

*CropHealth Advising & Research  
Rural P.O. Box 28098, Kelowna, B.C.  
Office 250- 717-1898 www.crophealth.com*

To:

Date:

Tuesday October 8, 2013

*3 pages from Mario Lanthier*

### **WORKSHOP ON TREE PRUNING WITH ED GILMAN**

Pruning of trees  
with Dr. Ed Gilman



**Do not miss this unique event  
with the leading researcher  
on pruning of trees !**

Thursday October 3 in Kelowna  
From 8:30 am to 4:00 pm  
Rotary Centre for the Arts, Cawston Avenue

This workshop was organized by our company and held October 3 in Kelowna.

Dr. Ed Gilman is based at the University of Florida (<http://hort.ifas.ufl.edu/people/gillman.shtml>).

He is known world-wide for his research on pruning. He is the author of the book "An Illustrated Guide to Pruning", now in its 3<sup>rd</sup> edition.

Persons attending were 50% city employees, the other 50% being equal numbers of landscape maintenance companies, nursery growers and consultants.

### **ROOT MANAGEMENT AT PLANTING**

Root structure is the current area of research for Dr. Gilman. Girdling roots are a well known problem (roots that circle around the trunk, eventually killing the tree).

Another important defect is ascending roots: roots that grow upwards to the surface, then grow sideways and may become girdling roots.

Ascending roots may be caused by deep planting. Roots must grow towards the soil surface to access air and continue growing. These trees are weaker.

Ascending roots may also be caused by improper practices during propagation at the nursery. Trees grown in narrow plastic containers are more likely to have a faulty root system. The faulty roots should be cut away before replanting.

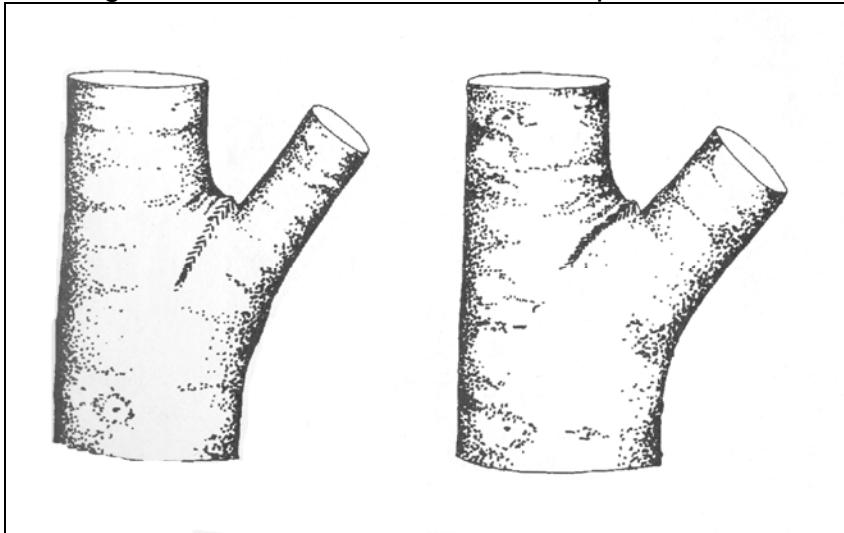
## **PRUNING: THE ASPECT RATIO**

Branches smaller than the trunk are better anchored into the tree, whereas large branches are weakly attached and prone to failure during storms.

According to Dr. Gilman, this is the most important feature in pruning of trees: reduce the length of a large size branch, or remove the branch altogether.

Branch diameter should be 50% or less than trunk diameter at the point of attachment (ideal is 33% or less). However, there is specific cut-off and the relation is linear: the larger the branch diameter compared to trunk diameter, the most likely to fail.

As a branch grows into the trunk, its wood is enveloped by trunk wood. The smaller the branch size, the shorter the distance for trunk wood to envelop the branch. The larger the branch, the wider to envelop the wood, creating a weaker attachment.



Above: Examples of branch sizes to illustrate the aspect ratio.

Tree to left: side branch is good size compared to the trunk. Pruning is not required.

Tree to right: side branch is large. Pruning must be done (reduce or remove branch).



Tree to left has a large side branch. Note the crack developing at the junction to the trunk, caused by a weak attachment.

Tree to right failed during a storm. The failure was at the point of attachment of a large side branch.

## PICTURES FROM THE EVENT



Above: Dr. Ed Gilman pruning a mid-size street tree.  
Pruning cuts should be made on large size branches to reduce their rate of growth.  
Other branches do not require pruning except for final visual appearance.



Above: Example of pruning for the aspect ratio.  
Left: Tree before pruning. Note the large size branch to the right.  
Right: After pruning. Foliage was removed from the large branch to slow its growth.