Center for Value Added Seed Technology

Mission

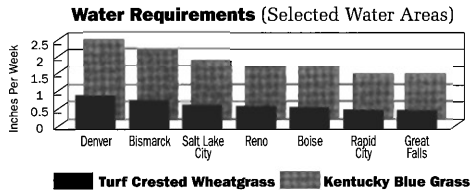
To assist industries through the genetic transfer of carefully chosen and economically important traits to wheat, barley, forage and turf grasses, and by releasing genetically enhanced breeding lines and varieties.

The Center

The Center for Value Added Seed Technology (CVAST) at Utah State University is developing drought-resistant, low maintenance turf grasses, and hybrid varieties of wheat that could transform wheat production much as corn hybrids did when they were introduced over a half century ago.

TURF CRESTED WHEAT GRASSES

Turf Crested Wheat Grasses are the carefully bred progeny of wheat grasses obtained from the Mideast. Wheat grasses are now widely planted on range lands to provide forage for livestock. However, this new turf grass should be available for commercial uses in a few years. *Lawn varieties of this commercial turf grass grow more slowly and require about half as much water and less mowing than that of conventional lawn grasses.* The development of this grass would capitalize on a growing market estimated at $200 million annually.

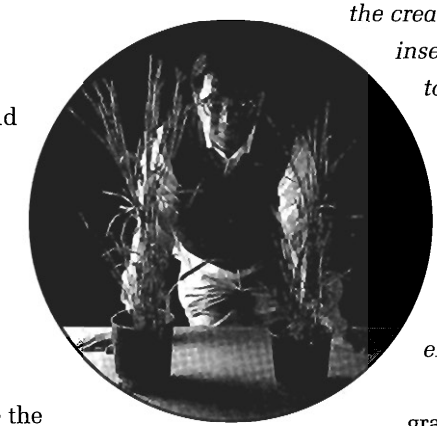


	Kentucky Bluegrass	Turf Crested Wheatgrass
Denver	2.25	0.90
Bismarck	2.00	0.80
Salt Lake City	1.70	0.68
Reno	1.50	0.60
Boise	1.50	0.60
Rapid City	1.25	0.50
Great Falls	1.25	0.50

Source: Cooperative Extension Service

HYBRID WHEAT

The key to producing hybrid wheat varieties, another focus of CVAST's research, is the transfer of the genes that control apomixis, the ability of some species of plants to clone themselves through their seed. The transfer of desired traits through genes would eliminate the need for labor intensive and expensive hand pollination of wheat that is currently required to produce wheat hybrids. USU researchers have already produced a few wide hybrids with desired traits by hybridization with a species of wheat grass, a distant relative to wheat. *Developing successful hybrids could boost production of wheat by 10% to 15%, an increase worth hundreds of millions of dollars annually.*



Hybrid wheat varieties.

Center Highlights

- Proprietary procedures for efficiently producing genetically engineered wheat were developed and are undergoing final testing by CVAST scientists. *This innovation will facilitate the creation of wheat lines with unique insect, disease, and herbicide tolerances, higher yields, and improved nutritional and bread making qualities and will catapult wheat and probably other world grain crops, for the first time, into the realm of modern genetic engineering.*
- A promising turf-type wheat grass, obtained from Kazakhstan in 1992, will enhance development of a variety of turf grasses with unique applications.

For more information, please contact:

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