

Cost effective half-rate herbicides

Cereal crops treated with half-rate herbicides have been yielding just as much as crops receiving the recommended rates of agro-chemicals in United Kingdom trials.

It was found that full rates of herbicides were often, but not always, too much, while half rate often gave good performance.

The scientists who conducted the trials argue there is now compelling evidence that lower input alternatives to the use of herbicides at recommended rates are likely to be more cost effective. Their explanation is that recommended rates include increments for reliable performance in adverse environmental conditions and against less susceptible weeds.

The trials, in England, Scotland and Northern Ireland, looked at four basic treatments covering autumn and spring insurance spraying at both full and half rates, and full and half rates of the threshold programme, based on the weeds present and their likely effect on yield. Overall differences in levels of weed control between full and half rates were found to be small, and grain yield was similar for all sites for winter wheat, winter barley and spring barley.

However, one of those sites also suffered a population explosion of chickweed, demonstrating definite value in using full-rate herbicides for controlling weeds in some situations.

Source: London Press Service

Ozone pollution study

Crop yield losses caused by ozone pollution have led British scientists to call for wider research into the effects of the gas on plant production.

In a three-year study, scientists at Nottingham University, in the English midlands, found flower abortion and reduced yields in some varieties of oilseed rape exposed to typical levels of ozone. In contrast, other varieties appeared to be more resistant to ozone and did not suffer yield losses.

The trials were part of a £1 million research programme into the effects of ozone, jointly funded by the National Environment Research Council and National Power

Source: London Press Service

Pest killer's sting in the tail

British scientists working on genetically-engineered viruses to kill insect pests have hit on a method of speeding up their effect by going back to the natural world and using scorpion venom.

The viral insecticides being developed at the Institute of Virology, in Oxford, have worked successfully against target pests but are much slower to work than conventional pesticides. Now, the Oxford scientists have introduced the gene responsible for scorpion poison into a genetically-engineered pesticide. The gene produces a toxin, which immediately paralyses target pests for attack by the slower-acting virus.

The viral insecticides can be made unique in their action on target pests, and the Oxford team has introduced a destruct mechanism into the virus, which ensures that it kills itself off after dealing with the target pests.

Source: London Press Service

Hedgerows make a comeback

British farmers are replanting hedgerows around field margins at an increasing rate, according to a survey by the Institute of Terrestrial Ecology.

In 1984 the total length of hedgerows in England was 410,000 km. By 1990 some 39,000 km of hedgerows had been removed. However, the survey found a dramatic increase in new planting, almost 20,000 km, in England during that period.

In the period 1978-84, the annual rate of planting averaged 530 km, but the new survey shows that in the next six years the rate increased

sixfold to 3300 km. In the six years to 1990, 78,000 km of hedgerows declined in quality to the extent that they could no longer be classed as true hedgerows. This was partly offset by some 18,000 km of formerly derelict hedgerows being brought back into active management.

A new scheme aims to encourage the rejuvenation of hedgerows and bring them back into positive management by making payments to farmers and landowners to assist with coppicing, laying and other environmentally beneficial work.

Source: London Press Service

Copyright © 1992 ***REAP Canada.***