

Turf Industry Personnel Services

EMPLOYER PAID POSITIONS FOR:

**Golf Course Superintendents
Turf Sales**

PLEASE SEND INFORMATION TO:

Name _____

Address _____

City, State, Zip _____

Position _____

Employee Employer

*All information confidential.
We endorse GCSAA Code of Ethics.*

**T.I.P.S., P.O. Box 773,
Boynton Beach, FL 33425**

BUSINESS & AGRONOMY

Tiny wasp 'promising' against some roaches

BY DARCY MEEKER

GAINESVILLE — A little wasp about the size of two fleas strung together shows promise as a biocontrol for cockroaches and palmetto bugs, says a University of Florida scientist.

The wasps lay their eggs on roach egg capsules and "parasitized" 100 percent of the roach eggs found in dark locations in test kitchens, said Dr. Phil Koehler, an entomologist with the UF's Institute of Food and Agricultural Sciences.

"One of the nice things is that this wasp prefers all the dark places that are hard for us to spray, like inside walls and behind kitchen cupboards," Koehler said. "People could have these living in their houses and

never see them."

The wasp "stings" only roach eggs, not people, he emphasized.

In earlier research with graduate student Brian Hagenbuch, about 600 wasps were released per week for seven weeks in test kitchens. By the end of that time, wasp larvae infected over 93 percent of roach eggs in and on cabinets and on the floor. In another month, infection rate was over 97 percent except on the ceiling. The research is to be published this fall in the *Journal of Economic Entomology*.

Unfortunately, the wasps are of no use against the pesky little German roach which protects its egg case by carrying it around. Nor are they effective against the Asian

ONE MAN DRESSING OPERATION



- ★ 3 YARD DUMP TRAILER
- ★ DOUBLE ACTION TAILGATE
- ★ METERED DOOR
- ★ HYDRAULIC LIFT

- ★ 12 VOLT ASSISTED
- ★ QUALITY CONSTRUCTED
- ★ CHOICE OF COLORS
- ★ LABOR SAVING

R T T
RAYSIDE TRUCK & TRAILER

2983 SOUTH MILITARY TRAIL
WEST PALM BEACH, FL 33145
(407) 965-7950

"South Florida's Truck Equipment and Trailer Place"

roach, another egg case carrier.

"Some of our roach problems may be the result of generally applied pesticides," said Koehler. "If you do a lot of spraying, you may be giving yourself a worse roach problem in the end by destroying roaches' predators and parasites. Where we stop spraying, we may be able to re-establish these wasp biocontrols.

"We got our colony of the wasps (*Testasichus hagenowii*) when they appeared in a university lab in 1986 after it switched from sprays to a bait to control roaches," said the IFAS extension entomologist. "Baits do not attract or kill most of roaches' natural enemies. It would be interesting to know how much their effectiveness comes from buildup of natural enemies like the wasp."

One way to distribute the wasps would be to release clouds of them in the spring on roaches' overwintering spots.

"Usually there's one palm tree or other

gathering spot that has thousands of roaches in it, that serves as a roach source for the whole neighborhood," said Koehler, working with scientists at the "Insects Affecting Man and Animals" Laboratory, a Gainesville outpost of the USDA Agricultural Research Service.

There's a lot of research that must be done first, however, Koehler said, and with little grant money available for roach biocontrol, the project depends on grad student interest.

"Luckily, Juan Correa Curbelo from Puerto Rico has decided to do his Ph.D. on the wasp, even though we could offer him no support.

"We've just been trying to maintain the colony until we could get somebody like him in here," Koehler said.

Curbelo will work on faster ways of raising the hagenowii wasps and researchers will see if its pupae (an encapsulated resting stage between worm-like larvae and



DARCY MEEKER/IFAS

Dr. Phil Koehler of the University of Florida's IFAS holds a vial of roach-marauding wasps.

free-flying adult) could be freeze-dried and distributed like a pesticide.

FLORIDA BLUEGRASS

T.M.

**Spray Pattern
Indicator Dye**

Gives you
efficient, precise
control of your
spray programs.



Du Cor Chemical
1011 Lancaster Road
Orlando, FL 32809
Call collect
(305) 859-4390

Specialized Chemicals for the Turf Grass Industry

**OUR NAME AND THE BEST
KNOWN NAMES IN TURF
EQUIPMENT TOGETHER SINCE
1932**

Distributors for:	HMC String Trimmers
Toro Mowers & Turf Equipment	Power Trim Edgers
Toro Turf Irrigation	Lely Spreaders
Toro String Trimmers	Standard Golf Supplies
Billy Goat Vacuums	Florida Turf Sprayers
Cushman Turf Care System	Broyhill Sprayers
Ryan Turf Care Equipment	Olathe Turf Equipment
Mitsubishi Tractors	



EQUIPMENT CO.



Jacksonville
1741 Hamilton St. 32210
(904) 387-0516

Orlando
11405 Rio Grande Avenue 32085
(401) 841-8460