

Summary

Our Food Supply at Risk **White Paper on the Importance of Alfalfa Production** **in the American West**

November 15, 2022

By Dan Keppen, Family Farm Alliance
Mike Wade, California Farm Water Coalition

Alfalfa is a foundational crop and is the basis for the West's beef and dairy production

Alfalfa is grown as livestock feed for the beef and dairy industries, both of which contribute to a balanced diet, including high protein foods, such as beef, milk, and milk products, such as yogurt, butter, cheese, ice cream, cottage cheese, and more.

Just Seven Western states account for 46.3% of U.S. alfalfa production

Idaho, California, Nebraska, Kansas, South Dakota, Washington, and Texas combined produce almost 19.5 million tons of alfalfa per year, or 46.3% of all alfalfa production in the United States.

California is the third ranking producer of alfalfa in the country

California also happens to be the No. 1 dairy state in the nation. California dairies generate 41.8 billion pounds of milk (18.5% of U.S. 2021 total output) from 1.7 million dairy cows. Of that total milk production, 46 percent is used to generate 2.5 billion pounds of cheese. California also leads the nation in the production of butter (534 million pounds), ice cream (528 million pounds), and yogurt (442 million pounds).

Benefits of Alfalfa

Alfalfa fields are the beginning of a food chain for a host of wildlife. The fields attract insects, which attract songbirds. Alfalfa fields also entice gophers, ground squirrels, and other rodents who make their homes there because alfalfa fields are not plowed under each year. All this activity draws the attention of nature's hunters and predators such as hawks, raptors and foxes looking for prey.

Alfalfa helps reduce chemical applications and diesel fuel usage

By growing alfalfa as a rotation crop, farmers reduce the need for chemical fertilizers in subsequent crops. Alfalfa is an excellent source of nitrogen, which is an important soil nutrient. Being a legume, alfalfa extracts and "fixes" nitrogen into the soil from the air.

As a perennial crop, alfalfa's deep roots help build healthy soil. That means there is less tillage, less gasoline and diesel use, and more carbon sequestration, which helps fight climate change.

When used as a rotational crop, alfalfa's unique soil-building characteristics make it more productive to grow other crops, such as potatoes or onions, in alternate years.

Alfalfa is an efficient water user

Although the sum-total water demand for a fully-watered alfalfa crop appears to be high, this is mostly a function of its high yield and season-long growth in the West. Alfalfa is considered an efficient water user when yield is taken into account. The entire above-ground plant is harvested and used.

Farmers in California's San Joaquin Valley have implemented a practice known as "summer dry-down" to temporarily free up water supplies for other crops in the region. By temporarily ceasing to irrigate alfalfa, that water can be used by other farmers when it is needed most during water short years.

Alfalfa farmers in California's Imperial Valley participate in District-funded programs, conserving water that is then made available for urban users throughout the Southern California region. Farmers are conserving and transferring 500,000 acre-feet of water per year.

In Arizona, irrigation water diverted to farms decreased 15% between 1990 and 2015 and nearly 18% between 1975 and 2015. Factors contributing to this reduction in water use include a reduction in irrigable acres driven by urbanization, expanded use of multi-crop production systems that require less water and significant improvements in crop and irrigation management and infrastructure.

More honey is made from alfalfa than any other crop

Western farmers grow alfalfa as a seed crop and the seeds are marketed to other farmers around the world. When alfalfa is grown for seed, it flowers. Alfalfa flowers support pollinators (bees) that are vital to many other crops grown in the West

Western alfalfa farms out-produce the rest of the country

Arizona and California alfalfa growers lead the nation in crop yield, averaging 8.4 and 7.1 tons per acre respectively since 2016. Other states in the Lower and Upper Colorado River basins produce 2.9 to 5 tons per acre on average, with the national average just 3.3 tons per acre.

Alfalfa irrigation is energy efficient and uses computer models and soil sensors to determine when to irrigate and how much.

Most of the West's alfalfa is consumed locally

Very little alfalfa is exported. According to National Geographic, 88% of alfalfa produced in the Colorado River Basin is consumed domestically as livestock and dairy feed.