Acer campestre



Contorted Filbert



Acer griseum



Sterling Linden



Purple Catalpa

Making A Statement With Foliage

-by Joe Dixon

One of the wonderful aspects of the nursery stock business is our participation in providing exterior spaces with a wide array of beautiful and different shade and flowering trees.

An attribute that deserves consideration for adding interest to the landscape is unusual foliage provided by many available tree varieties. Beyond the leaves or leaflets that are found on the common varieties of ash, cherries, crabs, maples and lindens, there are many more choices that make our favorites list at Carlton Plants.

- In the maple family, Acer griseum provides a lovely trifoliate compound leaf with strongly lobed margins, while Acer campestre has a tri-lobed leaf with almost a live oak leaf appearance. These are both maples of a smaller size compared to many of our rubrums and platanoides and provide a more refined appearance in the landscape.
- The buckeyes and horse chestnuts of the Aesculus genus are exquisite due to the large five-leaflet compound leaf that spreads out like the fingers of an open hand.
- Catalpas with their huge 12 inch rounded leaves, when chosen for their purple or gold colored varieties, are particularly striking.
- The crinkly rounded foliage of the contorted filbert certainly adds character to the twisted branch appearance of this collector's tree.
- Ginkgos in all of their ancient glory have

Quality is never an accident, it is always the result of intelligent effort.
- John Ruskin



2

Making A Statement With Foliage continued

3

Plants Need Rest Too

4

Layering, Almost A Lost Art

5

Preventative Maintenance

6

Carlton Field Representatives

2008 Winter Trade Shows

continued pg. 2

A Notice Regarding Customer Pick-up

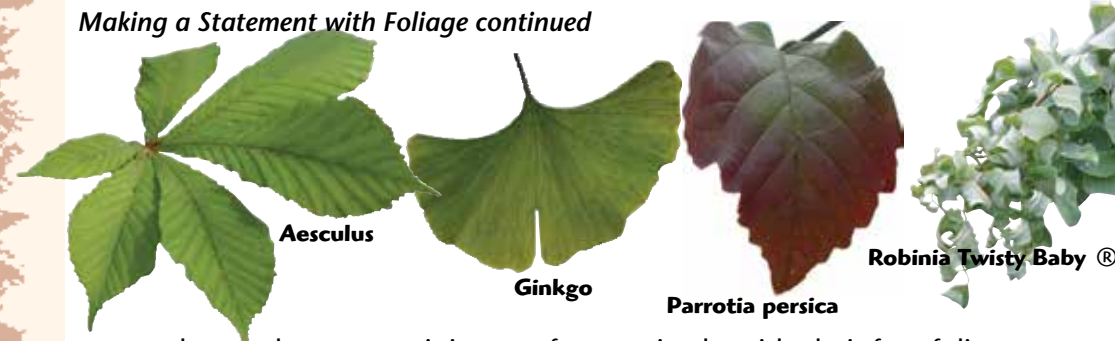
During shipping season we are busy preparing and staging orders that have set departure dates via semi-trucks. By giving us a week's advance notice, we can have your order ready when you come in to pick it up.

It is essential that your vehicle has adequate room for and is protective of your materials. Please contact us for an estimate of your load's size. Although we pack the plants' roots with straw and/or shingle tow and water the load generously, we recommend tarps or a covering for open loads as exposed plants dry out quickly.

Our shipping dock hours are 7:30 AM – noon and 12:30 PM – 4:00 PM Monday through Friday.



Making a Statement with Foliage continued



leaves that are reminiscent of super sized maidenhair fern foliage.

- Gleditsias with their multi compounded leaf and open branching allows filtered light to come through like no other.
- 'Royal Raindrops®' and 'Golden Raindrops®' flowering crabs have purplish and green foliage (respectively) and have a distinctive scalloped margin unlike any other crab.
- Parrotia persica has beautiful veined undulating foliage which is exceptional.
- Rhamnus asplenifolia adds a soft texture to the landscape with its thread leaf foliage.
- Robinia Frisia in its gold leaf glory can catch sunlight and luminescence beyond compare.
- Robinia 'Twisty Baby®' is truly unique not only for its twisted branches but also for its feathery soft twisting and undulating compound foliage.
- Salix repens 'Nitida' provide a pussy willow alternative with soft, velvety, bluish silver leaves that are complementary to its catkins.
- 'Sterling' Linden gives to us a striking dark green foliage on top with a polished silver color on the bottom providing a silver green look that dazzles the eye.

These are just a few of many varieties that our industry can use to creatively jazz up our landscapes.



PLANTS NEED REST TOO

- by Travis L. Orback

We have chosen to grow and care for trees and shrubs anywhere from one to a few seasons. That's why an understanding of plant physiology is essential in maintaining healthy, saleable trees and shrubs. If all goes well, we'll send a healthy plant out into the landscape or to another grower or retailer. Some problems that may occur before and during dormancy (a period of rest characterized by temporary growth cessation and suppressed metabolism) can be attributed to overfertilization, dehydration and late pruning. Hormone balances within each plant push or stop growth and are determined by day length and temperature. Cooler temperatures and shorter days increase the balance of inhibitor hormones which induce dormancy and stall shoot development from buds (and seeds).

Fertilization of trees and shrubs should only be done during the first half *your the growing season*. If fertilizer is applied later in the year, the plants may continue to grow and not harden off for winter. In addition, most plants benefit from ample water throughout the growing season and occasionally during dry autumns and winters to avoid dehydration. Furthermore, heavy pruning on some plants during the second half of your growing season can stimulate bud growth that doesn't harden off and/or wounds that do not heal and become infected. It is also important to note that not all plants become dormant at the same time.

A few other points to consider in helping your trees and shrubs survive the winter:

- wrapping the trunks of trees exposed to direct winter sun can prevent sunscald
- eliminating or controlling rodent damage contributes to survival

- dormant spraying to control disease in fruiting and flowering varieties
- dormant pruning benefits some plants (watch your varieties)

Spoiling our trees and shrubs during their growth will encourage proper dormancy as long as we know when to stop the treatment. Their emergence in the spring gives us hope for another sales year and the faith to continue for many more.



Modifications for Unexpected Hazards

- by Ed Galinat

Those of you who have visited Carlton Plants have seen "big guns" (large hose reel irrigators) being used in our fields. These guns are commonly used in agriculture and have reduced the number of people needed to do irrigation tasks. They also have significantly reduced the risk of injury (lifting and pulling of landlines) while making irrigation a more efficient task.

To adjust the irrigation nozzle an individual must literally climb the cart. Our crews have done this for many years without an incident or injury. This past summer, as an employee was stepping onto a cart to adjust the nozzle, he slipped, pinching a finger between the leveling arms of the nozzle cart. The finger was almost amputated. As a result, an unidentified hazard became obvious. Our irrigation supervisor, two irrigators, the operations manager and the shop maintenance manager took a hard look at what happened and designed a solution.

The pictures with this article show a cart, as originally built, and the modifications that have been made. The modifications include:

- ✓ A fold down step on the back of the cart to reduce the height of the hop needed to get on the cart.
- ✓ A handhold to give a secure grip for the person getting on the cart.
- ✓ An expanded metal platform for the person to stand on while nozzle adjustments are being made.



Close up of guard, block and chain

- ✓ A guard to keep hands from accidentally getting into the pinch point of the nozzle leveling arms. Inside the guard a chain was added to reduce the back swing of the leveling arm and an adjustable block was added to the frame of the cart to limit front swing.
- ✓ Finally, three steps were added to the front side of the cart so adjustments can now safely be made from either side of the cart. By making the cart accessible from either side, the person making the adjustments stays out of the water.

It is our hope that this article will give you ideas of how to prevent injuries on this type of equipment.

Layering - Almost a Lost Art

- by Mike Anderson



Layering is a propagation process that is steeped in history, being a mainstay propagation tool for centuries employing highly refined techniques. Since the advent of IBA, a relatively recent occurrence in the annals of propagation and the even more recent arrival of tissue culture, layering has fallen into the background and is primarily found employed with Malus understock and (some) small fruit production. The finer points of layering and the specialized techniques are in danger of being lost.

Reviewing propagation and nursery stock production textbooks from the pre-IBA epoch, one discovers layering was a common propagation method for genera that included Acer, Magnolia, Cotinus, Syringa, Hydrangea, and many others. Donald Wyman, published in Arnoldia (available online) relates over 200 species that were successfully being layered in Holland in 1953. In some European nurseries simple layering is still routinely used for Tilia and Platanus propagation. Two very useful reference books include Wilfrid G. Sheat's, *Propagation of Trees Shrubs and Conifers* (1948) and *The Nursery Book* by Liberty Hyde Bailey, first published in 1891 and revised in 1915 (downloadable from Google books). These are absorbing sources of propagation history while also providing relevant information that may still be of great value.

While IBA assisted softwood and hardwood propagation has moved layering into the background for many species, there are still a great number that we as propagators struggle with. Tissue culture has served as a valuable additional tool for some difficult items, but sometimes at great expense. A thoughtful examination of the economics of layering as well as research into augmenting success using IBA applications and girdling techniques may serve to rekindle interest in layering. A good place to start is by relearning what our propagation ancestors documented long ago.



Before



After