

Study could help increase plants' productivity

BY MICHELLE STARR
Staff writer

UNL researchers are studying plants to try to make them more productive, which will reduce the amount of water and fertilizer they need and possibly increase crop yield.

John Markwell, a UNL professor of biochemistry, along with John Osterman, a UNL associate professor of biological sciences, have been studying plants' responses under drought conditions in an effort to make plants more productive.

"In a state like Nebraska, water is the main limitability," Markwell said.

The research, which began about three years

ago, has also shown that when plants accustomed to a high amount of water are under drought conditions, they use their energy more efficiently, Markwell said. The increased efficiency could allow more productivity in dryer parts of the state, such as western Nebraska.

"It's almost like a desert out there," Markwell said.

With an increase in productivity, plants will utilize nitrogen more efficiently, resulting in less fertilizer use, which will reduce the amount of run-off and contamination, Markwell said.

Also, the plants' photosynthesis productivity is increased, which means plants might need less water and thus take less water from Nebraska's aquifer for irrigation, Markwell said.

The research is also looking at increasing crop yield by genetically engineering crops such as soybeans, Osterman said.

"The majority of crops in Nebraska are going to encounter water limitations at some time. We're trying to help those plants maintain their yields under these conditions," Osterman said.

The research is also examining why plants in drought conditions use a process of photorespiration that takes carbon from the air and converts it to oxygen and sugar made from photosynthesis and then turns it back into carbon, a counteractive process, Osterman said.

The researchers are studying how to stop photorespiration because it expends too much of the plants' energy.

The plants might conserve energy by reducing photorespiration. The researchers are studying what the genetic causes may be for this conservation of energy.

The research has been partly conducted by examining the amount of chlorophyll in the plants' leaves, which determines how efficiently the plant uses its nitrogen; the more chlorophyll, the more efficient the use.

Researchers used a chlorophyll meter and an equation calculated by Markwell to determine the amount of chlorophyll in the plant, Markwell said.

The USDA is funding the project, and Markwell will be gathering more information to apply for other grants from the USDA and the Department of Energy, Markwell said.

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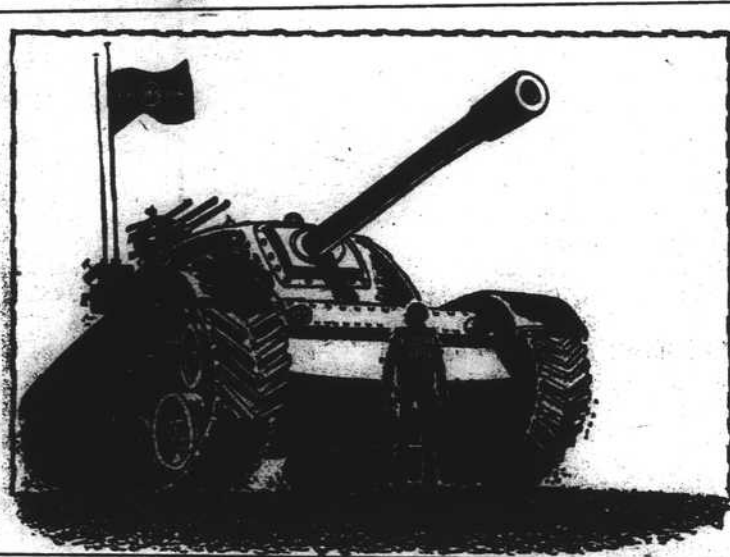
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Intelligence sources will "neither confirm nor deny" the so-called insidious insidious Brain-Devolution associated with repeated exposure to said "broadcasting" procedure.(Live365.com.)

+**Ignore the following at your own peril**:

MYTH 1

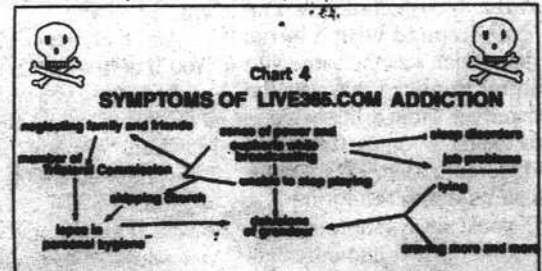
"All you're gonna feel is good." Sure, the "tunes" seem good, the DJs seem good, it's all good. !!!At FIRST!!! But then you're hooked and the turntables turn. Just how "good" are you gonna feel when you have to move what's left of your belongings into a box car?!!?

MYTH 2

"I can quit listening any time I want." Nail biting, slouching, "close" dancing--these are things you can quit. Live365.com is not. Pretty soon, you'll be skipping work. Kids will be playing hooky. And who's that sitting in your barcalounger? Why it's Saddam Hussein!

MYTH 3

"Free music on the Internet is good." That's just what the Trilateral Commission (aka the Illuminati aka the Bilderbergers) wants you to believe. Wake up, Nancy! Free music leads directly to Free Love... and next thing you know you're keeping time to the music with a big dose of the Clap!



Darryl Jackson aka DJ Darryl aka THE DOMINATOR aka Rasta D This unlicensed DJ's (Death Jockey!) reggae show now has 100,000 desperate addicts. How many more must fall under his spell before we awaken from our slumber???



***this "curious" pattern appeared one morning in an Idaho cornfield. The handiwork of an overzealous farmer and his mower? Think again!!!!!!



Wrong for America

