



INTRODUCTION TO PRUNING

M. L. Robinson, Specialist/Associate Professor
Angela O'Callaghan, Ph.D., Specialist, Associate Professor
Jeff Anderson, Extension Agriculture Agent, New Mexico State University

Pruning is an important part of landscape maintenance. Although pruning may be straightforward and quite simple, poor or incorrect pruning will often lead to serious problems, including premature death of the plant.

REASONS FOR PRUNING



Figure 1. Ground covers should naturally grow to the desired height, not be pruned to it.

To Remove:

- Hazards from trees and shrubs
- Dead wood
- Unwanted sprouts
- Weak, rubbing, crossed or broken branches

To Provide:

- Clearance for vehicles, pedestrians and utility lines

To Promote:

- New growth and better health
- Good branch structure

To Improve:

- Landscape aesthetics
- The canopy by opening it up to stimulate growth and improve flowering/fruit production
- A view/visibility

GOOD PRUNING BEGINS WITH CORRECT PLANT SELECTION, IRRIGATION AND FERTILIZATION

Good horticultural maintenance begins long before the clippers or saws are pulled out for use.

1. Select a nursery plant with good root and branch structure.
2. When choosing a landscape plant, consider its height and breadth at maturity.
 - a. If ground cover less than a foot tall is desired, do not select a variety whose mature height is 3 feet, as frequent pruning will be required. Rather, choose one that is 1 foot tall or less at maturity (Figure 1).

- b. The same holds true for shrubs. Choose and plant those that will reach the desired height at maturity, and less pruning will be needed over the life of the plant (Figures 2 and 3).



Figure 2. This Texas ranger (*Leucophyllum* spp.) is too large for the space.



Figure 3. These *Cordia parvifolia* are easily controlled by selective pruning during the growing season. Once every one to two years they should be pruned to the ground in late winter or early spring.

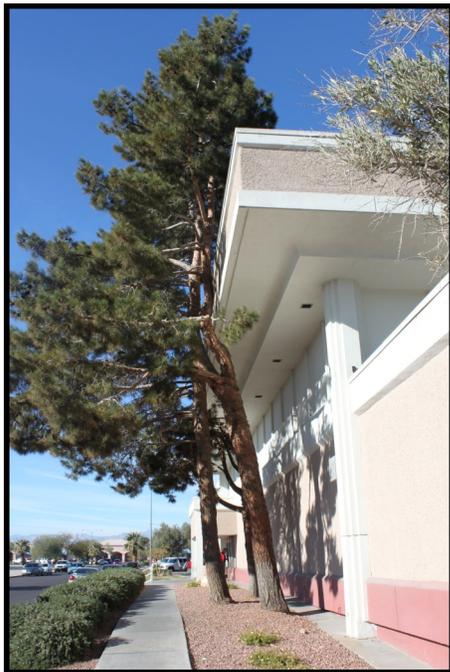


Figure 4. These pines never should have been planted so close to this building. They are too tall and wide for this space.



Figure 5. This chaste tree (*Vitex agnus-castus*) is the correct size for this small yard. If a small tree is needed, plant a large-growing shrub.

- c. If a small tree is needed, consider planting a large-growing shrub whose mature height is no more than 10 to 20 feet (Figures 4 and 5).

- d. Install plants far enough from buildings, sidewalks, driveways and parking areas, so when they are mature, there will be adequate space between them and the accesses or structures. This can prevent damage from plants while reducing the need for pruning (Figure 6).



Figure 6. Planting beds in parking lots should have enough space for tree and shrub roots to establish.

- e. Tree roots extend beyond the leaf canopy. Planting too close to a building and sidewalk can cause damage, be a safety hazard or interfere with plant growth (Figure 7).



Figure 7. Here is a large *Eucalyptus* root lifting the sidewalk. When sidewalks are lifted like this, they are a hazard to pedestrians.

- 3. Water and fertilize only as needed to maintain good health and appearance.

- a. Too much water and fertilizer will cause rapid growth that requires constant pruning and produces large amounts of yard waste.
- b. Overfertilized plants can become excessively succulent leaving them more vulnerable to pests. Many southwest natives require minimum water and little, if any, fertilizer (Figure 8).



Figure 8. Native and well-adapted plants can give a natural look with less water, fertilizer and pruning.

4. Select the right plant for the climate.
 - a. A plant that looks good in the spring might become burned in desert sunlight by July.
 - b. The leaves and blossoms of a flowering shrub may burn or dry up if the plant is not adapted to local conditions (Figures 9 and 10).



Figure 9. This *Pittosporum* was planted in the shade to protect it from intensive sunlight and afternoon temperatures.



Figure 10. Reminder: Pruning stimulates new growth that will easily burn in the summer, as with this *Euonymus*.

If these concepts are kept in mind, pruning will only be necessary once a year or less, with only an occasional “clean-up.” After correct pruning, it should be difficult for an observer to tell whether the plant has been pruned.

TYPES OF PRUNING

Restoration (shrubs) is necessary when a shrub has been incorrectly pruned to the point where there is more dead wood than leaf area. Pruning to the ground is necessary only when the plant needs total restoration, or when a plant has outgrown its site. Usually, this type of pruning should be done in late winter or early spring, when the shrub is not actively growing. Never prune in the heat of summer; the new growth will burn and the plant may die. Although this *Leucophyllum* (Figure 11) can grow too large for its planting space, it can be cut to the ground every two years.



Figure 11. Here a large amount of foliage has been removed. This properly pruned *Leucophyllum* looks natural, although a larger amount of foliage has been removed.



Figure 12a. This very tall *Nerium* oleander hedge was pruned to the



Figure 12b. By June it had resprouted.

Figure 12c. By September it was blooming and covering the wall again.



Crown cleaning (trees) – This removes suckers (Figure 13); dead, broken or crossing limbs (Figure 14); diseased branches (Figure 15); and insect damage (Figure 16).



Figure 13. Suckering (“water sprouts”)



Figure 14. Crossing limbs



Figure 16. Insect damage



Figure 15. Disease such as fire blight

Crown thinning (trees) – This removes unwanted limbs or branches in order to increase the amount of light and/or air that reaches the center of the crown.

Crown raising (trees) – This removes lower branches in order to clear space for pedestrians or vehicular traffic (Figures 16 and 17). It is best to wait until the tree trunk has reached a suitable girth, since lower branches from the main trunk help it develop caliper.



Figure 16. These tree branches are too low for traffic.



Figure 17. Here the branches have been raised.



Figure 18. This Palo Verde will never reach its full potential, because it has been constantly topped.

BAD PRUNING

Topping (trees) – This is sometimes done to reduce the size of a tree, or to control its growth. Topping is the removal of all large branches from the top of a tree. The branches are cut at the same level, leaving stubs. When trees are cut this way, small weak branches (suckers) tend to grow vigorously at the tips of branches, leaving the tree more likely to be damaged in high winds. A weak tree is more vulnerable to disease and insect damage (Figures 18, 19 and 20).



Figure 19. This topped pine will never put on new growth from the bare branches. The best that can happen is any green that is left will cover the dead area.

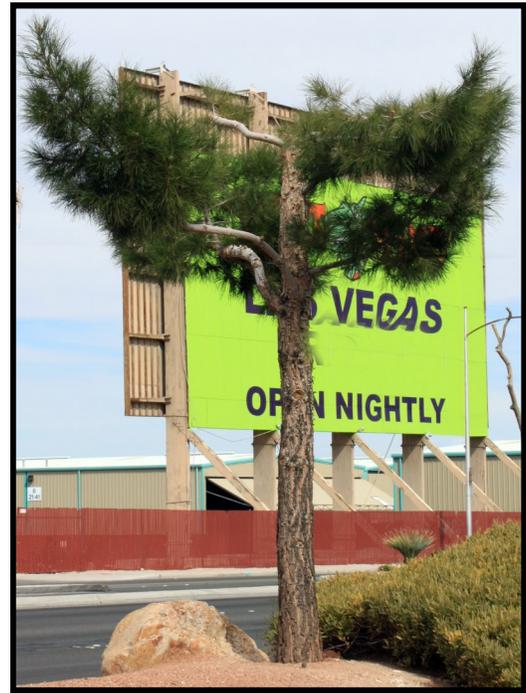


Figure 20. Trees are topped to increase visibility of businesses and signs.

Shaping into balls and squares (shrubs) – This is the practice of carving entire shrubs into spheres or cubes to maintain a small shape (Figure 21). It ignores the graceful lines of most shrubs, which tend to be round. Like topping, this causes a flush of growth at the tips of branches. While flowers appear at these tips, the rest of the branch will have few if any leaves or flowers (Figure 22a), making most of the shrub look dead. These plants tend to be more vulnerable to decay. Also, all the weight is at the end of the branches. This extra weight makes the branches more likely to snap off during wind storms (Figure 22b).



Figure 21. This native brittle bush has been pruned into a ball shape, removing most of the flower buds.

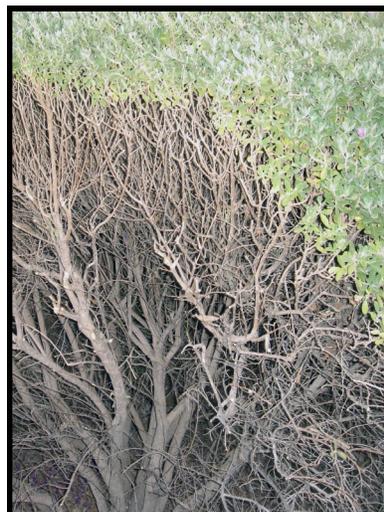


Figure 22a. Although this seems like a beautiful shrub, the interior is dead.

Figure 22b. When the outside few inches of green are removed, there is only a dead interior.

CONCLUSION

When creating a landscape, select trees and shrubs that fit the site when planted and for years to come. This limits the amount of pruning that will ultimately be necessary. Avoid overwatering or over-fertilizing. When pruning is unavoidable, use techniques that will maintain plant health.



Figure 23a. This pine had 90 percent of its green foliage removed.



Figure 23b. After two years, the tree still has not grown back and may never do so.

REFERENCES

<http://www.treesaregood.com/treecare/resources/WhyToppingHurts.pdf>
<http://aggie-horticulture.tamu.edu/earthkind/landscape/proper-pruning-techniques/>

Shigo, Alex. Modern Arboriculture. 1991. Sherwin, Dodge Printers. Littleton, NH
Skelly, J. and A. O'Callaghan. 2001. Fire Blight. University of Nevada (UNCE) FS 01-56

DISCLAIMER

Copyright © 2013, University of Nevada Cooperative Extension. All rights reserved. No part of this publication may be reproduced, modified, published, transmitted, used, displayed, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopy, recording or otherwise without the prior written permission of the publisher and authoring agency.

All materials used are what is believed to be of public domain or are used with permission from the respective authors. Every effort is made to identify the original author and attribute appropriately. When this is not possible, "Author Unknown" is noted or no author is shown.

If something is misquoted or attributed to the wrong author, or if an author or interested party of any of the written work wishes for it to be attributed appropriately or removed, please notify the authors, and it will be taken care of promptly.

All graphics and photos are created by the authors unless otherwise attributed. The graphics and photos are not available for use elsewhere due to licensing agreements without permission.

The University of Nevada, Reno is an equal opportunity/affirmative action employer and does not discriminate on the basis of race, color, religion, sex, age, creed, national origin, veteran status, physical or mental disability, or sexual orientation. The University of Nevada employs only United States Citizens and aliens lawfully authorized to work in the United States.