Texas A&M irrigation engineers test subsurface drip systems

BY **ROBERT BURNS**

Tests show 12-in. spacing between lines works best during a drought.

"If we can make it work here, we can make it work everywhere," said Dr. Guy Fipps, a Texas AgriLife Extension Service engineer in College Station.

Fipps wasn't singing about show biz in New York. Instead, he was talking about subsurface drip irrigation for turf.

Initial tests of subsurface drip irrigation systems by Texas AgriLife Extension Service engineers show 12-inch spacing between the lines works best during a drought.

Fipps and Charles Swanson, AgriLife Extension associate–urban irrigation, have been testing subsurface drip systems near the Medical School on the Texas A&M University campus since July 2008.

Originally, the test was designed to test subsurface systems in the area's heavy clay soils; but it turned out to be a test of the systems under drought conditions as well, Fipps said.

"We had 54 consecutive days without rain," he said.

The drought made one thing clear: "During droughts, there's no doubt you can't go greater than 1-foot spacing," Fipps said.

Subsurface drip irrigation is being promoted by irrigation companies as a potential water-saving alternative to conventional sprinkler systems.

"But the thing that's not well understood is how durable the drip irrigation is," Fipps said. "That is, how long it'll last under a typical landscape installation."

Several factors can affect the longevity of subsurface systems, including shrinkage and swelling of soils, and trash, particulates and minerals in the water.

Soil shrinkage and swelling can damage drip tape and fittings. Trash and other foreign matter in the lines can clog the small holes or emitters. Because the lines typically are buried 2 to 4 inches deep, repair can be expensive.

College Station was the ideal location for the test because the heavy clay soils shrink and expand as they dry out and become wet again, Fipps said. Also, the local water supply contains many particulates and minerals.

"In sandy soils, you won't have shrinkage and expanding as you do with clay soils," he said. "Also, many areas in Texas have better water quality. And we had a drought this summer, as everyone knows."

Fipps and Swanson tested eight drip irrigation products at different spacings of the drip lines. They also compared four systems with and without an installed back-flush feature, which allows one end of the line to be open to purge any trash and particulates. Drip tape and drip tubing with varying spacing of the drip emitters are being evaluated.

As of late October, there have been no problems with emitters clogging or with tears in the tubing. However, it appears that during dry periods, if there's inadequate irrigation, the soil will shrink and compact around the drip tubing, reducing and or preventing the free flow of water along the full length of the tubing, Fipps said.

"After installation, we had problems with the drip tubing being pulled out of the fittings connecting it to the supply pipelines, which could have been caused by any combination of soil shrinkage and swelling, fluctuations in pressure and improper installation," he said.

Fipps and his associates hope to continue the study for at least five years.

PHOTO COURTESY: CHARLES SWANSON

Dow adjusts pricing

INDIANAPOLIS — Dimension specialty herbicide for control of crabgrass and broadleaf weeds is more cost-effective than ever. Based on challenging market dynamics, Dow AgroSciences has lowered the price on all formulations of the product, including Dimension 2EW, Dimension Ultra 40WP and Dimension on fertilizer. The company also has made price changes to Eagle 20EW specialty fungicide.

Honoring sustainable practices

TORONTO — A new Green for Life Award will be introduced at Congress 2010, and the winners will be announced Wednesday, Jan. 13, 2010, at Tailgate Party XIV. The Green for Life Award has been created to promote, recognize and reward environmentally responsible professionals in the horticultural, lawn and garden industry. Winners will be drawn from three industry sectors: contractor, landscape design/interior plantscape and lawn care/maintenance.

Syngenta extends world-wide reach

TEL AVIV, ISRAEL — Syngenta and Makhteshim Agan announced a long-term agreement in which Syngenta will supply Makhteshim Agan with its azoxystrobin fungicide. The agreement will offer growers a wider choice of products through the distribution channels of both companies.Syngenta will continue to expand the sales of its azoxystrobin-based fungicide products, while Makhteshim Agan will develop and commercialize its own range of products based on azoxystrobin, mainly in mixtures with its existing fungicide portfolio.