

Roundup Ready Alfalfa Update and Alfalfa Production and Weed Management Systems in South America

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Most growers are familiar with Roundup Ready (RR) alfalfa which was developed using biotechnology to confer resistance to glyphosate in alfalfa. A gene from soil bacterium was inserted in alfalfa in 1997 at Montana State University and the first commercial varieties were released in the fall of 2005. However, a federal court found that USDA (APHIS) erred in approving genetically engineered alfalfa without completing a full environmental review (EIS). The primary issues were the possibility of contamination of organic and conventional fields with RR alfalfa and the possibility of increased glyphosate resistance. Further plantings of RR alfalfa were March 2007 were suspended pending the development of a full EIS. The draft EIS was completed in December, which started a 60-day public comment period. The public comment period was extended to March 3rd after a February snowstorm in Washington D.C. caused the postponement of a public comment meeting. After the public comment period, APHIS will evaluate the comments and respond to the issues raised and issue a final EIS. If and when RR alfalfa will again be deregulated is not known at this time.

The author had the opportunity to work with alfalfa in Chile and Argentina over the past couple of years. The work in Chile was with Fundacion Chile, an economic development corporation funded by governmental and private funds. The visit to Argentina was for the national alfalfa meetings (Jornadas de Alfalfa). Presentations and field visits were made in both countries providing the opportunity to contrast South American alfalfa production systems with those used in California.

It is important to understand the geography of Chile and Argentina in order to get a better feel for alfalfa production systems in both countries. Chile is a long narrow country along the western coast of the continent (2,653 miles long and 221 miles wide at its widest point and 40 miles wide at its narrowest point). It is very similar to California in terms of its geography and the Mediterranean climate. All the alfalfa fields we visited were irrigated. The primary irrigation method was surface irrigation with ditches that ran parallel throughout the interior of the field. The irrigator would place a temporary plastic dam in the ditch so that the water would spread out of the ditch onto the field. In contrast, Argentina is a much larger country (slightly less than three-tenths the size of the United States) and its climate is more like the Midwestern US. Nearly all of the rain comes during the spring and summer months and the quantity is sufficient so that irrigation is not needed in most parts of the county.

In California the majority of the alfalfa is produced as a cash crop by farmers and sold to livestock producers—primarily dairies. In contrast, most of the alfalfa in Chile and Argentina is produced on dairies for their own use. In Chile, most of the alfalfa is either used as green chop or baled hay. In Argentina, the overwhelming majority of the alfalfa is grazed. The alfalfa market in both countries is not nearly as developed as it is in California. Producers recognize the importance of high quality alfalfa for optimum milk production, but alfalfa is not analyzed by laboratories to determine its forage quality.

Because the alfalfa market is not well developed and high quality alfalfa does not receive a premium, growers in these South American countries do not aggressively control weeds to the degree California growers do. However, weed control in seedling alfalfa is relatively common. Growers typically use trifluralin preplant or post emergence herbicides like imazethapyr (sold as Pivot) or flumetsulam. Established alfalfa is rarely treated for weed control. Most producers do not recognize the potential feeding value of the first cutting and consider it to be of poor forage quality due to uncontrolled weeds. Most growers use a “corte de limpieza” or cleaning cut to remove the weeds on first cutting.

Alfalfa growers in both countries are very interested in RR alfalfa. It is not available in either country at this time and its fate depends on what happens in the United States.