

R&D NEWS

Biologicals

...crop protection agents from marine microorganisms

AgraQuest, Inc. have announced a new research initiative with the University of California, San Diego, funded in part by a BioStar (Biotechnology Strategic Targets for Alliances in Research) award. The joint funding will support research aimed at investigating deep marine sediment microbes for use as biological pest management solutions for controlling fungal disease, insects and nematodes. The research will be carried out in collaboration with the laboratory of William Fenical (Scripps Institution of Oceanography, UCSD) (<http://www.agraquest.com>).

...control of the glassy-winged sharpshooter

Gonatocerus triguttatus, a tiny, parasitic wasp that was imported from Mexico and bred at the University of California, Riverside, is now being released in limited numbers in Riverside County, California, USA by Riverside researchers, working together with the California Department of Food and Agriculture (CDFA). The wasp is another tool in the fight against the glassy-winged sharpshooter and Pierce's Disease, which have already caused considerable damage to grapevines in California (*Pesticide Outlook*, 2001, 12(5), 199). The wasp is successfully parasitising the sharpshooter in Mexico and Texas, by laying its eggs inside those of the larger sharpshooter. Researchers at Riverside will monitor how well the wasp survives in the dry heat of California, how successfully it reproduces and how well it is able to find and parasitise the sharpshooter eggs.

In addition University of Florida researchers have now patented a grapevine that is resistant to Pierce's disease.

...natural mosquito repellent

The US Agricultural Research Service has identified a piperidine from black pepper that is 3-4 times more effective than existing products such as DEET at repelling mosquitoes that transmit both yellow fever and West Nile fever (<http://www.barc.usda.gov/psi/caib/>).

Weed control

...organic pesticides

Certified Organics have contracted

BioDiscovery Ltd. New Zealand to evaluate the fungicidal and insecticidal potential of organic pine leaves. Certified Organics already sells Organic Interceptor™, the world's first organic herbicide, based on pine leaves. (<http://www.certified-organics.com>)

Disease control

...reduced mildew sensitivity to quinoxifen

In northern Germany, mildew that is less sensitive to the fungicide quinoxifen has been identified prompting fears of a strobilurin-style spread of resistance across Europe. Researchers say it is a reduction in sensitivity rather than full-blown resistance. That reduction in sensitivity is not yet fully understood so how rapidly it will spread cannot be predicted. Commercially, quinoxifen has only been available since the 1997-1998 growing season, but repeat applications are common.

...methyl bromide alternative

AgraQuest has licensed rights to the fungus, *Muscodor albus*, and related strains from Montana State University professor Gary Strobel, who found it during an expedition in Central America. The fungus, which emits a cocktail of gases that kill many disease-causing fungi, may be a useful methyl bromide alternative. The new product is likely to be submitted to the US Environmental Protection Agency for approval within 12 months. (<http://www.agraquest.com>)

...flutolanil against rhizoctonia

Aventis hopes to be able to market flutolanil in the UK for the control of new rhizoctonia/black scurf of seed, processing and ware potatoes in 2003. The compound has been marketed in Europe for 10 years alongside Bayer's Monceren (pencycuron); in the Netherlands it is sold as Monarch. As rhizoctonia resistance to Monceren has recently appeared in France, a new product will be welcome in the UK. (<http://www.aventis.com>)

Insect control

...second generation neonicotinoids

ACTARA is a new, wide spectrum insecticide from Syngenta, based on the second-generation neonicotinoid, thia-

methoxam. It is effective against over 70 pest species, protecting vegetables, cotton, rice, citrus fruits, stone fruits, pip fruits, potatoes and tobacco. It is safe to apply and low doses are sufficient. Its environmental profile is favourable and it does not accumulate in soil. Syngenta recently settled a patent dispute with Bayer over the production and use of thiamethoxam. (<http://www.syngenta.com>)

...fluacrypyrim – a new miticide

Nippon Soda has developed a new fast-acting acaricide, fluacrypyrim, effective against all growth stages of spider mites. Manufacturing will be undertaken by the subsidiary Koriyama Kasei. It will be aimed at the markets in China, South Korea and Japan.

Sterile insect technique (SIT)

...in South Africa

A SIT project has been used to control fruit flies in the Hex River valley of the Western Cape, run by the Infruitec-Nietvoorbij in Stellenbosch, and with financial and technical support by the FAO/IAEA Joint Division. Numbers of flies are significantly lower, and the 2001 season the number of cartons rejected for export because of fruit fly damage halved from 8% to 4%, while SIT has cost R2 million less than conventional pest control methods.

...in Australia

A recent report has revealed that use of SIT to eradicate medflies from Western Australia is technically feasible, but too costly. Eradication would cost upwards of A\$70 million and require the state's fruit industries to expand by 18% for benefits to exceed costs.

Genetic predisposition in OP poisoning

In a study involving 409 farmers, Nick Cherry and colleagues from the University of Manchester showed that farmers who reported ill health attributed to exposure to OP sheep dips were nearly twice as likely than healthy farmers to have specific alterations in the gene regulating paraoxonase (responsible for breaking down diazinonoxon, the principal metabolite of diazinon) (*Lancet*, 2 March 2002).