

STATE OF THE SEED INDUSTRY

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The state of the alfalfa industry has much in common with the general state of agriculture in the U.S.: 1) generally higher, but widely fluctuating commodity prices; 2) higher input costs; 3) continuing introduction and adoption of technology and 4) industry consolidation. These topics and trends are discussed below.

2008 SUMMARY AND 2009 FORECAST

Settlement prices for alfalfa seed production contracts were at record highs in 2008. Short global alfalfa seed supply, increased potential income/acre for competing commodity grains, and higher input costs were all contributing factors. Despite a late spring, most U.S. alfalfa seed growers were able to harvest an average yield with excellent seed quality. In general, 2008 was an excellent year for U.S. alfalfa seed producers. Canada and Australia are the second and third largest alfalfa seed producing countries. The seed crop in Canada was below average, especially in the north. The continuing drought in Australia has negatively impacted their alfalfa seed production, contributing to a global shortage of non-dormant alfalfa seed. Seed supply for 2009 looks adequate for most varieties.

In much of the country, alfalfa hay prices were also near record highs during 2008. This was due to stable demand, 2-5% fewer harvested acres, and increased costs for feed grains and alternative forages. Although alfalfa hay/haylage yields were about average, weather related factors prevented timely harvest for one or more cuttings in many areas, with a negative associated impact on forage quality. Supply and demand dictated a slightly higher premium for dairy quality hay in 2008. Early indicators for 2009 planting suggest an average year, maintaining total alfalfa hay/haylage production of ~23 million acres.

FUTURE TRENDS

Breeding – Molecular breeding tools are enabling revolutionary advances in corn and soybean breeding/product development. The recent sequencing of the *Medicago truncatula* (an alfalfa relative) genome, the rapidly decreasing cost of DNA analysis, and the adoption of “know-how” from our corn and soybean colleagues, is opening the door for utilization of these new molecular tools by alfalfa breeders. Stay tuned ... we can expect accelerated gains in forage yield and forage quality in new alfalfa varieties.

Traits – The National Alfalfa and Forage Alliance (NAFA) has worked with stakeholders to build a consensus plan for stewardship that allows for coexistence of biotech and non-

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biotech alfalfa hay and seed. A recent Council for Science in Agriculture (CAST) paper summarized the current knowledge about gene flow in alfalfa and outlines science-based mitigation strategies for seed and hay producers. USDA/APHIS is scheduled to complete the court mandated Environmental Impact Statement for Roundup Ready alfalfa in early 2009, and likely make a decision on deregulation by year end.

The AgBiotech industry continues to invest heavily in new trait discovery, with a particular emphasis on genes/traits that allow crops to do more (higher yield) with less (less water, poorer soils/water quality, less pesticides and less fertilizer). All four of the principle alfalfa breeding companies are either owned by or have trait agreements with biotech companies, and it is reasonable to assume that alfalfa will benefit from this new pipeline of traits. The Consortium for Alfalfa Improvement (CAI), an industry/USDA/Noble Foundation collaboration, is developing biotech traits for improved forage quality. Reduced lignin alfalfa is now on a commercial track.

Seed Treatments – Seed industry efforts to identify seed treatments to enhance product performance has intensified for all crops. In alfalfa, various combinations of Rhizobium inoculation, micronutrients, growth enhancers, and seed coatings are being tested, with the first generation value-added seed treatments/coatings launched in 2008. As with traits, we are on the early relatively stages of this research, with great opportunity for improved establishment and crop performance.

Industry Consolidation/Research Partnerships – Twenty years ago there were over ten alfalfa breeding companies in the U.S. Today four breeding companies are responsible for over 90% of the proprietary alfalfa seed sold in the U.S. This industry consolidation has led to a more focused and extensive research effort, with industry alfalfa research programs having the size and scale to do things that were previously not possible. There has also been an effort to fashion unconventional research partnerships, such as the aforementioned CAI, bringing together multiple public and/or private institutions to address large/long-term alfalfa research problems requiring multi-disciplinary research and creative funding.