

a Cortez
guide to
selection
planting
care



TREES and shrubs

Provided by
The Cortez Tree Commission
and
Cortez Parks and Recreation

210 East Main St.
Cortez, Colorado
81321

(303) 565-3402

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FORWARD

BEAUTY is before me.
BEAUTY is behind me.
BEAUTY is above me.
BEAUTY is all around me.

So goes a common chant of the Navajo Indians. This cannot be fully appreciated until you understand that BEAUTY to them also means NATURE, God and Life and Death and the universe. When one sees God in everything it automatically makes us **Conservationists** and anxious to preserve the natural BEAUTY and create BEAUTY where there is none.

When we try to create BEAUTY with trees and flowers it is important for us to learn that "**Rocky Mountain Horticulture**" is different and how to control these differences.

Let us all look for BEAUTY wherever we can find it.

MAY
1987

GEORGE W. KELLY
horticulturist

INTRODUCTION

The purpose of this booklet is to bring to residents of Cortez, new and old, information which will help in the planting and care of their home landscaping. The joys of easy care planting will bring pleasure for today and leave a legacy treasured for many years. We will confine the contents of this booklet to the selection, care, and maintenance of trees and shrubs for the Cortez area.

The goal set for the booklet is simple: to improve and preserve existing trees where practical, to promote a knowledge of tree care and selection, and to enjoy southwest gardening.

This publication is not intended to provide complete information, but only to mention main topics. Further information may be obtained through:

Cortez Parks and Recreation Dept..... 565-3402

Colorado State Forest Service..... 247-5250

Colorado State University Extension Office:

They provide a service, CSU Extension teletips with a toll free number. Hundreds of recorded informative tapes on 45 major subjects are available. This list will be sent to you.

Ask your Extension Agent..... 565-3123

George Kelly Publications - found in local stores

SPECIES HARDY TO CORTEZ

| <i>SHRUBS</i> | <i>DESCRIPTION</i> |
|--|---|
| BARBERRY | Many forms, has flowers & fruit. |
| COTTONEASTER | Many forms and sizes, has red berries. |
| DOGWOOD | Has red twigs, some easily propagated. |
| FORSYTHIA | Early yellow flowers, loose irregular growth. |
| POTENTILLA | Yellow flowers, hot/dry or moist/shade. |
| ROSE, SHRUB | Many forms, flowers red, pink, white, & yellow. |
| SPIREA | Medium to low shrub, small flowers, fruit. |
| SUMAC | Good fall colors, smooth stems, many forms. |
| YUCCA | Distinctive evergreen, narrow sharp needles for leaves, many forms. |
| <p>FOR MORE INFORMATION, CONTACT CORTEZ PARKS AND RECREATION (303) 565-3402</p> | |

SPECIES HARDY TO CORTEZ

| EVERGREEN TREES | DESCRIPTION |
|---|--|
| AUSTRIAN PINE (<i>Pinus nigra</i>) | Good density. Long rich green needles. Needs ample room. Grows well in clay soils. |
| BRISTLECONE PINE (<i>Pinus aristata</i>) | Attractive, dark color. Can prune new shoots for denser branching. |
| PINYON PINE (<i>Pinus cembroides edulis</i>) | Slow growing, short needled, dense growing native. |
| PONDEROSA PINE (<i>Pinus ponderosa</i>) | Large, informal natural shape. Needs ample room. |
| COLORADO BLUE SPRUCE (<i>Picea pungens</i>) | Native, new needles intense blue. Needs ample room. |
| SCOTCH PINE (<i>Pinus sylvestris</i>) | Hardy tree with open layered effect. |
| ENGLEMAN SPRUCE (<i>Picea englemann</i>) | Resembles Colorado Spruce with less blue color and densely pyramidal. |
| ALBERTA SPRUCE (<i>Picea albertiana</i>) | Shelter from drying winds and strong reflected sunlight. |
| DOUGLAS FIR (<i>Pseudotsuga menziesii glauca</i>) | Dense dark, green needles. Ends of branches swing up. |
| JUNIPER (<i>Juniperus scopulorum</i>) | Neat compact, narrow gray-blue pyramid.. |
| EVERGREEN SHRUBS | |
| JUNIPER | Various spreading varieties. |
| EUONYMOUS (<i>Euonymus Japonica grandiflora</i>) | Used in protected area. Impact, upright dark green shrub, takes shearing well. |
| MAHONIA (<i>Aquafolium</i>) | Dry glossy green holly like foliage, grape like berries. |
| MUGHO PINE (<i>pinus Imugo mugo</i>) | Dwarf varieties most suitable. |














For more information, contact
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(303) 565-3402

| Mature Size | | | | Growth Rate Per Year | | Drought Tolerance | | | Form | | | | |
|---|---|---|---|--|---|--|---|---|---|---|---|---|---|
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| | | 3 | 4 | 1 | | 1 | 2 | 3 | | | | | 4 |
| | 2 | 3 | | | 2 | 1 | 2 | 3 | | | | | 4 |
| | | 3 | 4 | 1 | | 1 | 2 | 3 | | | | 3 | 4 |
| | | 3 | | 1 | | 1 | | | | | 2 | 3 | 4 |
| EVERGREEN SHRUBS | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 1 | | 1 | | | 1 | 2 | 3 | 4 | |
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| 1 | | | | | 2 | | 2 | | 1 | | | | |
| 1. Under 6 ft. 2. 6-15 ft. 3. 15-30 ft. 4. Over 30 ft. | | | | 1. More than 1 ft. yr. 2. Less than 1 ft. yr. | | 1. Drought tolerant 2. Regular watering 3. Water loving. | | | 1. Low, spreading, or creeping. 2. Irregularly pointed or rounded. 3. Rounded to oval. 4. Irregular to definitely pyramidal. | | | | |

SPECIES HARDY TO CORTEZ

| DECIDUOUS TREES | DESCRIPTION |
|---|--|
| GREEN ASH (<i>Fraxinus pennsylvanica</i>) Marshall's Seedless | Good shade, dark green leaves, yellow fall color. |
| HONEY LOCUST (<i>Gleditsia triacanthos inermis</i>) Moraine, Skyline | Good light shade, permitting grass to thrive. Strong and drought tolerant. |
| HACKBERRY (<i>Celtis occidentalis</i>) | Very durable, sturdy, drought tolerant. Good shade. |
| RUSSIAN OLIVE (<i>Elaeagnus angustifolia</i>) | Picturesque, informal growth. Silvery leaves. |
| WESTERN CATALPA (<i>Catalpa speciosa</i>) | Attractive leaves, flowers, and seed pods. Wrap trunk when young. |
| AMERICAN LINDEN (<i>Tilia americana</i>) | Neat, seldom needs pruning, formal. |
| SYCAMORE (<i>Platanus species</i>) | Large lobed leaves, peeling bark. |
| NORWAY MAPLE (<i>Acer platanoides</i>) | Beautiful in all seasons. Heavy shade. |
| CUTLEAF WEEPING BIRCH (<i>Betula pendula laciniata</i>) | White bark, cut leaves, and weeping branches. |
| OHIO BUCKEYE (<i>Aesculus glabra</i>) | Beautiful symmetrical shape. Large flowers in spring. |
| KENTUCKY COFFEE TREE (<i>Gymnocladus dioica</i>) | Nice shape, hardy, and pest free. Should be planted more. |
| LITTLE LEAF LINDEN (<i>Tilia cordata</i>) | Good street tree, compact. Fragrant flowers. |
| ASPEN (<i>Populus tremuloides</i>) | White bark, beautiful fall color. Shallow rooted. |
| WESTERN COTTONWOOD (<i>Populus sargentii</i>) | Massive. Not for city lots or streets. |
| FLOWERING CRAB (<i>Malus species</i>) | Dependable flowering tree. Ornamental, many forms. |
| HAWTHORNE (<i>Crataegus species</i>) | Attractive flowers and fruit. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | 2 | | | 1 | | 1 | 2 | | 1 | | | |
| | | 3 | | 1 | | | 2 | | | 2 | 3 | |
| | | 3 | | 1 | | | 2 | 3 | | | 3 | |
| | | 3 | | 1 | 2 | | 2 | | 1 | 2 | | |
| | | 3 | | | 2 | | 2 | 3 | 1 | 2 | | |
| 1 | | 3 | | 1 | | | | 3 | | 2 | | 4 |
| | 2 | | | | 2 | | 2 | 3 | | 2 | 3 | |
| | | 3 | | | 2 | 1 | 2 | | | 2 | | |
| | 2 | | | 1 | | | 2 | | | 2 | 3 | |
| | | 2 | | 1 | | | 2 | | | 2 | | |
| | | | 4 | 1 | | | | 3 | 1 | 2 | | |
| 1 | 2 | | | 1 | | | 2 | | 1 | 2 | 3 | 4 |
| 1 | 2 | | | | 2 | 1 | 2 | | 1 | | | |

1. Under 20 ft.
2. 20 to 30 ft.
3. 30 to 60 ft.
4. Over 60 ft.

1. More than 1 ft.
2. Less than 1 ft.

1. Drought tolerant
2. Regular watering
3. Water loving

1. Rounded
2. Oval
3. Pyramidal
4. Weeping

THE RIGHT TREE FOR THE RIGHT PLACE

"What is right?" may sound like an exam question from a class in moral philosophy, but in the green world it is not quite as complex. A tree's requirements to thrive, its form or shape, its size at maturity, and its role or function in your landscape help determine the best tree to plant. Beyond that, it's largely a matter of personal opinion.

1. THE TREE'S PURPOSE:

A tree's function is the purpose you want it to serve for you. Some of the most common are listed here to help make sure you get the right tree for the right place.

Shade - Plant for where you want the shadow during the hottest time of the year and the time of day you desire the shade. High, wide crowned trees with deciduous leaves are the best providers of shade.

Aesthetics - Several principles to remember are to never locate a tree where it will split your lot into equal halves. Another is to use your trees to enhance the house and lot. To give the lot an appearance of greater depth, plant on a diagonal line outward from the front corners of the house. This is framing. Trees planted behind the house and to the side will provide accent. Trees can also be used to separate spaces and provide space enclosure.

Accents - A tree with color or some other showy feature can be used as an accent point in your landscaping picture. Don't overdo accents. One accent plant in a given setting or "view area" is usually enough. For visual accent, select a tree that contrasts with the characteristic landscape in one or more of the design elements - form, size, color or texture. The more contrasts, the stronger will be the accent.

Windbreaks and Screens - Low branching conifers that hold their foliage are most effective for screening and providing privacy. Noise is best reduced by tall, densely planted trees with fleshy, broad leaves. Windbreaks can be made most effective through a dense, step-like arrangement of both conifers and deciduous trees. Deciduous trees are best at allowing incoming solar radiation in winter.

2. SIZE AND LOCATION:

Available space is probably the most often overlooked or when deciding what tree to plant. It is often difficult to envision the planting site in 5, 10, or 20 years in the future. Yet this is essential. Before planting know what the tree will look like as it nears maturity. Consider its height, crown spread and root space.

3. CROWN FORM OR SHAPE:

The character of tree crowns and thus the form or shape of trees varies among species as much as leaf shapes or bark patterns. Its shape is another clue to how well it will fit the space you have available and how well it will help meet the goals you have for it.

SO, YOU NEED AN ARBORIST...

Twelve Tips for Selecting an Arborist:

1. Check the phone directory. Although anyone can list themselves in the yellow pages, a listing at least indicates some degree of permanence.
2. Beware of door-knockers
3. Never let yourself be rushed by bargains and never pay in advance.
4. Ask for certificates of insurance, including proof of liability for personal and property damage (such as your house and your neighbors'), and workman's compensation.
5. Ask for references. If possible, take a look at some and talk with the former client.
6. Determine if the arborist is a member of any state or national organizations for arborists.
7. Cortez does not require certification, but Durango does. Certification does indicate at least a working knowledge of arboricultural practices.
8. Have more than one arborist look at your job and give you estimates.
9. A good arborist will offer a wide range of services.
10. A good arborist will recommend topping a tree only under rare circumstances.
11. A conscientious arborist will not use climbing spikes if the tree is to remain in the landscape.
12. Beware of an arborist who is eager to remove a living tree. Removal clearly should be a last resort.

Price: Tree care costs money. Remember that pruning is an art. The arborist's skill and professionalism may be more important than low bid. Don't be shy about asking questions such as, "How do you make your pruning cuts?"

Two good ways to save on the cost of tree care are:

1. Schedule your work well in advance and especially during the arborist's slow time. You may be able to arrange a savings on price.
2. If you can, try to get several neighbors together who need work done and you may be able to interest an arborist in a group discount.

The Agreement:

To prevent misunderstandings and be assured of having your work performed to the standards you expect, a contract is the key. Most arborists have their own form and the conditions included vary widely. Read the document carefully. If you have questions, a local forester or your attorney may be able to add clarification and valuable insights. Items that a contract should include are:

1. The dates that work will begin and end.
2. Exactly what work will be done. It should be as specific as possible.
3. Specify what cleanup work will be done and when; who gets any firewood, and if it is you, will it be cut into 16" lengths and stacked by the garage?
4. Clarify if removal of a tree includes grinding out the stump and surface roots to one foot below grade, filling with topsoil and planting grass.
5. The total dollar amount you will be charged.
6. Work is usually priced one of two ways: (a) as a single price for the job, or (b) on an hourly basis, plus materials. When using the latter; be sure to include the wording, "...but not to exceed...".

TREE CARE CONSIDERATIONS

Soil and Watering:

Soil types most commonly found around Cortez are alkaline. Avoid buying trees and shrubs which require acidic conditions. Compost material is always a good addition. Chop up garden debris from your yard before it dries and spade in immediately. Remember, compost is to improve soil and should not be considered a fertilizer. Proper watering is one of the most important aspects of caring for trees. Water deep and slow is the best use of water in this arid area, and is best for the tree. This drives the roots down and helps protect the tree from drouth. Do not depend on lawn watering alone, as shallow or frequent watering draws roots to the surface.

Care and Protection:

The very best tree and shrub care is prevention. Careful and regular inspection of plants and trees by checking for disease and insect damage will save problems later. If damage is found, seek help from your local nurseryman for information and treatment. If trees are planted in a suitable area with reasonably good soil they should not need additional fertilizing. However, should your trees show signs of poor growth or health, then fertilization may be necessary.

Mixtures of 20-5-5 are acceptable, but try to keep the ratios of nitrogen (N) to phosphorus (P), and potassium (K) at about 3-1-1 (N-P-K). Always be sure to read labels carefully. Feeding of trees should be done in the spring with the fertilizer broadcast from the trunk to the drip line. **Do not use a weed and feed fertilizer under your tree's drip line as the herbicide in the fertilizer cannot tell the difference between your tree and a weed.**

You may also wish to have your soil analyzed if you have consistent problems with getting your trees to grow in a particular area. Contact your local Colorado State University Extension Service office for this service.

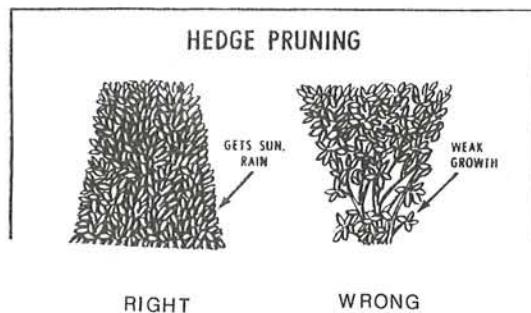
Finally, you may also find it necessary to protect young trees from drying winter winds and to wrap and stake trees as necessary.

PRUNING CONSIDERATIONS

Evergreens: Conifers normally require very little pruning, except where double leaders occur, or when a change in branch density is desired. Removing the terminal bud on side branches will not only slow outward growth, but also help to make the plant more bushy. If the tree develops two leaders, remove the less desirable leader early in the spring.

Shrubs: Shrub pruning follows many of the same guidelines and techniques as trees. One note is that often shrubs receive little or no attention after planting, until they are too large for their allotted space. By then, inside and lower foliage have probably been weakened and shaded out, and pruning efforts leave a sparse, unattractive plant. Pinching the tips of vigorous shoots periodically will keep the shrub compact and symmetrical.

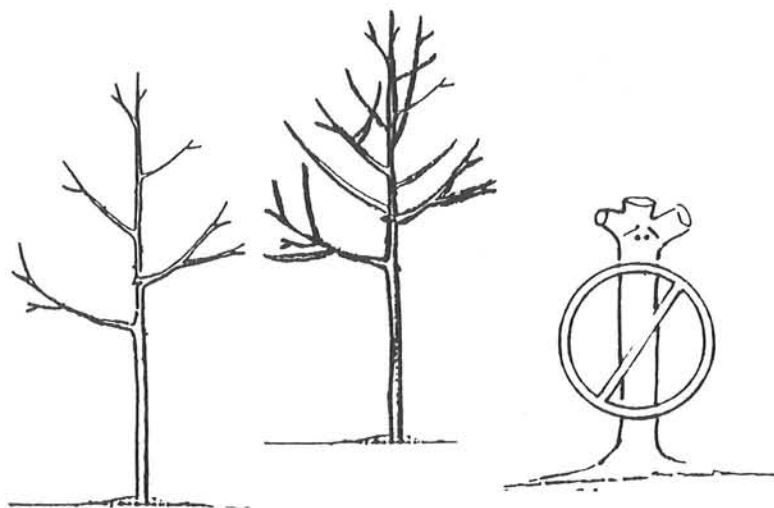
Hedges: To maintain low foliage, shear a hedge so that it is wider at the base than at the top. When a hedge has become too tall or too wide, prune approximately one-third of the old stems to stimulate new branching and dense growth.



FRUIT TREE PRUNING

Fruit Trees: Pruning fruit trees is one of the most important steps in producing high quality fruit. Objectives are to permit entry of sunlight and remove unproductive, weak, or crowded branches. Generally, 4-9 main scaffold branches are selected to encourage lateral growth instead of height growth. Continue to thin out undesirable branching to maintain the basic scaffold branching structure and allow maximum light penetration for fruit production.

Time of Pruning: Most pruning is done during the dormant season. Cultivars susceptible to winter injury are pruned in late spring before growth begins, rather than in January or February. Regardless of cultivar grown, do not prune any tree before January, or winter injury will occur. Besides dormant pruning, you may prune during July and August to restrict growth, to remove water sprouts, and to remove diseased or damaged wood. Once the basic structure of a fruit tree is developed, avoid pruning until fruiting occurs.



DO...modify the "flushcut" to avoid cutting into the branch bark ridge.

Selectively thin branches at their point of origin.

Prioritize your pruning:

1. Deadwood
2. Competing or interfering branches
3. Weak branch structure.

Sanitize your cutting tools when a disease is suspected.

DON'T...Enlarge the wound area by demanding a "flushcut".

Leave Stubs.

Indiscriminately remove a large proportion of the tree crown when planting.

Use wound dressings or pruning cuts.

Cut into previously developed callous growth.

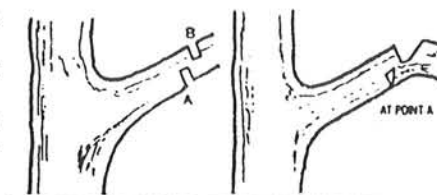
BASIC PRUNING PRINCIPLES

HOW TO PRUNE A BRANCH

STEP 1

In pruning any sizable tree member, first remove most of the branch's weight with two cuts:

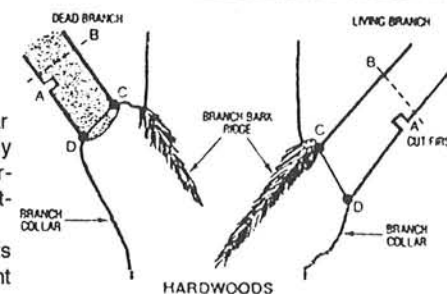
1. Undercut branch at Point A about one foot from main stem.
2. Make second cut at Point B one to two inches beyond cut A. Point B is *always* farther from the main stem than Point A.



STEP 2

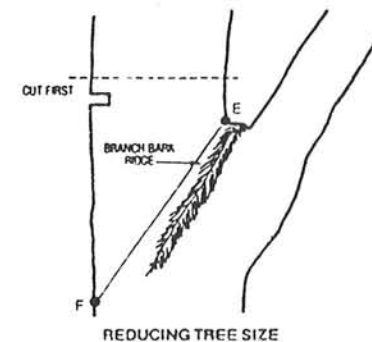
Note the Branch Bark Ridge and Branch Collar in the illustration. These areas vary substantially in appearance on different species; the difference is especially notable on hardwood vs. softwood trees.

The final pruning cut is made between Points C and D. If D is hard to locate, cut straight downward from point C.



PRUNING TO REDUCE SIZE

This process involves removal of larger branches back to a point (E-F) where a smaller branch joins the stem. Locate the Branch Bark Ridge, and make the cut - without disturbing the Ridge - from Point E to Point F at approximately the same angle as the Branch Bark Ridge.



CORTEZ ZONE

Cortez, at 6,200 feet above sea level, is in the elevation belt known as the Colorado Plateau Uplands. It is in the lower 1/3 of this belt that this planting guide will concentrate. Long, hot, clear, dry summer days and warm nights result in abundant fruit and vegetables. It seldom frosts after June 1st, but **always check the weather forecasts!** Winters can be cold and tend to be dry. New tree planting may need water during dry winters.

This zone map, published by the U.S. Department of Agriculture, based on average low temperatures, is not entirely accurate, but is the best available now. Work is underway on an updated computer-assisted map. In the circle is a region named by George Kelly as the Rocky Mountain Region. In it are found three zones: 3, 4, and 5. Dry alkaline soil, much direct sun, and low humidity are typical of this area.

| | |
|----------------------|---------------------|
| Zone 1: below -50° | Zone 6: -10° to -0° |
| Zone 2: -40° to -30° | Zone 7: 0° to 10° |
| Zone 3: -40° to -30° | Zone 8: 10° to 20° |
| Zone 4: -30° to -20° | Zone 9: 20° to 30° |
| Zone 5: -20° to -10° | Zone 10: 30° to 40° |

