New technologies, techniques paving the way...

**Dry Sprayer takes overseeding to the next level**

**By ANDREW OVERBECK**

JACKSONVILLE, Fla.—Turf Solutions has developed the Dry Sprayer, a machine using new overseeding technology that dramatically increases the speed, accuracy and germination time over standard overseeding techniques. Adapting air-blast technology commonly found in agricultural equipment, the Dry Sprayer blows seed directly into the turf canopy.

“We have modified this ag-based small crop machine into one suitable for turfgrass applications,” said John Wicker, vice president of Turf Solutions, the service arm of local distributor Southeastern Turfgrass Supply. “We built our first machine three years ago and we do the final assembly, modifications and shipping out of Jacksonville.”

The Dry Sprayer features a 1,000-pound ground-driven hopper-unit that distributes seed via a clutch-driven paddle to tubes that run down to the 16-foot boom. The seed, which is blown at a speed of 65 mph, then hits diffusers that run along the length of the boom, orienting the seed downward and blowing it into the turf canopy.

“The ground-driven distribution system ensures even application of seed and forces it through the thatch layer providing better seed-soil contact,” said Wicker. “This leads to better germination, uniform coverage and a reduced outlay of seed by 10 to 15 percent.”

The Dry Sprayer is ideally suited for fairway applications and can cover 120 acres in one day. “We typically make two passes with split applications and with three or more machines we can easily do a course in one day,” said Wicker. “One machine on a course could easily handle 25 to 30 acres a day, a significant time savings over traditional overseeding.

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**Metallic Power gets boost for zinc/air power**

**By MICHAEL LEVANS**

SAN DIEGO — Metallic Power Ltd. has been awarded a $350,000 contract from the California Energy Commission’s South Coast Air Quality Management District to demonstrate a prototype zinc/air fuel cell-powered riding electric greensmower by January 2000.

The company will collaborate with the Toro Co. on the project.

“With this contract we’re now on a rapid trajectory to develop the zinc/air fuel cell technology,” said Jeff Colborn, Metallic Power’s chief executive officer. Founded in 1995, the company has won more than $1.5 million in government research and development contracts.

The zinc/air fuel cell combines zinc pellets, approximately 1 mm in diameter, with oxygen. The reaction takes place in the presence of potassium hydroxide, the liquid electrolyte found in alkaline disposable batteries.

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**ABT consolidation, integration continues**

**By ANDREW OVERBECK**

HENDERSON, Nev. — AgriBioTech Inc. (ABT) marked the completion of the acquisitions phase of its three-pronged business plan by completely reshuffling it’s upper management.

Citing a need to shift gears into integrating and consolidating the 34 companies that ABT acquired since 1986, the company’s board of directors decided in late February to replace Dr. Johnny Thomas, chairman and chief executive officer. Kent Schuler, president and chief operating officer resigned in late March.

The board felt that former Lofts Seed president Richard Build and others would be better suited to operate the company as it moved into consolidation.

Budd, who joined the board of directors when Lofts was taken over by ABT in January 1998, is now chairman and chief executive officer and is joined by a new

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**Seed Research and Advanta sign marketing and research agreement**

**By ANDREW OVERBECK**

CORVALLIS, Ore. — In an effort to improve and enhance its current cool-season turfgrass offerings, Seed Research of Oregon (SRO) has acquired the North American turfgrass marketing program of Netherlands-based Advanta Seeds Inc. In addition, SRO has assumed responsibility for Advanta’s turf and forage seed production.

Terms of the agreement were not disclosed. “The agreement gives SRO and Advanta will manifest itself in new products down the line, according to Robinson.

“There are 160 varieties of perennial ryegrass and they are relatively similar,” said Robinson. “We would like to come up with something that is unique and there is a lot of work going on in Europe at the moment.”

The agreement gives SRO an instant fix to what it saw as an inadequate cool-season grass program. “With all the species that we work with and the expansion of our warm-season grass program it is hard to keep the intensity up,” said Wicker. “We were toying with two new breeders before we talked with

Continued on page 33
Scotts seed
Continued from previous page

which will ship the seed throughout
the country and handle the
billing and accounting.

According to Horman, the new
operation will be smoother,
eliminating many of the head-
aches that plagued his territory
managers and distribution sys-
tem in the past.

“What we did in the past was
store seed at seven different lo-
cations around the country,” said
Horman. “But we would put
things in the wrong warehouse
and have delivery or back order
problems. This agreement helps
us get away from that. There will
now be a distributor in the area
that has the seed that the cus-
tomers need.”

Landmark’s expertise in han-
dling complex distribution sys-
tems will allow Scotts to improve
delivery timeliness, offer more
services to its customers and
better serve regional demands.

“With regional distributors, we
will have a better idea of what
the customer wants. If there is a
greater demand for a product in
Michigan, we can do that now.
We can gear up and meet de-
mands in a specific state or re-

region very well,” said Horman.

The company’s 30 territory
managers will continue to promote
Scotts seed, but they will be pro-
moting the regional distributor
and the services they offer. “It
allows them to push seed, but not
have to deal with getting the prod-

uct there,” said Horman.

Zinc/Air battery
Continued from page 31

“In a lead/acid battery you’re using the
lead/hydrogen reaction. In this you’re using
the zinc/oxygen reaction which generates
electrons,” said Dana Lang, director of ad-
vanced turf care at Toro. “This device con-
sumes zinc and creates zinc oxide and in the
process gets electrical energy out of it.”

When the zinc/air fuel cell is exhausted,
zinc pellets are pumped into the cell along
with a liquid electrolyte from a “vend-
ing-machine-sized” recycling/refueling
unit. At the time of refueling, the
zinc oxide byproduct produced by the
reaction is pumped into the unit and is
turned back into zinc pellet form.

According to Colborn, this refueling takes
approximately five minutes, while the recy-
cling inside the “vending machine” is con-
tinuous.

“Aside from the recycling advantage, there’s
up to seven times the energy per pound in zinc/
air versus lead/acid,” said Colborn.

“While SRO will benefit
from Advanta’s strong tech-
nological knowledge and
research and development
capabilities, Advanta will

gain a powerful marketing

arm,” said Robinson. “SRO offers them
a large distributor base, a
distinct market presence
and it, in turn, will be easier
to move both the existing
and the new products that
come out of our agreement
into the marketplace.”

SRO has taken over all of
Advanta’s varieties and cus-
tomer base and has hired
Advanta salesman Scott
Harer to handle Advanta’s
Royal product line and the
new products that emerge
from the joint research ef-

forts.

SRO deal
Continued from page 31
Advanta.”

While SRO will benefit
from Advanta’s strong tech-
nological knowledge and
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capabilities, Advanta will
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arm.

Advanta found it tough
going as a new entry in the
North American market.
“They decided that in order
to be a player in this market
they had to go through an-
other company,” said
Robinson. “SRO offers them
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800 263-9499
ABT changes
Continued from page 31

which many industry experts think grew too much too fast, financially solvenl again.

"We are working to create a profitable and productive future for our customers and the company and put the growth and consolidation challenges behind us," said Budd. * 

Ask the microbes in your soil, they'll tell you. LiquiGreen" is a slow release, non-burning organic source of nitrogen that is safer to use and delivers more consistent results.

- Thatch is minimized.
- Root mass increases by up to 40%!
- Plants are more resistant to disease.
- Weather and even drought will take less of a toll.

Apply LiquiGreen and immediately, billions of microbes in the soil begin to convert LiquiGreen to available nitrogen. The slow release formula keeps a consistent level of nitrogen in the soil, longer.

More available nitrogen in the soil creates thicker and healthier turf.

Healthier plants stand up better in high traffic areas - like tee boxes, greens and fairway landing areas. Plus, LiquiGreen has a salt index that's 8-9 times less than other nitrogen sources; you could virtually triple the rate without burning! It also stays put. There's very little leaching with LiquiGreen; no nitrates will be showing up in the water table.

The end result! LiquiGreen helps you grow consistently, healthier plants that benefits your course as well as the environment! Ask any microbe....

LiquiGreen, of course!

Can you spare some for a fellow microbe.*

Ind. Seeds
Continued from page 31

bution channels," said John Zajac, director of Independent Seeds. "We will fully represent all the warm-and-cool-season turf varieties in one location and through one sales representative."

By combining these 13 companies, Independent Seeds now offers a broad line of high-performance turfgrass varieties. "If you take the companies that used to exist and replace them with the Independent Seeds name, we are very well represented in the top grouping of many of the current turfgrass trials," said Zajac. The new company will also benefit from increased marketing and ordering efficiencies.

"We have invested in more sophisticated warehouse tracking, which will make it easier to work with distributors; and we are working to simplify and trim down operations integrating our Oregon people into one location," said Zajac. "As we integrate we will take these new efficiencies and relavest into research and development and new products."

Improving research and development efforts is at the top of Independent Seeds' list. "We want to continue to play a leadership role in both warm-and-cold season grasses as far as the end user is concerned," said Zajac. "We will concentrate on developing turfgrasses that look better under less maintenance and environmental inputs and stand up better to the traffic and stresses that turf demands."

A larger research program will allow Independent Seeds to delve into more diverse projects. "We will spend more time looking at the less-important and more-obscure grasses that could be developed to serve niche markets that are now not being invested in," said Zajac. * 

Dry Sprayer
Continued from page 31

methods.*

"It is a huge time, labor and seed saver," said John Davis, superintendent at The Ford Plantation in Richmond Hill, Ga. "I did it for the first time last year at the Secessions Club (in Beaufort, S.C.). With other methods, we would go out and overseed in four different directions to make sure that we didn't miss any spots because the wind was so bad."

The Dry Sprayer also eliminates the need for crews to "beat" the seed into the turf. "We just mowed right behind it and we were done," said Davis.

Turf Solutions has built several Dry Sprayers and uses five of them in its service fleet, which has 50 accounts throughout Florida, Georgia and South Carolina.

Thanks to word of mouth, interest in the Dry Sprayer has extended beyond the Southeast. "We have gotten calls from people in California and Arizona," said Wicker.

With demand on the rise, Wicker expects to ramp up assembly next year with production slated to be around 40 to 50 units. The Dry Sprayer retails for between $15,000 and $18,000.

While Wicker admits that this new technology could catch the eye of larger equipment manufacturers, he plans to keep it.

"We are not actively seeking out larger companies with this," said Wicker. "Our name is trademarked and we have patents out on the design characteristics. Our goal is that they'll come to us."