GRAIN SORGHUM

Because it lacks gluten, certain proteins present in wheat, rye and barley, sorghum is considered safe for the 1 to 2 million people in the United States diagnosed with celiac disease, also known as gluten intolerance.

Currently, Yuma County producers are growing roughly 1000 acres of sorghum this year, significant sorghum acreage has not been grown in the region in years.

A bushel of grain sorghum produces as much ethanol as a bushel of corn. Currently, 12% of sorghum production in the US is used to make ethanol.

50% of all the grain sorghum produced worldwide is consumed directly by humans.

Grain sorghum has been found by archeologists at sites originating as early as 8,000 years ago.

Some hybrid sorghum varieties can reduce nematode populations over 80% when plowed down while still green.

Over 90% of a grain sorghum plant’s root system is in the top 24 inches of the soil.

Here’s a sorghum rule of thumb. Every one bushel of grain sorghum harvested requires ~550 harvested heads.

It requires 6,800 gallons of water per bushel per acre to produce a 125 bushels/acre corn crop. It requires 5,400 gallons of water per bushel per acre to produce a 125 bushels/acre grain sorghum crop. As grain sorghum requires less water than corn, it is likely to be grown as a replacement to corn and produce better yields than corn in hotter and drier areas, such as the Yuma.

Sorghum contains such valued nutrients as iron, calcium and potassium. Before the invention of the daily vitamins, many doctors prescribed sorghum as a daily supplement for those low in these nutrients.

Sorghum is a tall, coarse annual (Sorghum vulgare) of the family Gramineae (grass family), somewhat similar in appearance to corn, but the grain is located in a panicle at the top of the plant rather than an ear on the main stalk.

Probably indigenous to Africa, it is one of the longest-cultivated plants of warm regions there and also in Asia—especially in India and China. Because of its extreme drought resistance due to an unusually extensive branching root system, sorghum has the ability to better withstand hotter climates than corn.

In the United States, sorghum is grown throughout the Great Plains area and in Arizona and California; about half the crop is used for forage and silage and half for feed grains.

Sorghum is the world’s fifth most important cereal, in terms of both production and area planted.

Sorghum is crucial to the world food economy because the grain contributes to household food security in many of the world’s poorest, most food-insecure regions. In the main production
regions in Africa and Asia, more than 70 percent of the sorghum crop and over 95 percent of
the millet crop are consumed as food.

Grain sorghum is probably indigenous to Africa. It is one of the longest-cultivated plants of
warm regions there and also in Asia—especially in India and China.

The first sorghum seeds may have been brought into the United States during the late 1700's on
slave ships. It is believed that Benjamin Franklin introduced the first grain sorghum crop to
the United States.

Grain sorghum grows well in Arizona because it doesn’t require a lot of water and can survive
long, hot summers.

Milo is a variety of grain sorghum.

Johnsongrass is a variety of sorghum, native to Africa, which has become an invasive weed in
the US.

Sorghum is a genus with many species and subspecies, and there are several types of sorghum,
including grain sorghums, grass sorghums (for pasture and hay), sweet sorghums (for syr-
ups), and Broomcorn.

Grain sorghum and maize (corn) are comparable in costs of production and in nutritional qual-
ity.

Grain sorghum requires less water than corn, so is likely to be grown as a replacement to corn
and produce better yields than corn in hotter and drier areas, such as the Yuma. One study
showed that when corn required over 30 inches of water, sorghum required less than 23
inches.

US sorghum accounts for 70% to 80% of world sorghum exports.

Although breeding has resulted in better nutritional value of sorghum and better flavor, earlier
sorghums had higher tannin levels, which caused offensive flavor and was advantageously
used as a deterrent to birds. These high-tannin sorghums are still grown where birds could
cause significant losses.

Due to its hard and waxy covering, the sorghum grains need to be processed by cracking, rolling,
or grinding.

Sorghum fibers are used in wallboard, fencing materials, biodegradable packaging materials,
and certain solvents. Dried stalks can be used for cooking fuel, and dye can be extracted
from the plant to color leather.

A more recent use of sorghum is for ethanol. By-products from ethanol production, such as sor-
ghum distillers grain, are also finding a place in the market as animal feed.

Sorghum can be used as a gluten-free replacement for wheat, but due to the lack of gluten sor-
ghum breads are generally unleavened. Some varieties are rich in antioxidants. And except
for the high-tannin sorghum, the flavor is neutral and the grain is known for taking on the
flavors of the other ingredients.

Kurt Nolte is an area agriculture agent with the Yuma County Cooperative Extension. He can be
reached at 928-726-3904.