

## ROUND-UP® READY ALFALFA IS JUST AROUND THE CORNER

Round-Up® Ready Alfalfa will be available sometime during the 2005 planting season. The exact date of release has not been determined, but will be announced when all approvals are finalized. This much anticipated release follows the success of Round-Up® Ready soybeans, corn, and cotton as a means of controlling yield-reducing weed pressures.

Upon approval of the technology, Syngenta Seeds will make an NK® Brand, 8 fall dormancy Round-Up® Ready variety available as its initial release into the California/Arizona market in addition to a 4 fall dormancy Round-Up® Ready variety for northern California and the rest of the northern and central U.S.

## HELP NAME THE NEXT VARIETY!

Syngenta Seeds NK® Branded Products will soon be releasing a new high-yielding, high quality 8 fall dormancy multi-foliolate alfalfa and would like to enlist your help in naming that variety. As an incentive, Western Ag Services and Syngenta Seeds will pay \$500.00 to the winner whose name is selected. Please send in your entry with your name, address and phone number to Ed Wentzel, Western Ag Services, 8105 N. Locan, Clovis, CA 93619. All entries must be in by September 30, 2004. If two or more people submit the winning name, the first entry is the winner.

## IMPROVE ALFALFA QUALITY AND YIELDS

High quality alfalfa, "the queen of forages", has been the subject of much discussion: How do you grow it?...How do you harvest it?...How do you market it?...What's it worth? Has it been analyzed for protein, TDN, ADF and NDF.

The best growing environment is a mellow, medium textured calcareous soil, well supplied with nutrients (both micro and macro) and water. Alfalfa requires plentiful sunshine, warm weather, insect-free and weed-free fields, and clear days at harvest.

A good crop begins with a healthy stand of vigorous growing plants. Several things are involved here...a fine firm seed bed which is well supplied with moisture, oxygen and beneficial nutrients; a high cation exchange capacity; a rhizobial bacteria with minimal harmful substances such as excess sodium, bicarbonates, hydroxides, and pathogens.

The soil texture, mechanical condition, and bulk density of the soil will have a profound effect on the above. Tight soils restrict water penetration and movement within the soil; they restrict root growth and favorable organism activity; and they are also conducive to drought on the one hand and water-logging on the other. They foster pathogen buildup and harmful chemical release.

In summary, alfalfa grows best when all agronomic parameters are in balance—field productivity is maximized when these factors are meshed with wise management.

## PRODUCING ALFALFA

### Soil Preparation

Open the subsoil to 26" with deep ripping. Apply amendments such as gypsum if needed. Level the surface of the land for desired irrigation. Fertilize, irrigate, disk, set up borders, float and firm the seedbeds. Some will apply a preplant herbicide.

### Seeding

Plant alfalfa at 25-30 lbs per acre, at a depth of 1/4–1/2" in medium to heavy textured soils and 3/4–1" in light textured or sandy soils. Alfalfa seeds cannot push up from deep or crusted soils. Firm the soil above the seed to create upward movement of moisture into the seed zone, and prevent the soil around the seed from drying out. Some growers sprinkler irrigate to establish the seedlings. Other growers will flood irrigate to bring up the stand.

### Fertility

Soil nutrients should be in balance and be readily available. A 10 ton per acre alfalfa crop will use the following:

			Existing Soil Condition
	<u>Nutrient</u>	<u>Lbs/Ac</u>	<u>Favorable Soil Test (ppm)</u>
Nitrogen	N	500	20
Phosphorous	P <sub>2</sub> O <sub>5</sub>	150	16
Potassium	K <sub>2</sub> O	600	150
Magnesium	Mg	50	-
Sulfur	S	50	20
Calcium	Ca	320	-
Zinc	Zn	.5	2.0
Soil pH			6.2–7.8

Here is a brief look at what these nutrients contribute to plant growth.

### Nitrogen

Properly inoculated plants should produce most of the nitrogen they need. An addition of N at planting (e.g. 20 lbs. per acre) and in between irrigations during the hot summer season may be a good plan.

### Phosphorus

P does not move in the soil and may be picked up only as roots come into contact with it. P deficiency will result in lower yields and lower quality forage.

### Potassium

Alfalfa grown deficient soils will have smaller roots, lower yields, and be more susceptible for diseases. Readily available K will increase the sugar content and palatability of alfalfa forage. It is important to keep K in balance with Mg.

### Magnesium

Mg is important for photosynthesis and will stimulate the uptake of other nutrients.

### Sulfur

S is important in nitrogen fixation, protein development and healthy roots.

### Calcium

Ca is needed as a plant structural nutrient as well as a buffer for other nutrients and soil mechanical structure.

### Zinc

Zn is needed for energizing several enzymes within the plant, as well as increasing P uptake and increasing the favorable microorganism population in the soil.

### Soil pH

PH in the 6.2–7.8 range is favorable for alfalfa growth and nutrient availability to plants. Lower and higher pH's can reduce nutrient availability and favorable microorganisms populations.

**NOTE:** For a list of micro-nutrients, please contact Ed or Win at 559-284-2274.

## QUALITY FORAGE FOR DAIRY HERDS

Increasing emphasis is now being placed on forage quality for dairy cattle. Most growers in the West now understand the effect of stage maturity on alfalfa hay. Dr. Dwayne R. Buxton, Iowa State University forage specialist, used to tell his students, "No single factor impacts forage quality more than plant maturity."

As plants get older, a higher percentage of the plants consist of cell wall material high in hemicellulose, lignocellulose and lignin. These excessive materials interfere with digestion, and they lower milk production. Immature alfalfa tends to be much more readily digestible. The optimum cutting stage for alfalfa is in the late vegetative to early bud stage. Rick Speicher, who studies alfalfa very carefully in Idaho, contends, "If you leave your alfalfa standing in the field, you increase your ADF 1/2% per day. In just 4 days you can lose 12–15% in quality." Growers need to balance this out with yield and stand persistence. Some growers cut a little earlier during the spring and early summer and let the August cutting grow to a greater degree of maturity to replenish root reserves. Others "soup up" their fertility programs to optimize forage yield, quality and stand health.

## SEQUOIA TESTIMONIALS

Our feature alfalfa variety this issue is Sequoia. Sequoia is an 8 fall dormancy, tri-foliolate released in the fall of 2003. For information on Tahoe, Tulare, 819 Brand Alfalfa, Sedona, Reno, or Expedition, as well as any additional information on Sequoia, please check out our web site at [www.westernagservices.com](http://www.westernagservices.com).

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*"That Sequoia is unbelievable the way it produces. My July cutting yielded almost two tons per acre and my dairyman loves the quality of Sequoia. Regrowth on Sequoia has been tremendous."*

**Sonny Coelho – Fresno, CA**

*"From a yield standpoint, Sequoia has exceeded my expectations and quality has been equal to anything else. Sequoia's regrowth is quick. I'll plant more Sequoia—I like it."*

**Bo Champlin – Visalia, CA**

*"My second year Sequoia is my highest producing hay. It's holding up really good in the summer...I like it."*

**Kevin Antongiovanni – Bakersfield, CA**

*"I like Sequoia. It's been my top yielding variety out of the four I use. I plan to plant more Sequoia...it's really consistent."*

**Charles Mitchell – Shafter, CA**

