Forage sorghums can be very tall, producing huge amounts of silage. This is a research trial in California.

Jury Still Out As To Best Fit For Sorghum Forages

By Chris Bennett

Roll the clock back 25 years and there was no question or debate: sorghum forages were not as good as corn for silage feed — forages simply were lacking in quality when lined up against corn silage.

"We've come a long way from what your father or grandfather grew as forage sorghums years ago," says Jeffrey Dahlberg, director of the Kearney Agricultural Research and Extension Center, Parlier, Calif. "It's to the point now that we can compete with corn silage on both quality and tonnage."

A farmer can buy a bag of corn and then, depending on market whims, plant and harvest for grain or plant and harvest for silage.

However, sorghum is distinct, and researchers are breeding varieties specifically for forage quality, a marked difference between the corn and sorghum sides.

"It can now be argued that the quality of our forage sorghums is as good as corn," Dahlberg says. "I think there is no doubt about that. One of the advantages we have over corn silage is that we don't need as much water."

He points to Texas A&M research from Bushland, Texas, showing that forage sorghums could use from a third to half the water of corn silage and still produce the same quality and yield.

Reduced water usage, he says, is "a huge advantage, especially in areas around the U.S. that are concerned with having enough for their silage production."

In California agriculture, water talks — no

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—Jeffrey Dahlberg, Director of the Kearney Agricultural Research & Extension Center

Jeff Dahlberg spoke at a field day this summer at the Westside Research and Extension Center in Five Points, Calif. where there are many types and varieties were planted for evaluation last summer.

other American state is as water-conscious. Despite being the top U.S. state in farm revenue, it also ranks as one of the driest states, with an average of only 22 inches of rainfall per year.

California has also become the poster child for American water conflicts, with drought, water storage issues and environmental lawsuits, insuring that the problem will be around for decades to come. California farmers, despite generating $40 billion for the state's economy each year, face increasing water cutbacks and uncertainty.

Dahlberg makes it clear that sorghum isn't just about less water: "Sorghum silage also typically doesn't need as much nitrogen; in fact, you can over-manage sorghum silages, which can be an issue."

Forage sorghums do require more management than corn — less water and less fertilizer. "With that system you can produce silage that is equivalent to corn," he says.

"Typically, growers think, 'I've got to manage this exactly as I do my corn silage.' But when they do that, they tend to over-fertilize and over-water the sorghum. That tends to let it grow too fast and too well. It doesn't set and have a good lignin content down in the stem for stock strength — and then it can lean over and lodge."

Dahlberg says lodging issues can be dealt with through good management of water and nitrogen. "Those who haven't grown forage sorghums in 20 years will be pleasantly surprised by the selection of sorghums and their quality."

Nutritionally, he says, cattle respond well to forage sorghums. "These sorghums might have a little less energy, and you might need to add a bit of energy to your silage ration, but that is dependent on what kind of nutrition groups you are working with. In most cases, this can be tweaked and you won't lose anything."

Corn remains California's traditional top drawer silage crop, and that's what forage sorghums are competing against, says Carol Frate, UC farm advisor, Tulare County.

It's the quality and yield of corn compared to sorghum's advantage of using less water, more salt-tolerance, and maybe a little window in the late summer or early fall for an additional crop.

In parts of Tulare County where there are salt issues, or where water is short, or where corn went in early — growers are increasingly planting and experimenting with sorghum, which continues to gain popularity and attention as California confronts increased water scarcity.

"We've seen more sorghum grown lately," says Frate. "In addition to its need for less water, in some parts of Tulare County, sorghum is more tolerant to salt. With corn, a good grower can get 36 tons to 38 tons per acre of silage. Some of the forage sorghums can produce very high yields, but we haven't sorted out — when we have water and nitrogen — which variet-

ies begin to approach or are equivalent to some of the corn silage varieties.

"I'm looking at input costs and comparing them to yield potential and quality for milking cows. I would be a bit leery of the forage sorghums that grow so tall because of lodging issues. We've had some growers experimenting with them and then having 20 or 40 acres of forage sorghum that is pretty flat."

Frate says she remains unsure of the precise role of forage sorghums. She believes the jury is still out regarding their best fit, "which kinds we want and which varieties will perform well and not lodge — it's a matter of what their niche is going to be."

With the chronic water crisis and a dairy industry shackled by exorbitant costs — and little relief in sight as producers measure the strain of rising inputs — the role of forage sorghums in California agriculture will continue to gain attention.

Dahlberg looks east for a bellwether: "Out in the western Panhandle of Texas, it's pretty dry, with a lot of dairies. Lots of those guys are using forage sorghums, primarily because of water issues. They're not losing very much by switching over, and they have been pretty happy with forage sorghums."

Forage Seed Exhibitors

Be sure to check with forage seed suppliers at World Ag Expo Feb. 12-14 in Tulare, Calif., for the most adaptable varieties for your area. Here is a list of forage seed suppliers and forage harvesting equipment:

Forage Handing, Hauling, Supplies

ACX Pacific Northwest, Inc.	3228
Bridon Cordage	2400, 2401
Burrows Enterprises	DX36
F S I Fabrication	GS50, GS51, GS52, GS53
Grouser Products	T54
H & S Manufacturing Company, Inc.	AB19
Mil-Stak. Inc.	P6,P8
Parma Company	N39
Patz Corporation	DS149
Stinger, Inc.	SS89
Warren & Baerg Manufacturing, Inc.	3318

Forage, Silage Supplies, Equipment, Parts, Accessories

ACX Pacific Northwest, Inc.	3228
Ag-Bag, A Miller St. Nazianz, Inc. Co	DS117, DS118
Agri-King	6406, 6407
American Fabrication & Powder Coating	3222, 3223
B&D Rollers of MN, Inc.	6036
Busatis GmbH	4200
Circle C Equipment, LLC	SS79
Claas of America	P37, P39
Connor Marketing	DS105, DS106
Cordex North America	3115
Ellis Equipment-Distributor	N17
Fabpro Oriented Polymers	2508, 2509
Fabra Dome	DS120
Hanson Silo Company	DS126
International Stock Food Corp.	6102
Kemin Industries, Inc.	6513
Kondex Corporation	GS59
Kooima Company	6721, 6722
Kuhn North America, Inc.	O31, DS74
M A Mattos Enterprises	2503
Monsanto	6432
Nikkel Iron Works, Corp.	O32
PACBAG	DS72
Poettinger U.S., Inc.	GS60
Reman Sales & Service	K10
Scherer Design Engineering, Inc.	6025
Staheli West, Inc.	S37, S39
Supreme International Limited	DS137
Tarps & Tiedowns, Inc.	3000
Versa Corporation	N33, N35

Seed

America's Alfalfa	6034
Barkley Seed, Inc.	6312
Blade Energy Crops	3817, 3818
Dow AgroSciences	3215, 3216
Eureka Seeds, Inc.	6216, 6217
Mycogen Seeds	6308, 6309, 6310
NEXGROW Alfalfa	6516, 6517
Penny Newman Grain Company	6228, 6229
S & W Seed Company	6615
Santa Maria Seeds, Inc.	3332
The Burchell Nursery, Inc.	1334, 1434
Willits & Newcomb, Inc.	L37
WinField Solutions	6612
W-L Research	6604