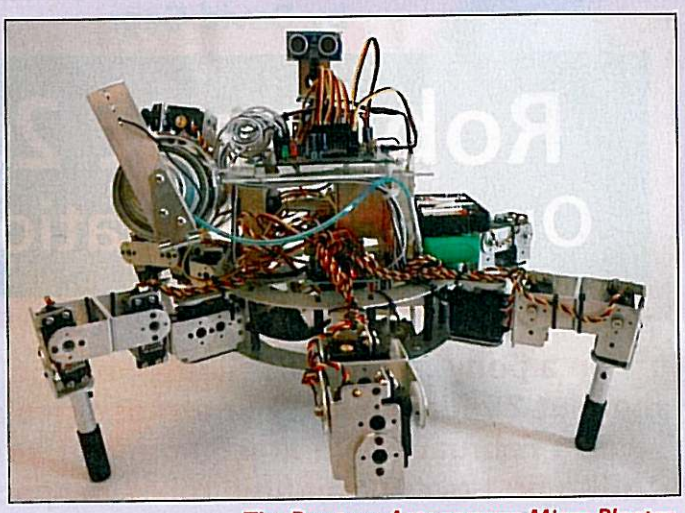
Robotic Farming with Swarm Technology

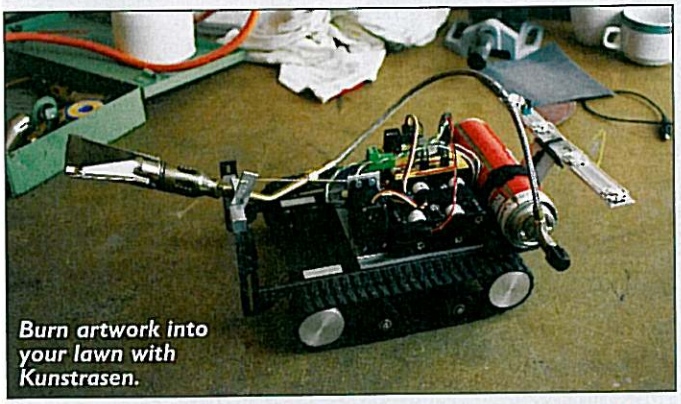


The Prospero Autonomous Micro Planter.

It may not pose much of a threat to John Deere, but the Prospero robotic farmer does offer a new approach to farming. According to its creator, David Dorhout, existing farm equipment has a basic design flaw in that it is centered around a human operator which has led to larger and more complex equipment to allow one farmer to cover as much as a thousand acres in a day. The problem is that such equipment tends to treat the entire farm as if soil, moisture, and nutrients are uniform which often is not the case. His alternative is the Prospero autonomous micro planter (AMP) which is designed to be one of a swarm of autonomous but interactive robots that — while planting — can adjust its procedures to match conditions in the field. The final goal is to develop one robot that can plant, tend, and harvest, autonomously moving from one phase to the next. The prototype is controlled by a Parallax Propeller chip mounted on a SchmartBoard. It can walk in any direction and avoid objects via ultrasonic pings. In operation, it can determine optimal spacing and depth, then dig a hole, plant a seed, cover the seed, and apply required fertilizers and herbicides. Several videos are posted on YouTube, so you can see it in action. A 60 page description of the AMP (including source code) is available from a blog on Trossen Robotics website. Just log onto **forums.trossenrobotics.com/showthread.php?t=4669** and scroll down to the PDF.

Scorched Earth Machine

Artist Sebastian Neitsch has created a range of robotic and kinetic devices, including a chandelier whose 12 lighted arms react to the movements of spectators, a kinetic garden of 36 moving carbon staves, a robotic cube that runs away from you, and others, most with no practical purpose. However, you have to like the possibilities presented by "Kunstrasen" (German for "artificial turf") — a small bot that crawls around on your lawn and burns designs into the grass using vector graphics and a flamethrower. Perfect for burning obscenities into your neighbor's turf or tormenting the greenskeeper at the local golf course. You can check them all out at **www.sebastianneitsch.de**. SV



Burn artwork into your lawn with Kunstrasen.