



**THE SIZE, SCOPE AND IMPACT
OF HAY EXPORTS
FROM THE SOUTHWESTERN UNITED STATES**

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Hay exports are playing an increasing role in Southwestern hay markets. Exports of hay from the Southwestern USA totaled about 770 thousand tons with a value slightly over 150 million dollars in 1995. This is a tonnage increase of nearly 60% since 1989 (Table 1). The leading hay commodities during 1995 included 359 thousand tons of sudangrass, 161 thousand tons of alfalfa hay, 141 thousand tons of alfalfa cubes and 109 thousand tons of other forage products. California producers supplied the majority of these exports, although Arizona, Nevada, and Utah together supplied about 35% of the exports leaving the Southwestern USA.

Increased demand from Japan is a major factor contributing to the rise in exports during the past seven years. About 92% of the hay exported from the Southwest goes to Japan. As Japanese consumers become more westernized, their diet includes a greater proportion of beef and dairy products. In addition, Japan places a strict quota on beef and dairy imports to preserve their livestock industry. This quota creates a demand for forages that cannot be met internally.

A lack of arable land in Japan limits forage production. Japan is slightly smaller than California (144,110 sq. miles), and only 16% of this land is suitable for crop production. Urbanization claims much of the arable land. Japanese farmers plant the limited cropping acres to either rice, high value vegetables or fruit crops. In the past, rice straw supplied much of the forage for Japanese livestock but this low quality forage is slowly being replaced by imported alfalfa and sudangrass.

Forages exported to Japan from the Southwest are usually as hay, although some hay cubes are also exported. Baled hay is typically hydraulically compressed to about 25/lb. per cu. ft., loaded into 40 ft. shipping containers holding approximately 22-26 tons each and shipped via rail to seaports in Long Beach, Stockton and/or Oakland, California. At port, the hay is often fumigated according to Japanese plant protection quarantine regulations before leaving the U.S. Upon arrival,

Japanese officials inspect containers for fumigation residues, as well as the presence of restricted plant and insect materials before the forage moves to inland markets.

Often domestic and foreign consumers do not agree on the characteristics of optimum hay quality. To the Japanese buyer, packaging and appearance are paramount. Color, stem size, and dustiness are often more important than fiber or protein analysis. For instance, foreign sudangrass buyers desire hay with a bleached color (light green) and a stem diameter less than 1/4 inch. Another difference is that export buyers are extremely cautious about nitrate poisoning of livestock. Many buyers reject hay with nitrates more than 1000 PPM NO_3^- even though livestock can tolerate approximately 2100 PPM in a feed ration. Most U.S. producers are not accustomed to producing hay with these characteristics. Many producers become frustrated with foreign buyers who refuse hay traditionally viewed as acceptable in the U.S.

Successful sudangrass producers in the Southwest alter their growing practices to accommodate the foreign buyer. Many producers use seeding rates in excess of 150 lb./acre to reduce stem size. These seeding rates may be extreme, but export buyers pay a premium for fine-stemmed hay. Another agronomic practice of successful export producers is lengthening the field curing time to give the hay a bleached color. Producers in the Southwest have not always perceived bleached hay as high quality, but many are adjusting hay making practices to produce lighter colored hay. To avoid nitrate accumulation, many producers minimize nitrogen applications near harvest and schedule irrigations to avoid water stress. These agronomic practices help maximize the value of hay for the export market.

Only time will tell what role exports will play in the future of forage marketing. Emerging markets in Korea and China could provide an even larger outlet for American forage producers. At present, exporting is a viable marketing alternative for those producers willing to produce hay specifically for foreign markets.

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Table 1. Export of compressed hay and cubes from Southwestern ports between 1989 and 1995.

Export of all hay products (including cubes) from Southwestern ports	
year	metric tons
	482,130
1990	569,572
	697,015
1992	599,115
	634,029
	724,836
1995	772,827

Source: California Agricultural Statistics Service, Sacramento CA.

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