



Texas Agricultural Extension Service

The Texas A&M University System

Guar Production Factsheet for West Texas

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Contract guar acreage in the Texas South Plains and surrounding areas for 2000 was about 30,000 acres. Most acreage in 2000 was concentrated in Terry county (nearest contractor) and west Dawson County and far east Gaines County (after hailed-out cotton in early July).

Past Production

In the last 20 years 15,000 to 40,000 A of guar has been grown in the Vernon, TX, area with some across the Red River in Oklahoma. There is one processing plant for field guar in the U.S., Rhodia, Inc., in Vernon (940.552.9911) although they mostly process guar endosperm from India and Pakistan.

Uses

Guar primarily is processed for its galactomannom (or mannogalactan) gum which is extracted and widely used as a stabilizer and smoother in ice cream and other frozen desserts. Industrial uses include paper manufacture and especially as a frac gel in drilling muds. The guar meal following extraction is good high-protein feed, but as a hay or forage guar appears inferior to many other legumes.

Background Information

Guar is also known as cluster bean or guar bean though it is not a true member of the bean family. It does very well in droughty conditions, and in spite of limited soil moisture and rainfall achieved good yields in 1999. Guar is probably the most drought tolerant crop grown on the South Plains. Guar has occasionally been grown as a soil builder in the Rolling Plains. Crop insurance for guar may be available in 2001.

Yield Potential and Irrigation Response

Typically, we'd expect 500-1100 lbs./A dryland, and 800-1400 lbs./A for limited irrigation (3-6"). A few growers had guar under center pivots in 1999 due to hail out on cotton. Irrigation was 2-3" total and appeared to increase yields 200-300 lbs./A. Heavy irrigation (every 3-4 days) with spray application actually reduced yields in one instance, possibly due to washing the pollen off.

TAEX Reports

TAEX has not put out any information on guar since 1977 ('Keys to Profitable Guar Production, TAEX, B-1399), which is out of print but still available. Additional information was gathered on N fertility, harvest methods, and varieties in Terry Co. in 1999. A dryland guar-cotton rotation project was initiated in 2000 at AGCARES in Dawson Co.

Basics of Guar Management

*Guar is drought tolerant and is well-suited for sandy ground.

*Due to limited herbicide labels, it is not suited for weedy ground.

*The best use of guar in South Plains agricultural production appears to be rotation with dryland cotton.

Establishment

Minimum soil temperature at planting, 65 F, but 70 F is better (plant later than cotton). Guar seeding dates for the South Plains is generally about May 20-July 5, earlier if soil temperatures are warm. In 2000, earlier planted guar, even into late April, was able to take advantage of early rains and outyielded guar at all other planting dates with some fields yielding as much as 1200 lbs./A. Use good certified seed (~8 lbs./A on 40" rows) free of morning glory seed. Seeding equipment and planter plates used for sorghum will suffice for guar. Four varieties are currently available, but little is known of their relative performance in West Texas. Kinman and Esser have the longest track record, but Santa Cruz and Lewis appeared to perform the best in 2000. Lewis pods mostly on the mainstem thus this variety in particular favors planting on narrower rows (30" or even drilled). Santa Cruz and Lewis also had the highest test weights among 2000 production (62-64 lbs./bushel), whereas Kinman and Esser were lower. In 2000 test weights of 57 or less were rejected at delivery to the processing plant in Vernon.

Although good *Rhizobium* nodulation has not been achieved in the South Plains for this legume, inoculating with a guar-specific inoculant is still recommended (preferably one with a sticker already included). Use pre-plant yellow herbicides to control weeds (a big problem is that there are no currently labeled post-emerge or over-the-top herbicides).

Production may be favorable on narrower spacing. A common harvest problem is that many of the pods on the mainstem and lowest branches are close to the ground and difficult to harvest. Increasing seeding rates slightly or narrowing row spacing might give the plant a more upright plant architecture.

In-Season Management

Guar is a minimal input crop, which should be figured into production costs. If cultivating for weeds, do not throw dirt on lower limbs. No known fields have been treated for insects or disease in 1998-2000 in the South Plains although some fields with irrigation have developed unspecified disease. Guar midge (not the same as sorghum midge) has been an occasional problem in the past in the Vernon area.

Termination and Harvest

Guar is indeterminant. Guar commonly has a few green pods up until harvest, mostly dry pods, and a green stem. Efforts to terminate the crop early with Round-Up or sodium chlorate have been inconclusive, often because of insufficient leaf area to absorb the chemical.

A low-profile row-crop header may reduce harvest losses. On a drier than normal crop in Terry Co. in 1999, a row-crop header netted about 200 lbs./A more guar vs. a conventional flex header. In 2000, several growers did have good success with flex bar headers.

The Year After Guar

Due to some pod shattering off the stalk at harvest, Round-Up Ready cotton after guar should provide adequate control of most volunteer guar the following year.

Contract Information for 2001 (price probably available by late February)

In West Texas prospective growers may call, Klint Forbes, West Texas Guar Contractor, Brownfield, 806.863.6680, or Wes Campbell, Floydada, 806.983.2474. Other areas may contact Rhodia, Inc., in Vernon, 940.552.9911, for a list of guar contractors. Contracting, trucking arrangements, and net prices to the producer may vary among contractors.

The following is an example of how guar was priced and contracted in 2000.

- 1) West Texas Guar, Brownfield, located at C C Grain in Brownfield (Cory Golden, 806.637.4662) or Klint Forbes, 806.893.6680, had a two-tiered pricing system:

Contracted by May 15--for grade #1 delivered to Brownfield, net to producer, \$15.50/cwt, less a fuel charge for higher truck diesel costs to truck to Vernon; for grade #1 delivered to Vernon, net to producer \$17.00/cwt (no fuel charge).

Contracted for May 16 to July for grade #1 delivered to Brownfield, net to producer, \$14.50/cwt, less a fuel charge for higher truck diesel costs to truck to Vernon.

- 2) Wes Campbell, Floydada, office phone 806.983.2474, net \$14.00/cwt to producer, with contractor paying trucking charges.

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