

Water saved with gypsum

COLLEGE STATION, Texas—

Substantial savings in maintenance costs and water use are being chalked up to gypsum blocks used to measure moisture content.

The Texas Agricultural Extension Service here is teaming up with school districts and farmers to investigate these gypsum blocks, which have the potential to save considerable money and water.

"You plant these in the soil where the roots are. When the soil dries up, the gypsum dries up," explains Joe Hengler, associate professor and extension agricultural engineer/irrigation at Texas A&M University.

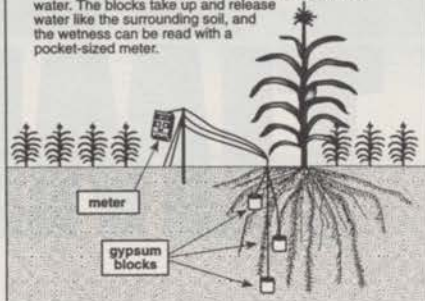
Made of an ingredient in plaster-of-paris, the blocks are buried in the soil at different depths. They take up and release water just like the soil. Their wetness can be read from a pocket-sized meter.

The blocks make it possible to determine how much moisture is available to plants, to spot and correct uneven water distribution, and to help schedule effective but efficient irrigation.

At Crane High School where less than 15 inches of rain falls each year, the football field was watered for an hour every day from March through September. School officials then worked

Gypsum blocks conserve water

The Texas Agricultural Extension Service is teaming up with farmers and school districts across the state to install gypsum blocks. These water-saving tools have the potential to save thousands of dollars and millions of gallons of water. The blocks take up and release water like the surrounding soil, and the wetness can be read with a pocket-sized meter.



Source: Guy Figgs, Texas Agricultural Extension Service
Graphic: Agricultural Communications, The Texas A&M System

with the extension service to bury the gypsum blocks at 6, 12 and 18 inches.

Moisture readings from the gypsum blocks indicated that the football field needed to be watered only for an hour, just three times per week. The new watering policy saved more than 170,000 gallons of water and nearly \$2,000 during the hottest six weeks of the year.

"Their watering practices changed drastically," says Greg Gruben, Crane County's extension agent. "The field looks just as good, and any time you can save the school system money, you're doing a good deed."

Hengler reports that five or six companies manufacture the gypsum blocks and moisture meters. "Some devices are tied to your (irrigation system) timer. Football fields are good targets, but I'm sure it would be a benefit to parks and golf courses."

—Jim Guyette

ACTUAL WATER USE AND COST DATA CRANE (TEXAS) HIGH SCHOOL

Month	1989		1990	
	Gallons	Cost	Gallons	Cost
July	193,332	\$2,938.65	125,835	\$1,912.69
August	96,309	\$1,362.39	25,945	\$394.36
Sept.	115,112	\$1,749.70	82,670	\$1,256.58
TOTAL	404,753	\$6,050.74	234,450	\$3,563.63

Source: Greg Gruben

The illustration shows a hand in a dark sleeve pulling a lever on a mechanical device. The device has a large, spoked wheel on the left and a horizontal barrel on the right. Several bullets are shown in motion, some entering the barrel and others being ejected. A large, flame-like shape is emerging from the barrel. The background is a gradient of yellow and orange.

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