MAXIMIZING THE SUCCESS OF YOUR HOME GARDENS

by using

TRIED AND TRUE, SCIENCE-BASED GARDENING TECHNIQUES

THE UNIVERSITY OF ARIZONA

How can you maximize your success in your gardening efforts?

Observe, Inquire & Discover

1. PLANT SELECTION
2. PLANTING TECHNIQUES
3. POST-PLANTING TECHNIQUES

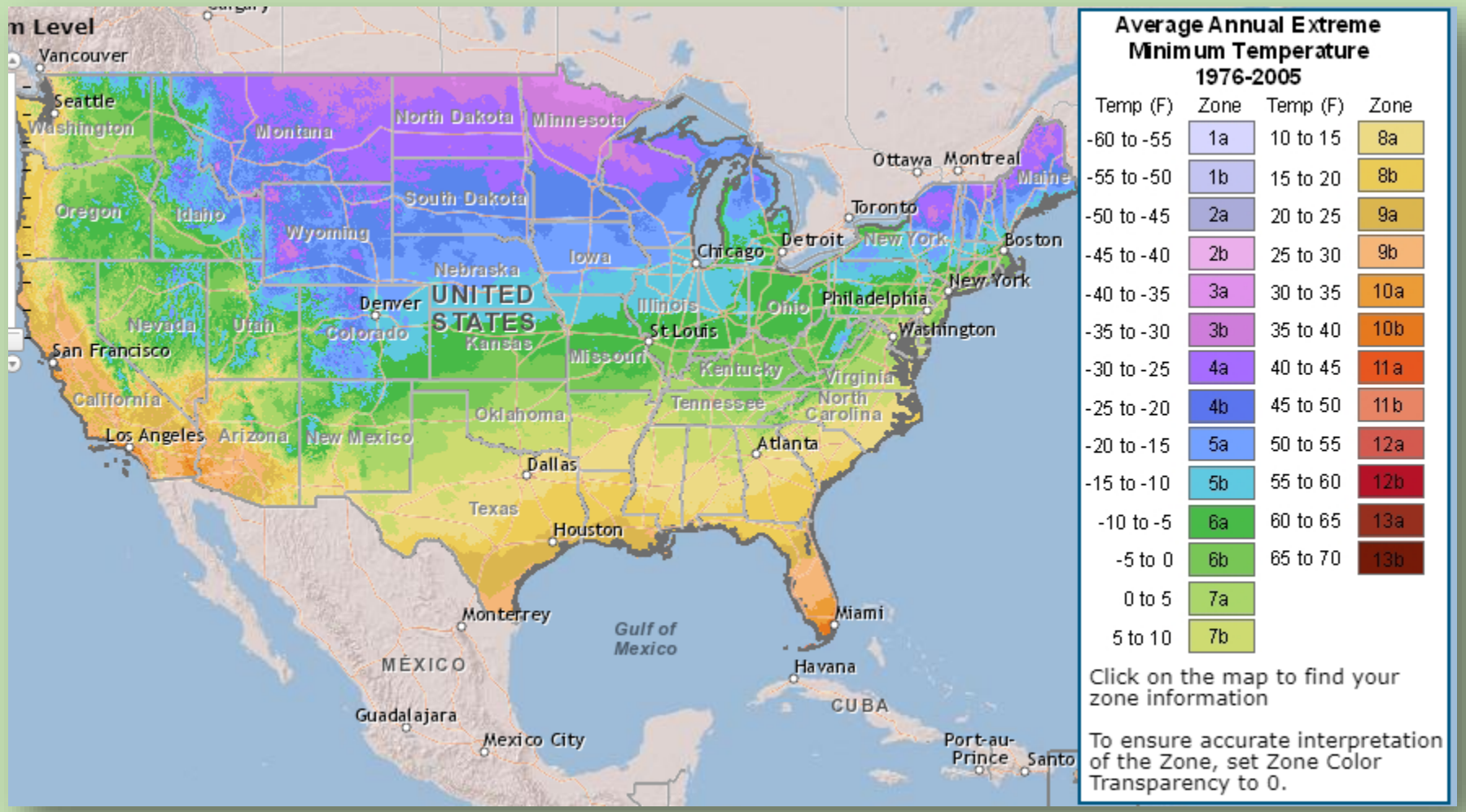
1. PLANT SELECTION

- ❑ Right plant right place
- ❑ Where are you learning about and buying your plants?
- ❑ What type of plants are you using?
- ❑ What size of plants are you using?

Select plants based upon your garden site:

- ❑ Local micro-climate
- ❑ Orientation
- ❑ Aspect
- ❑ Prevailing winds
- ❑ Shading elements
- ❑ Soil type(s)

USDA PLANT HARDINESS MAP



Interactive map at http://planthardiness.ars.usda.gov/PHZMWeb/

Select based on your garden's purpose:

Where are you learning about plants?

- Online information
  - .edu
  - Yavapai County Native Plants
  - mswn.com
  - Highcountrygardens.com
- Local Plant retail stores
- Master Gardener help desks

Yavapai County Native & Naturalized Plants

Yavapai County Cooperative Extension

Cacti

Grasses

Forbs

Shrubs

Agaves and Yuccas

Trees

Woody Vines

Noxious and Invasive Plants

Gardens Featuring Xeric Plants

Arizona Cooperative Extension
Yavapai County
840 Rodeo Dr #C
Prescott, AZ 86305
(928) 445-6590

Version 6.0
http://cals.arizona.edu/yavapaiplants/index.php
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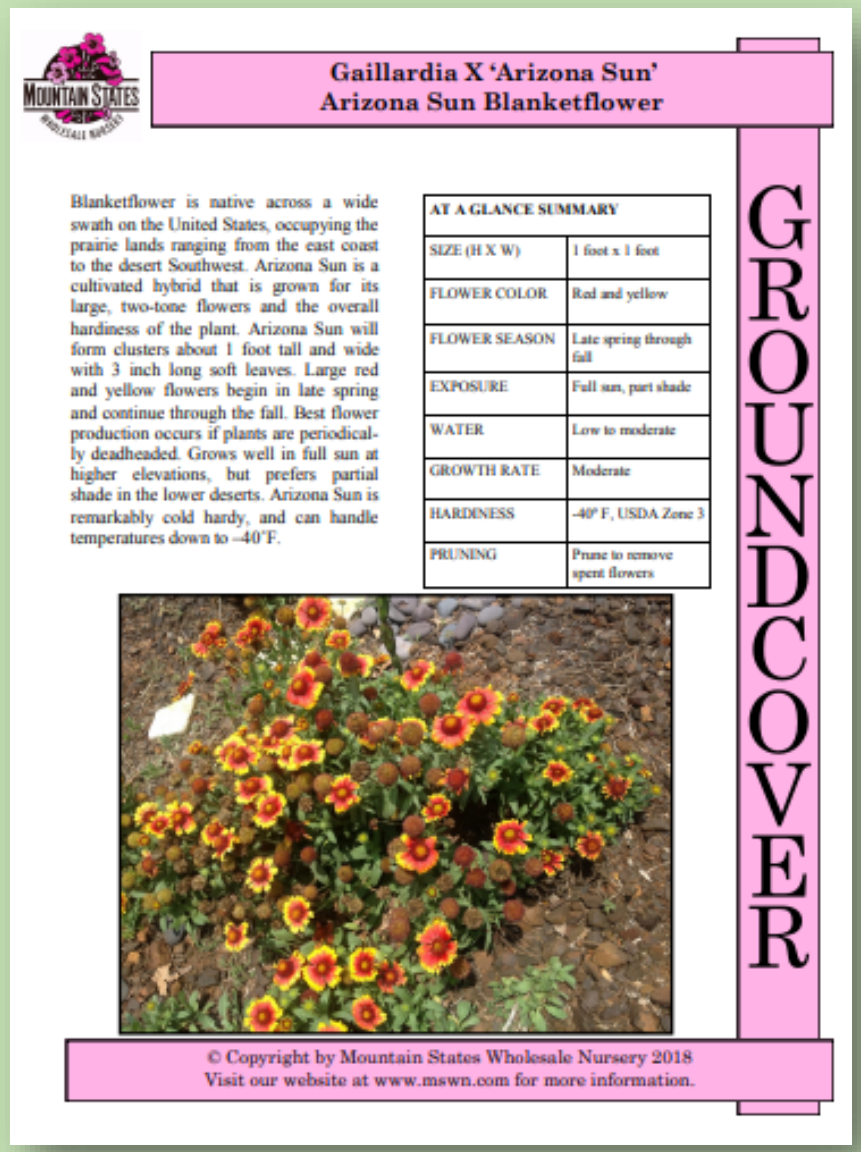
Content Questions/Comments: Email Jeff Schalau

MOUNTAIN STATES WHOLESALE NURSERY

Mswn.com

Specialize in water efficient plants

Note: Cold hardiness is limiting factor



Gaillardia X 'Arizona Sun'
Arizona Sun Blanketflower

GROUNDCOVER

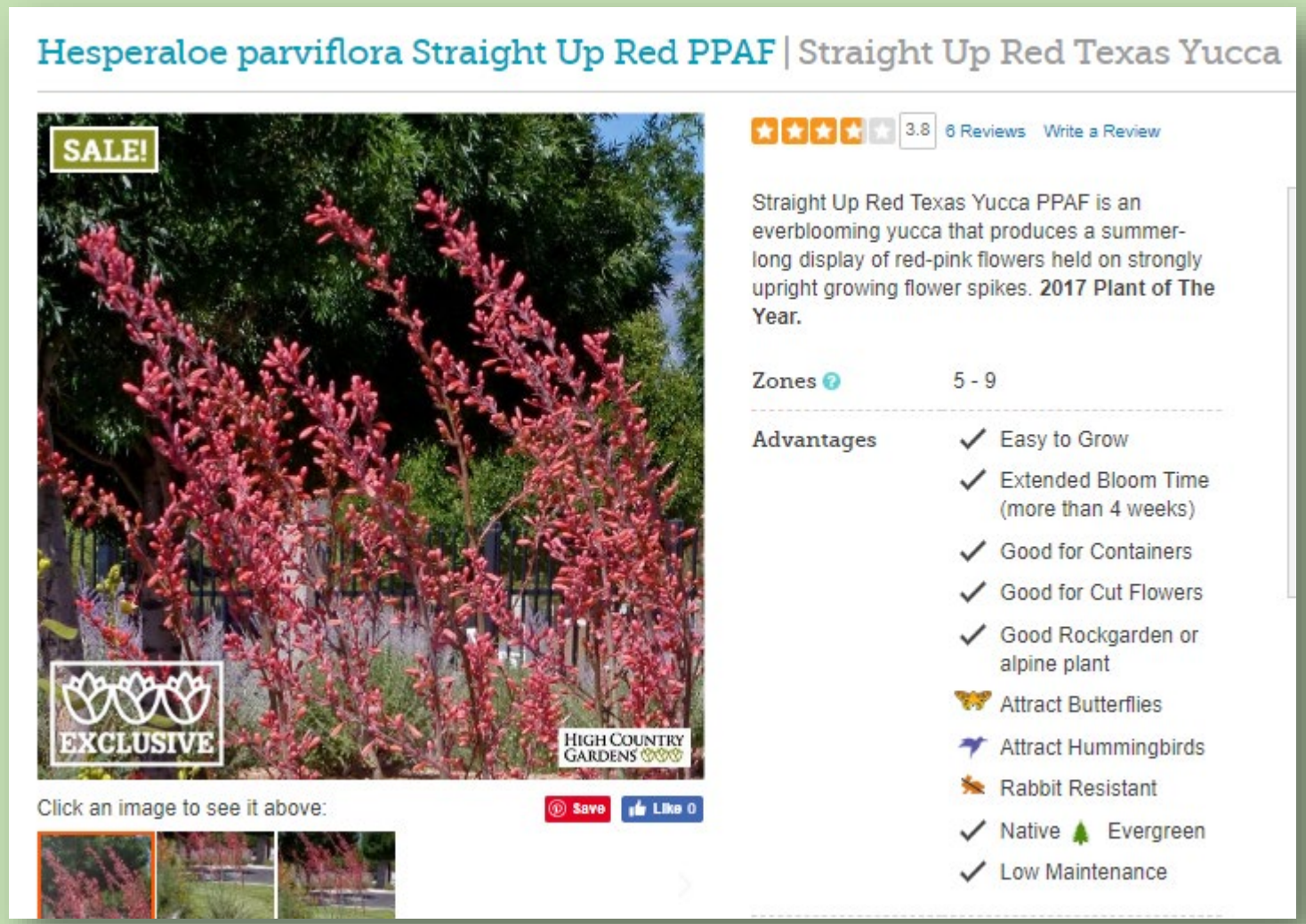
Blanketflower is native across a wide swath on the United States, occupying the prairie lands ranging from the east coast to the desert Southwest. Arizona Sun is a cultivated hybrid that is grown for its large, two-tone flowers and the overall hardiness of the plant. Arizona Sun will form clusters about 1 foot tall and wide with 3 inch long soft leaves. Large red and yellow flowers begin in late spring and continue through the fall. Best flower production occurs if plants are periodically deadheaded. Grows well in full sun at higher elevations, but prefers partial shade in the lower deserts. Arizona Sun is remarkably cold hardy, and can handle temperatures down to –40˚F.

AT A GLANCE SUMMARY	
SIZE (H X W)	1 foot x 1 foot
FLOWER COLOR	Red and yellow
FLOWER SEASON	Late spring through fall
EXPOSURE	Full sun, part shade
WATER	Low to moderate
GROWTH RATE	Moderate
HARDINESS	-40° F, USDA Zone 3
PRUNING	Prune to remove spent flowers

HIGH COUNTRY GARDENS

HIGH COUNTRY GARDENS
PIONEERS IN SUSTAINABLE GARDENING

Specialize in hardy perennials and low water use plants. Founded by David Salman, a Horticulturist.



Where do you purchase your plants?

- ❑ On-line
- ❑ Big Box Stores
- ❑ Local Nurseries
- ❑ Specialty Nurseries

What type of plants:

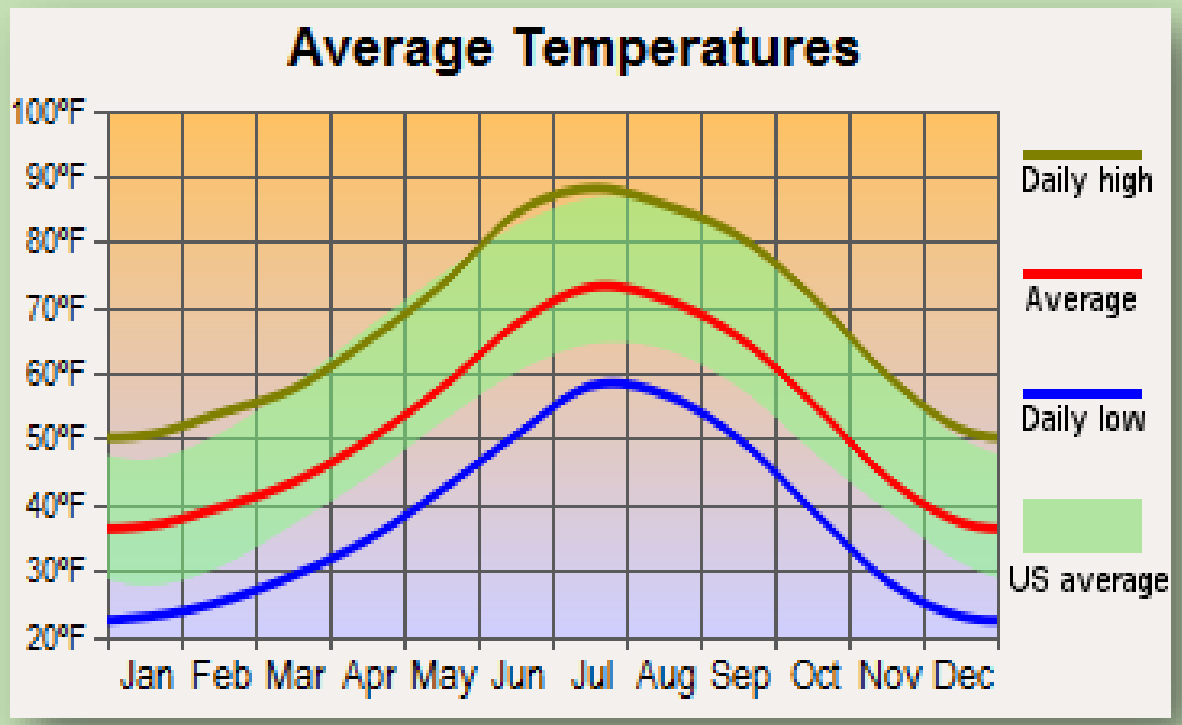
- ❑ Non-native
- ❑ Native & Naturalizing
- ❑ Annuals
- ❑ Perennials

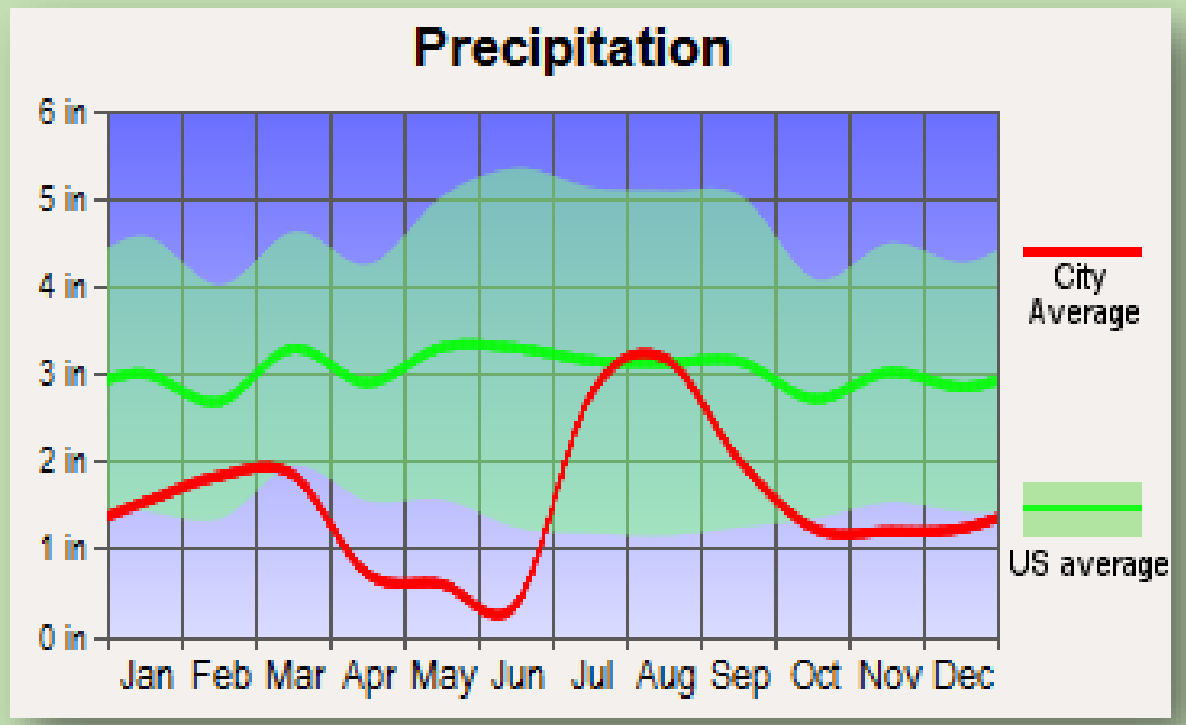
Native plants:

- Are adapted to our local climate
- Are adapted to our native soil
- Support biological diversity and provide habitat
- Are low maintenance
- Are beautiful

Adapted to our local climate:

PRESCOTT CLIMATE DATA





Adapted to our native soils

- Require no amendments to correct for the alkalinity of our soils
- Require no fertilizers

Nutrient Availability Chart

Soil pH

Nutrients	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0
Nitrogen	NA	SA	MA	MA	HA	HA	HA	HA	MA	MA	SA
Phosphorus	NA	NA	SA	MA	HA	HA	HA	MA	MA	SA	MA
Potassium	NA	SA	MA	MA	HA	HA	HA	HA	MA	MA	MA
Sulfur	NA	SA	MA	MA	HA	HA	HA	HA	MA	MA	MA
Calcium	NA	NA	SA	MA	MA	MA	HA	HA	HA	HA	MA
Magnesium	NA	SA	SA	HA	HA	HA	HA	HA	MA	MA	MA
Iron	HA	HA	HA	HA	HA	MA	MA	SA	SA	SA	SA
Manganese	HA	HA	HA	HA	HA	MA	MA	SA	SA	SA	SA
Boron	MA	MA	HA	HA	HA	HA	HA	MA	SA	SA	MA
Copper	NA	SA	MA	HA	HA	HA	HA	MA	SA	SA	SA
Zinc	HA	HA	HA	HA	HA	MA	MA	SA	SA	SA	SA
Molybdenum	NA	NA	SA	SA	MA	MA	HA	HA	HA	HA	HA

Acidic -------Optimum pH Zone for Soil------- Basic

Key:

NA = Not Available

SA = Slightly Available

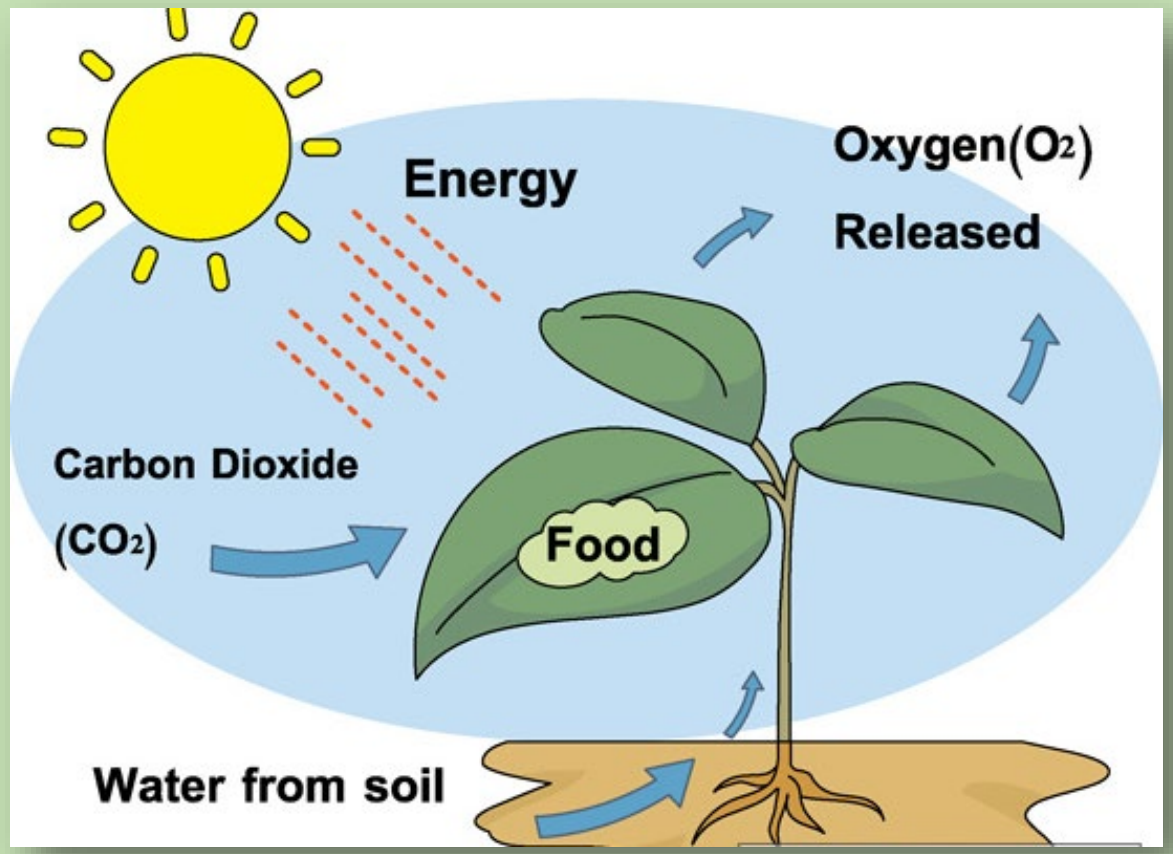
MA = Moderately Available

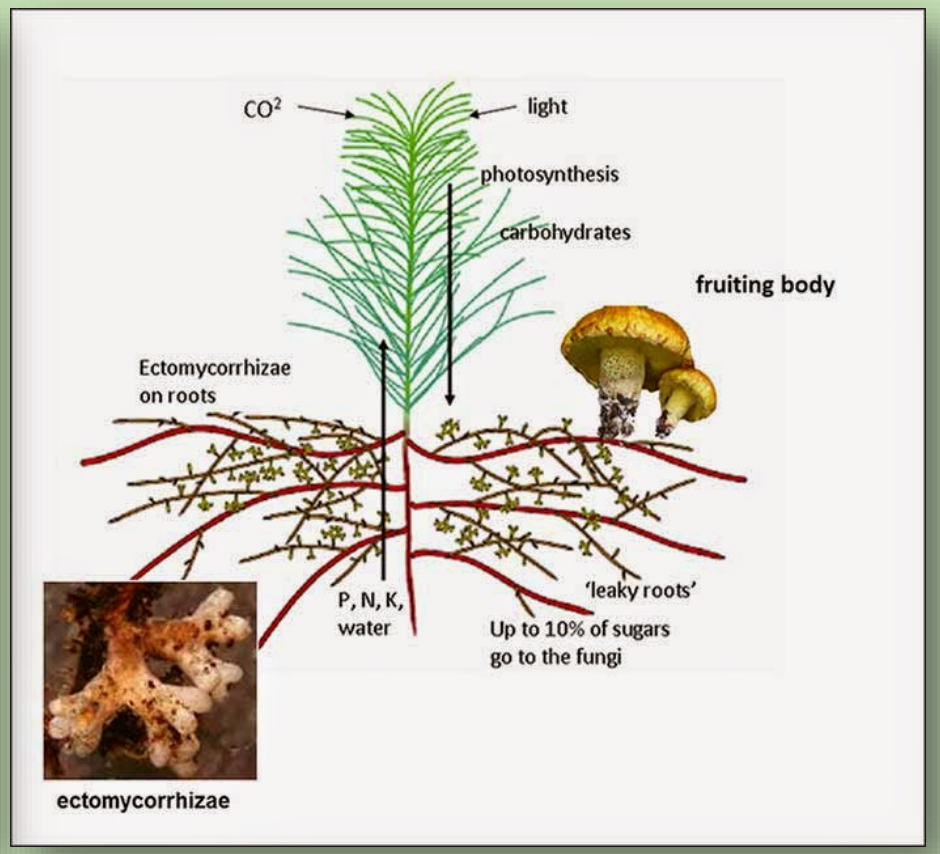
HA = Highly Available

https://cals.arizona.edu/yavapai/anr/hort/byg/archive/phosphorus2020.html

…maximum phosphorus availability occurs between soil pH 6.0 to 7.0. In Yavapai County our soils tend to be alkaline and have a pH of 7.0 to 7.8 and greater. Soils with a pH of 7.5 and higher typically have a high calcium concentration that binds phosphorus as calcium-phosphate creating an insoluble compound that is not available to plants (this process is called P fixation).

Native plants have symbiotic relationships with microbes (mycorrhizal fungi & bacteria) that allow them to acquire needed nutrients & phosphorous from the soil *without* using fertilizers or amendments…





Size of Plant:

- ❑ From seed
- ❑ 6 Pack
- ❑ 4” pot
- ❑ 1 gallon pot
- ❑ 5 gallon pot
- ❑ 15 gallon pot

QUESTIONS?

RELATED TO PLANT SELECTION CONCEPTS

2. PLANTING TECHNIQUES:

- When to plant
- Use U of A Planting Guidelines
- Hydration techniques

Best Season to Plant?

- ❑ Spring

Plant availability high. Soil just beginning to warm. Little time for root systems to develop to support the surge of leaf growth and flowering. Weather variable with danger of frost.

- ❑ Summer

Plant availability high. Temperatures hot! Plants require energy to develop both their root systems and growing leaves, flowers and/or fruiting. Need frequent watering. Plant conifers late summer.

- ❑ Fall

Plant roots grow when the soil temperature is 40+. During the late fall, the root systems of the fall-planted plants & deciduous trees develop and become better established. When spring arrives, the root system can support the surge of spring growth.

- ❑ Winter

Late winter is a good time to plant bare root plants, such as roses & fruit trees. Hydrate the roots well before planting and trim off any dead or damaged roots.

U OF A PLANTING GUIDELINES

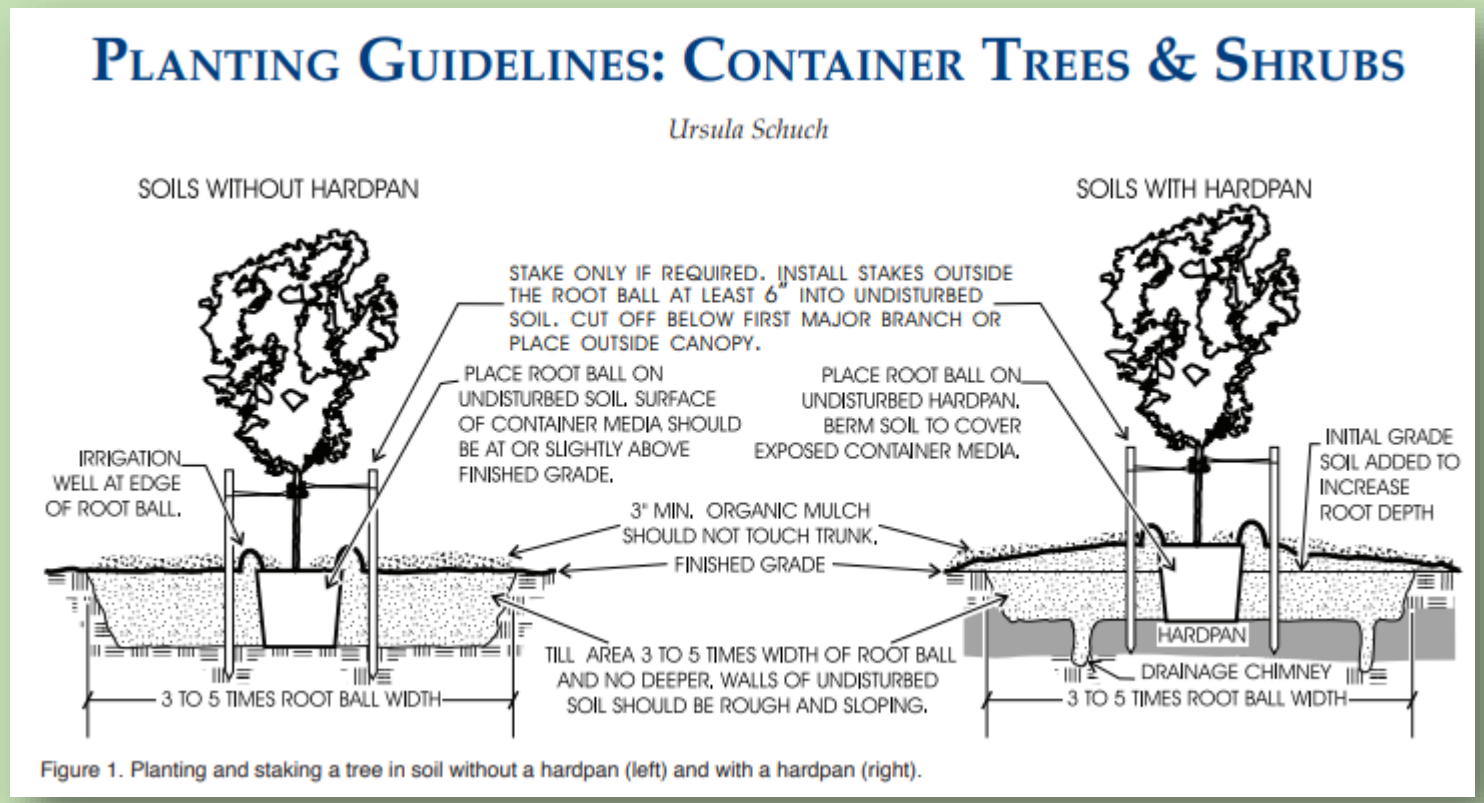


Figure 1. Planting and staking a tree in soil without a hardpan (left) and with a hardpan (right).

Handle the plant by the root ball, not by the trunk or stem!

Hydration:

- ❑ Fill hole with water & let drain completely before planting
- ❑ Saturate root ball prior to planting. Submerge pot in Container until no bubbles emerge. Let drain.

Maximize contact area between soil of plant and native soil:

- ❑ Walls of planting hole should be rough and slightly slanting outward
- ❑ Gently loosen root ball before planting and cut any circling roots

When Planting:

- ❑ Backfill
  - Amend to improve drainage, water holding capacity or organic content, <25%
  - Do not pre-wet backfill before planting
- ❑ Avoid planting too deep
- ❑ Compact soil around plant gently

Water deeply right after planting

- ❑ Use hose or bucket
- ❑ Add water gradually
- ❑ Helps settle soil
  - Add more soil as needed
- ❑ Removes air pockets

QUESTIONS?

RELATED TO PLANTING TECHNIQUES

3. POST PLANTING TECHNIQUES

- ❑ Watering
- ❑ Drip irrigation
- ❑ Mulch around plants
- ❑ Create pathways and use them

WATERING / IRRIGATION

MULCH

PATHWAYS

1. PLANT SELECTION
2. PLANTING TECHNIQUES
3. POST-PLANTING TECHNIQUES

THANK YOU

Questions?
Comments?
Thoughts?

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extension.arizona.edu/yavapai

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Cooperative Extension
Yavapai County