Integrated pest management comes to lawns

COLLEGE PARK, MD. - Ah Spring! With the official arrival of the vernal equinox, homeowners can turn their attention from soaring fuel bills, sudden snow squalls and gas line freezeups. Instead they can anticipate bright balmy weekends, suntans-and, yes, yard work, weeds and insect pests.

It's a shame that anything holding as much promise as warm weather also must bring with it the drudgery of landscape care and the partner problems of chemical sprays for weeds and insects.

Even if the homeowner opts for one of the commercial companies that promise to liberate you from hostage weekends, homeowners still must make the conscious decision to fill their little kingdoms with chemicals and sprays, or suffer crabgrass and beetles.

If need not be a feast or famine decision, though, say researchers at the University of Maryland. Suburban homeowners can bypass a lot of the chemicals and still have a beautiful, relatively weed and insect-free landscape.

How? University entomologists for years have been using a technique called Integrated Pest Management - or IPM - to help farmers save money and use fewer chemicals on their crops. Now, the same entomologists are bringing the battle and some of their successes to the urban front because their studies show that some heavily populated areas receive more pesticides per acre than farm land.

Urban IPM, say the entomologists, stresses managing plant diseases and insect and weed populations before they reach proportions that absolutely require chemical attention.

It's a lot like preventive or holistic medicine, explain John Davidson and Mike Raupp, entomologists at Maryland.

'We recommend using what we call 'scouts' to monitor the patient's health. Early detection of harmful insects, weeds and diseases is important and a specialist's diagnosis may be followed by recommendations to use biological controls, cultural techniques or, if necessary, careful use of selected pesticides," Davidson says.

Those biological controls, he explains, can include allowing



beneficial insects to prosper alongside the harmful ones. Some microscopic species of wasps actually attack other insects and help keep their populations at harmless levels. And predators like lady beetles are natural enemies of harmful aphids.

Cultural techniques, Davidson adds, include proper pruning, mulching and fertilizing to keep plants healthy enough to resist insect attacks.

The keys to any chemical use are: selecting the right chemical, applying it correctly and applying it at the right time, according to Davidson.

Indiscriminate cover spraying at the first sign of insects - any insects - is a little like cutting off a patient's head if he complains of a simple headache," explains Davidson. "It's a drastic measure because it is applied to more than just the problem area. A simpler, certainly less expensive treatment would work equally well."

In spite of all the recent attention focused on the reported ill effects some chemical pesticides, of American suburbanites still dump tons of pesticides on their shrubs, trees and lawns each year, according to Raupp.

"A recent survey in Florida showed that in one year homeowners used over 2 million pounds of pesticides in urban areas," Raupp says.

However, studies in Maryland also show that up to 53% of the homeowners in one pilot program said they were more likely to use IPM techniques than chemical sprays for insect pests.

So, you say, this is all fine in theory. But wouldn't it be easier to simply knock out all those bugs with chemicals, even if you lose a couple of the good ones - sort of sacrificing a few innocents for the good of the lawn and garden?

In the very short run, maybe yes, Davidson and Raupp say.

But research has shown for some time something we've all - that the more suspected chemicals we throw at insect pests, the more resident and ornery they become.

Not only have some insects built up immunities to poisons now on

the market, but some species have built up what entomologists call 'cross-resistance'' — they are immune to chemicals to which they have never even been exposed.

If IPM works so well, why haven't the techniques been adopted by more homeowners and commercial firms?

"It's sort of a Catch-22

spite of all the successes some farmers have enjoyed with IPM in the last 22 years, very little work has been done in urban settings."

Consequently, adds Davidson, urban homeowners know very little about IPM; they have created little if any demand for its availability; and, commercial firms have been reluctant to offer

situation," Davidson explains. "In IPM it only a latent market exists. Catch-22 enters the picture because homeowners in isolated pockets of the state are becoming more aware of IPM, but have few

commercial firms to turn to. And, adds Davidson, there are commercial firms cashing in on the cache of the name IPM, claiming to offer IPM services that

(Turn to Page D33)

