

HISTORY OF ALFALFA IN THE FAR WEST

When the *padres* came to California from South America centuries ago they brought with them some seeds of alfalfa grown in Chile and other countries. At that time no one was concerned with insects or diseases which could diminish yield, and quality was not even a consideration. Cattle and horses, many used by the U.S. Cavalry in the 1850's and 1860's, flourished while being fed alfalfa.

California and Arizona climates, with lots of sunshine and hot weather plus alkaline soils favorable to alfalfa growth, provided the environment conducive for successful alfalfa production. California alfalfa acreage has grown to over 1,000,000 acres while Arizona has increased to 200,000 acres as the dairy industry in both states has increased.

By the 1930's and 40's more sophistication came into the alfalfa crop at the same time hybrid corn was starting its great advances. USDA and university breeders nationwide attacked various problems including bacterial wilt disease, various leaf spot complexes, fusarium wilt, phytophthora root rot, verticillium wilt and aphanomyces were identified and were greatly curtailed. Other problems like spotted alfalfa aphid, stem nematodes, and root knot nematodes have been a part of resistance packages in many alfalfa varieties.

It wasn't until the 1970's that greater strides were made when multiple pest resistance became the major effort. At the same time, alfalfa breeders finally learned how to achieve phytophthora resistance. Breeders, who had previously concentrated on one or two resistance traits found that they could select varieties for resistance to several pests at one time. At the same time salt tolerant studies were undertaken to increase salt tolerance at stations such as the University of California Imperial Valley Field Station near El Centro, CA.

Recently, the excellent hay price has put added emphasis on big yields and high quality. There is generally a trade-off in this situation in that big yields normally cannot get top quality, and top quality doesn't necessarily get the biggest yields. We recommend a balance between yield and quality, understanding that the intense heat of the summer months quickly reduces quality.

Over the past years chemical companies have developed some excellent herbicides for weed control. Weeds continue to present a major obstacle in producing high quality, high producing alfalfa hay. But through technology a new exciting group of alfalfas has been developed. Now NK® Brand Alfalfa is available with Roundup Ready® Technology. Resistance to Roundup (glyphosate), which kills alfalfa not fortified with the resistance gene, has been bred into alfalfas. Western Ag Services (WAS) will market an 8 fall dormancy - Revolution, and a 4 fall dormancy - Liberator.

INTRODUCING REVOLUTION AND LIBERATOR ALFALFAS

Revolution is NK® Brand Alfalfas first non-dormant alfalfa variety with Roundup Ready® Technology. Revolution is an 8 fall dormancy, tri-foliolate alfalfa.

Key Features and Advantages

- Revolution's genetic potential for high yields and high quality combined with the new Roundup Ready® technology will help you maximize your yields of high-quality, weed-free alfalfa forage.
- Excellent early growth and rapid recovery after cutting for excellent yield potential.
- High resistance to Fusarium wilt and Phytophthora root rot with resistance to Anthracnose and Verticillium wilt.
- High Resistance to Pea, Spotted and Blue alfalfa aphids plus

Stem nematodes. **Liberator** is NK® Brand Alfalfas first dormant alfalfa variety with Roundup Ready® Technology. Liberator is a 4 fall dormancy, tri-foliolate alfalfa.

Key Features and Advantages

- Liberator will provide the Roundup Ready® technology which will help you maximize your yields of weed-free alfalfa forage. Liberator also exhibits the high quality and yield expected in NK® Brand Alfalfas.
- Liberator combines very fast recovery with strong persistence for maximum performance in 3-, 4- and 5-cut systems.
- Developed especially for alfalfa producers using top management and looking for maximum yields, and quality under aggressive cutting schedules.

Note: All Roundup Ready® Alfalfa will be treated with Apron XL Systemic fungicide, inoculant, and an 8% nutrient coating with purple colorant for a distinctive appearance. WAS recommends the same seeding rate for Roundup Ready® Alfalfa as used for conventional alfalfas.

Alfalfa Tips from Western Ag Services:

- On existing stands...
 1. Be sure that your potassium (K) and sulfur (S) levels are high. The crop has been pulling up K and S hard all season and the plants may be stressed going in to winter.
 2. In non-dormant areas, be prepared to remove excessive top growth, which can provide an environment for sclerotinia white mold.
 3. In areas where sclerotinia is not a problem allowing the alfalfa to reach 8-10' in height allows for replenishment of root reserves.
- On new seedings...
 1. Fall seeding - In the low elevations of the west, growers typically consider October their alfalfa seeding month, although planting actually occurs anywhere from late August to late November or even early December. As a rule of thumb, to improve your chances for a healthy stand, aim to seed early whenever possible.
 2. Get enough water into the soil profile, thus creating a healthy environment for alfalfa roots.
 3. Most alfalfa growers in California and the southwest do not skimp on seed; they have found that heavier seeding rates pay off in excellent stands and less weed pressures.
 4. On new alfalfa seedings we recommend deep ripping (up to 24") to ensure deep establishment of roots for maximum production.

2005 CORN HARVEST

Due to the record high temperatures in July and August, silage corn yields have reported lower figures than last year (the 2004 corn growing season was mild). The aphid populations have been extremely high resulting in reduced yields in some fields. Due to grower management practices, corn stunt has been greatly controlled. Growers concentrated on planting their corn early, avoiding late planted corn and have utilized sorghum and sudangrass products in their double-crop planting strategies. There have been some incidences of minor lodging (lodging is not minor when it happens to you!) but that has not presented a big problem...yet. The San Joaquin Delta, where most of California's grain corn is produced, planted late due the cooler temperatures, but has rebounded and harvest will commence as it usually does in September and October.

Roundup Ready® corn continues to be a big factor in California comprising 35-40% of the total corn acreage planted. More yield data will be forthcoming in our January issue of the Western Agronomic News.



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CONVENTIONAL ALFALFAS FOR THE 2005-06 PLANTING SEASON

Please consider the following alfalfas for your immediate seeding needs:

- Sequoia - 8 fall dormancy - Big yields with good quality
- Yosemite - 8 fall dormancy - Multi-foliolate for dairy quality hay
- Tahoe - 6 fall dormancy - Multi-foliolate for central California or high quality needs
- 819 Brand Alfalfa - 8 fall dormancy - A blend that fits well on tough soils
- Sedona - 10 fall dormancy - An Arizona favorite for the low desert areas
- Expedition - 5 fall dormancy - For more dormant alfalfa areas of the west

The logo for Garst features the word "Garst" in a large, bold, green, sans-serif font. The letter "a" is stylized with a green leaf-like shape extending from its top.

Delivering Technology To Your Field

Western Ag Services is now distributing Garst® Seed Corn in California and Arizona. Please see the following article on Garst written by Lloyd Chapins, Garst® Strategic Account Representative.

The Garst & Thomas Hybrid Corn Company was founded in 1930 by Roswell Garst. Roswell Garst was raised in the small farming community of Coon Rapids, Iowa. During the late 1920's, Roswell became acquainted with Henry A. Wallace — the editor of a respected farm publication and an innovative plant geneticist. In the spring of 1930, Roswell Garst made arrangements to grow hybrid seed in Coon Rapids — from parent stock supplied by Mr. Wallace — then sell the seed to nearby farmers. Initial efforts only planted ten acres and yielded just 300 bushels ... but it was a start!

That winter, Roswell sold his first crop of hybrid seed corn from the back of his car ... a bushel at a time. He also invited Charles Thomas to join the business and help grow hybrid seed. So began the partnership of the Garst & Thomas Hybrid Corn Company, producing and selling Pioneer® brand seed corn in the western corn belt. Both men promoted hybrid corn by giving small samples to any farmer who agreed to plant hybrid seed next to his own corn. Once those farmers were satisfied, Roswell asked them to sell Garst & Thomas hybrid corn to their neighbors.

These early innovators had one simple goal ... place quality hybrid seed in the hands of farmers. Between 1930 and 1945, 100 million acres of U.S. corn production went from almost no hybrid seed planted ... to almost all hybrid seed. During that period, farmers went from picking corn by hand ... to harvesting almost entirely with machinery!

World War II placed tremendous pressure on the world's food supply. And farmers everywhere — especially those in North America — had to double their efforts. Garst & Thomas in the western Corn Belt doing all the production, research, service, sales, and distribution for Pioneer Brand Seed corn until the early 1980's. At the bottom of each bag read "Distributed by Garst and Thomas Seed Co., Coon Rapids IA." In the early 1980's the two parties (Pioneer and Garst) ended their arrangement. Garst Seed Company started producing and selling their own Garst Brand seeds in the Mid-west.

At Garst, we consider that 75 years in the rapidly changing seed industry is truly a milestone, and it would not have been possible without the tremendous commitment of growers throughout the years to the Garst brand.

During the past 22 years, Garst acquired various seed companies and, in 2004, was purchased by Syngenta. Today, Garst markets corn, soybeans, sorghum, alfalfa and sunflower. Since 1995, Garst has doubled its corn sales and tripled its soybean sales, and today is the third largest U.S. corn seed supplier. Garst has a long history of delivering genetics, agronomic expertise and service to growers and has developed a leadership position in the rapidly changing trait market. Combining Garst's research, genetic, and people resources with resources from Syngenta is allowing Garst to continue our strong tradition and offer growers even more choices in their seed and trait selection.