

CAN A CORN IPM SURVEY GUIDE EXTENSION PROGRAMMING? Chris M. Boerboom, Richard T. Proost, Adam D. Jacobs, Michael D. Peterson, and Peter J. Nowak, Professor, Regional Agronomist, Graduate Assistants, and Professor, Department of Agronomy and Department of Rural Sociology, University of Wisconsin, Madison, WI 53706.

Assessing clientele needs is the initial step of successful extension programming. Farmers frequently request practical solutions for weed management. However, these requests do not identify barriers to improve integrated weed management (IWM) or if these barriers differ among clientele groups. To understand the rationale for management decisions of Wisconsin corn farmers, we conducted a survey of their practices and perceptions of pest management. A random sample of 667 corn and dairy farmers were surveyed on weed management practices and their use of consultants. The farmers based their response on their most productive corn field in 2001. The survey's final response rate was 35%.

One goal of extension weed management programming is to increase the adoption of IWM. Although scouting was practiced by most farmers (72%), the survey indicated limited adoption of several IWM practices. Of the surveyed farmers, cultivation was used by 34%, application of reduced herbicide rates was used by 8%, and banded herbicide applications, altered row spacing or crop density were used by less than 5%. Crop rotation was used by 56% of the farmers, but crop rotation was used more frequently by corn farmers than dairy farmers and is likely a mere function of their cropping system. Herbicide rotation was used by 34% of farmers.

The specificity in weed management programs and potential for higher levels of IWM may depend upon who is making the herbicide recommendation and application. On average, farmers used self and custom applications about equally. Corn farmers self-applied more herbicides than dairy farmers. Of farmers using custom applicators, barriers to increase the frequency of self-application include time constraints by 76%, not owning equipment by 52%, and a belief that custom applicators can make more accurate applications by 47%. About half to two-thirds of farmers who self-apply herbicides believe custom application is too expensive, that they can better monitor when and where herbicides are applied, and that they lack trust in the timing or location of custom applications. These responses indicate that farmers value self-application of herbicides as a practice to manage risk and expenses. Alternatively, 65% of farmers using custom application trust the timing of application and 56% value the record keeping service provided by their applicator. Only 29% viewed scouting by the custom applicator as a reason for using their service. If thorough scouting is to increase as a component of IWM, the main barriers are the perception of the high cost and that additional profit is not guaranteed. Dairy farmers feel a greater return is required from scouting to justify the expense than corn farmers. Alternately, farmers who use scouting services cite several economic and management benefits for scouting, which could be communicated to non-users.

Changing farmer's attitudes about weed management should improve IWM adoption. Survey results suggest extension programs could focus on weed interference and population dynamics based on perceptions of the effect of early and late season weed competition and the long-term effects of weed escapes. The use of reduced herbicide rates was not perceived to be excessively risky and may be another area of emphasis. Farmers tended to believe that herbicide resistant crops could augment resistant weed problems and that the introduction of new herbicides will not be a solution to resistance. This may indicate that programming on resistance has been partially effective although there is still potential for improvement in the response ratings. Farmers select weed management programs based primarily on control and risk of crop injury and rank price as less influential. Interestingly, a guaranteed re-spray program was an important criteria for selecting a program for only 26% of farmers. The largest advantage for herbicide resistant hybrids that was cited was improved weed control by 67% and largest disadvantage cited was marketing genetically modified corn by 57%. The survey information will be valuable in defining extension weed management programs in the future.