P.O. Box 2500 • Litchfield Park, AZ 85340
Located at 10020 W. Glendale Ave. • Glendale, AZ 85307
toll free 800-840-8509 • phone 623-247-8509
fax 623-247-6354 • email sales@mswn.com • www.mswn.com

SUMMER HOURS

6:00 am to 3:30 pm Office
6:00 am to 2:30 pm Yard
Open Monday through Friday
Closed Weekends and Major Holidays

UPCOMING EVENTS / NOTICES

July 11 - August 5
Permaculture, Landscape, and Water Management, Ecosa Institute
212 B. South Marina Street, Prescott, AZ.
Info: Visit www.ecosainstitute.org or
e-mail info@ecosainstitute.org
or call 928-541-1002.

August 6-10
Trees in Tune, International Society of Arboriculture 81st Annual Conference & Trade Show.
Gaylord Opryland Resort & Convention Center, Nashville, TN.
Info: Contact ISA at 217-355-9411, www.isa-arbor.com

August 12
Southwest Horticulture Annual Day of Education (SHADE 2005),
Sponsored by the AZ Nursery Association
Wyndham Buttes Resort, Tempe, AZ.
Info: Contact ANA at 480-966-1610.

August 12-14
Professional Landcare Network (PLANET) Summer Symposium
Chicago, IL Westin O'Hare Airport Hotel
Info: Contact Joan Haller at 800-395-2522 or e-mail
joanhaller@lancarenetwork.org

August 15-20
The Assoc. of Professional Landscape Designers Summer Conference
"Reaching New Heights – Challenges for the Landscape Designer."
Salt Lake City Marriott, SLC, UT. Info: Visit the web at www.apld.org

August 19-21
Texas Nursery and Landscape Expo
Dallas Convention Center, Dallas, TX
Info: Contact TNLA, (800) 880-0343;
fax (512) 280-3012;
e-mail: info@txnla.org

WHAT'S NEW?

There have been a few personnel changes at Mountain States recently, so we thought we would bring you up to date. Let's start in sales.

The ever burgeoning territory for **Dan Goodspeed** was starting to spread him a bit thin. We recently asked **Jim Latas** (formerly in Dispatch) to take over responsibility for the states of Colorado, Utah and Idaho. In addition, Jim will handle some of the commercial Arizona accounts. Dan will continue his stellar efforts in New Mexico and Texas.

To assist Dan and **Jeff Grass**, we have promoted **Sabrina Kampfe** (formerly Reception) to customer service representative. Sabrina is anxious to learn all the customers in Jeff and Dan's areas and to provide support in sales.

Julie Armstrong recently joined us as receptionist. Julie is one of the cheerful voices that answer the phone when you call in to the nursery. If you have not spoken to Julie yet, you might try it. It will surely brighten your day.

Nancy Venegas has joined the nursery to assist **Hoffman Carlos** in Dispatch. Hoffman will continue to provide inventory control, computer support and soon to come, enhanced Will Call service.

We also have a new service at Mountain States…cool, clear, refreshing water. We have bottled up our own line of Agua Fresca and have made it available in the lobby. If you are in the area, stop in for a drink!

July/August 2005

SALT TOLERANT PLANTS

In the arid southwest, salinity is a major consideration when it comes to plant selection. Salinity or the relative level of various salts within a soil varies greatly from one region to the next, and certainly the levels may change drastically from one neighborhood to another. The use of reclaimed water for landscapes in parks and golf courses creates further interest in salt tolerant plants.

The soil type, drainage and most importantly, rainfall or the lack thereof, can affect the level of salinity. Areas with little annual precipitation generally have higher levels of salt in the soil than those with more precipitation. Irrigation water also may play a role in salinity. As the quality of water declines due to extended drought and runoff into reservoirs, each irrigation cycle brings more salt into the equation. In fact, it is estimated that each acre foot of irrigation water may contain more than one ton of salt or more.

Soil testing laboratories can perform tests that will indicate the relative salinity of the soil. Salinity is measured by determining the electrical conductivity of the soil, with higher conductivity indicating greater levels of salt. One should request information from your local cooperative extension agent on salinity and where you can secure soil and/or irrigation water analyses for your area.

Many plants have become adapted to saline soil conditions through evolution. Plants native to arid regions typically can tolerate higher levels of salts than those indigenous to areas with higher rainfall. In general, plants adapted to drought are relatively tolerant of saline soils.

Plants that are not adaptive to salinity tend to have variable responses. Typical symptoms include a loss of vigor, stunted growth, overly thickened foliage, foliar leaf burn often referred to as scorch, defoliation, limb die-back and in severe cases, death of the plant.

Salinity levels may be managed by proper irrigation methods. Soils may be leached of salts by applying clean or relatively low salt irrigation water provided that drainage is adequate. As a rule of thumb, the application of six inches of water will reduce the salinity of one foot of soil by 50%. Twelve inches of water will reduce salinity by approximately 80%, and the application of twenty-four inches of water will remove approximately 90% of the soluble salts. Long, slow applications of water tend to provide better leaching of salts than brief cycles.

Unfortunately very little research has been conducted to determine the best-suited ornamental plants for saline conditions, as the primary research has been focused on agricultural and forage crops. As a result, most of the lists developed for salinity tolerance are anecdotal. Please consider the lists presented in this publication as a general guide, developed by evaluating other lists prepared by numerous governmental research agencies and laboratories. Information regarding other plants that are salt tolerant would be greatly appreciated. Please send comments and suggestions to Mountain States.

SALT TOLERANT PLANTS FOR THE DESERT SOUTHWEST

ACCENT PLANTS

BOTANICAL NAME	COMMON NAME
HIGH SALT TOLERANCE	
Yucca brevifolia	Joshua Tree
MODERATE SALT TOLERANCE	
Agave species	
Aloe species	
Dasylirion species	
Ephedra species	
Hesperaloe parviflora	Red Yucca
Nolina microcarpa	Bear Grass
Opuntia species	
Yucca elata	Soaptree Yucca
Yucca glauca	Small Soapweed

TREES

BOTANICAL NAME	COMMON NAME
HIGH SALT TOLERANCE	
Parkinsonia florida	Blue Palo Verde
Eucalyptus sargentii	Salt River Gum
Prosopis juliflora	Native Mesquite
MODERATE TO HIGH SALT TOLERANCE	
Acacia saligna	Willow Acacia
Acacia farnesiana	Sweet Acacia
Acacia stenophylla	Shoestring Acacia
Celtis reticulata	Canyon Hackberry
Eucalyptus microtheca	Coolibah Tree
Leucaena retusa	Golden Leadball
Pistacia chinensis	Chinese Pistache
Platanus species	Sycamore
Prosopis alba	Argentine Mesquite
Prosopis glandulosa	Texas Honey Mesquite
Prosopis x Phoenix™	
Prosopis velutina	Arizona Native Mesquite
Quercus fusiformis	Escarpment Oak
Vitex agnus-castus	Monk's Pepper Tree

(TREES CONTINUED)

BOTANICAL NAME	COMMON NAME
MODERATE SALT TOLERANCE	
Celtis occidentalis	Common Hackberry
Celtis reticulata	Netleaf Hackberry
Cercocarpus montanus	Mountain Mahogany
Chilopsis linearis	Desert Willow
Cupressus arizonica	Arizona Cypress
Dalbergia sissoo	Rosewood
Parkinsonia microphylla	Foothill Palo Verde
Parkinsonia praecox	Palo Brea
Parkinsonia x 'Desert Museum'	
Populus species	Cottonwood
Salix species	Willow
Sophora secundiflora	Texas Mountain Laurel

SHRUBS

BOTANICAL NAME	COMMON NAME
HIGH SALT TOLERANCE	
Atriplex species	Saltbush
Baccharis sarothroides	Desert Broom
Eremophila maculata	Valentine™
Ericameria nauseosus	Rabbitbrush
Krascheninnikovia lanata	Winterfat
Leucophyllum x 'Heavenly Cloud'	
Lycium fremontii	Wolfberry
Nerium oleander	Oleander
MODERATE TO HIGH SALT TOLERANCE	
Acacia greggii	Catclaw Acacia
Artemisia frigida	Fringed Sage
Artemisia tridentata	Big Sagebrush
Asclepias subulata	Desert Milkweed
Caesalpinia gilliesii	Mexican Bird of Paradise
Caesalpinia pulcherrima	Red Bird of Paradise
Calliandra californica	Baja Fairy Duster
Celtis pallida	Desert Hackberry
Fallugia paradoxa	Apache Plume

(SHRUBS - MODERATE TO HIGH SALT TOLERANCE - CONTINUED)

BOTANICAL NAME	COMMON NAME
Larrea tridentata	Creosote
Leucophyllum species	Texas Rangers
Maytenus phyllanthoides	Mangle Dulce
Rhus trilobata	Three Leaf Sumac
Simmondsia chinensis	Jojoba
Tecoma stans	Yellow Bells
MODERATE SALT TOLERANCE	
Anisacanthus species	
Senna species	
Cordia parvifolia	Littleleaf Cordia
Dodonaea viscosa	Hop Bush
Encelia farinosa	Brittlebush
Lantana camara	
Rhus glabra	Smooth Sumac
Rosa woodsii	Wood's Rose
Russelia equisetiformis	Coral Fountain
Salix exigua	Coyote Willow
Salvia species	

GRASSES

BOTANICAL NAME	COMMON NAME
HIGH SALT TOLERANCE	
Cortaderia sellowiana 'Pumila'	Dwarf Pampas Grass
Sporobolus airoides	Alkali Sacaton
Sporobolus wrightii	Big Sacaton
MODERATE SALT TOLERANCE	
Muehlenbergia lindheimeri	Autumn Glow™
Muehlenbergia rigens	Deer Grass

GROUNDCOVERS

BOTANICAL NAME	COMMON NAME
HIGH SALT TOLERANCE	
Baccharis x 'Starn' P.P. #11240	Thompson™
Bahia absinthifolia	Bahia
Drosanthemum speciosa 'Rosea'	Ice Plant
Malephora lutea	Rocky Point Ice Plant
Portulacaria afra	Elephant Food
Rosmarinus officinalis	Rosemary
MODERATE TO HIGH SALT TOLERANCE	
Acacia redolens Desert Carpet™	Ongerup
Ambrosia deltoidea	Triangleleaf Bursage
Ambrosia dumosa	White Bursage
Penstemon species	
Psilostrophe tagetina	Paper Flower
MODERATE SALT TOLERANCE	
Gazania rigens	
Glandularia pulchella	Rock Verbena
Lantana montevidensis	Trailing Lantana
Marsilea macropoda	Clover Fern
Sphagneticola trilobata	Yellow Dot
Verbena tenuisecta 'Edith'	
Verbena x Summer Beauty™	
MODERATE TO HIGH SALT TOLERANCE	
Antigonon leptopus	Queen's Wreath
Bougainvillea species	