



2006 Livestock/Field Crop IPM Priorities

I. Implementation (High Priority)

A. General

- * provide thorough documentation of program impacts
- * coordinated involvement of CCE / IPM staff, faculty, and multipliers, where appropriate
- * linkage to ongoing educational and research programs

B. In Depth Educational Programs

- * document increased IPM competence of individual growers, consultants, and agribusiness personnel

C. On Farm IPM Component Demonstrations

- * document location-specific economic and environmental impacts of critical biological, cultural, or least toxic IPM methods in side-by-side comparison with conventional practice

D. County Pilot Programs

- * evaluate scouting and integrated management strategies for new or emerging pests and/or commodities (e.g., small grains, soybean, stored commodities, livestock) on multiple farms

II. Multidimensional Demonstrations (High Priority)

A. General

- * improve grower awareness and confidence in comprehensive IPM strategies (cultural, biological, least toxic/reduced pesticide/ and/or organic) that minimize impact of **all** major pests in production system while optimizing net profitability and environmental impact
- * strong linkage to ongoing research and educational programs

Including Integrated Management of:

- * flies and external parasites of dairy cattle and poultry
- * weeds, insects, and diseases of corn-based cash crop rotations
- * weeds, insects, and diseases of corn/alfalfa-based dairy rotations

III. Research and Development (High Priority)

A. General (Short term, potential for significant pesticide reduction)

- * commodity/pest priorities are listed below based on current or anticipated widespread application of pesticides against these targets and / or potential economic losses associated with insect, disease, weed and vertebrate pests
- * successful projects should indicate a likelihood for significant reductions in pesticide usage or potential reductions in pest related economic losses in 2-3 yr. if results are implemented

- * priority will be given to integrated, multi-authored proposals that will enhance our understanding of the efficacy and economic impacts of cultural, biological, and/or least toxic approaches for management of target pests

B. Integrated Management of Significant Pests Affecting Dairy Cattle

- * fly pests affecting animals in barns (house and stable) or on pasture (face and horn).
- * external parasites (cattle lice and mange mites)

C. Integrated Management of Significant Pests Affecting Field Corn

- * corn rootworms
- * annual and perennial broadleaf and grass weeds (including herbicide resistant species)
- * Research on organic weed control methods

D. Integrated Management of Significant Pests Affecting Alfalfa (& Grass Mixtures)

- * potato leafhopper and alfalfa weevil
- * annual and perennial broadleaf and grass weeds (including herbicide resistant species)

E. Integrated Management of Significant Pests Affecting Wheat

- * foliar fungal disease complex of wheat (*Septoria nodorum* blotch, tan spot, powdery mildew, and leaf rust)
- * determine the value (disease control, yield and economic return) of foliar fungicides
- * integrated management of Fusarium head blight to reduce levels of deoxynivalenol
- * virus diseases (yellow dwarf, aphid vectors, wheat spindle streak mosaic)
- * cereal leaf beetle of wheat and oats

F. Integrated Management of Significant Pests Affecting Soybean

- * determine the value (disease control, yield and economic return) of foliar fungicides
- * integrated soybean aphid management
- * weed control methods including those appropriate for organic soybeans

G. Integrated Management of Significant Pests Affecting Poultry

- * flies, external parasites, and other arthropod pests affecting poultry

IV. Research and Development (Secondary Priority)

A. General (long term and/or limited potential for pesticide reduction)

- * commodity/pest priorities are listed below based on current or anticipated economic impact and the current lack of effective control
- * priority will be given to integrated, multi-authored proposals that will enhance our understanding of the efficacy, economic and environmental impacts of cultural, biological, and/or least toxic strategies for management of target pests

B. Long Term Research with Potential for Significant Pesticide Reduction

- * development of methods to manage pests listed as high priority, but with future implementation estimated at 4 or more years

C. Integrated Management of Significant Pests Affecting Dairy Cattle

- * cattle grubs, other arthropod pests and poisonous/noxious plants affecting cattle on pasture

- * vertebrate (bird, rodent) management in/ around dairy facilities

D. Integrated Management of Significant Pests Affecting Field Corn

- * European corn borer, armyworm, cutworm, and wireworm
- * seedling diseases in stand establishment
- * leaf blight diseases (northern leaf blight, gray leaf spot, anthracnose, eyespot, and northern leaf spot)
- * stalk rot diseases (anthracnose and Gibberella stalk rots)
- * toxigenic molds in grain and silage

E. Integrated Management of Significant Pests Affecting Forage Legumes (& Grass Mixtures)

- * alfalfa snout beetle
- * clover root curculio/*Fusarium* complex
- * leaf & stem blight complex (especially spring black stem & leaf spot and *Leptosphaerulina* leaf spot)
- * Sclerotinia crown and stem rot
- * brown root rot of alfalfa
- * Fusarium wilt of birdsfoot trefoil
- * fundamental pest survey and impact assessment of forage grass foliar diseases and insect pests.

F. Integrated Management of Significant Weed problems in Field Crop Systems

- * improve efficacy, economics, and information on weed control methods including those appropriate for organic

G. Integrated Management of Significant Pests Affecting Wheat

- * varietal resistance to soilborne viruses in winter wheat
- * develop / evaluate management strategies for stripe rust of wheat
- * pest survey for wheat soilborne mosaic virus

H. Integrated Management of Significant Pests Affecting Soybean

- * fundamental pest survey and assessment
- * varietal and cultural management of Sclerotinia stem rot

I. Integrated Management of Significant Pests Affecting Poultry

- * insect pests destructive to poultry housing structures
- * vertebrate (bird, rodent) management in/ around poultry facilities

J. Integrated Management of Significant Pests Affecting Pastures

- * fundamental insect, disease, weed, and vertebrate pest survey and assessment

K. Integrated Management of Significant Pests Affecting Oat

- * fundamental pest survey and assessment

L. Integrated Management of Vertebrate Pests affecting Field Crop Production

- * fundamental pest survey and assessment
- * integrated management to minimize impact of white tail deer on forages
- * integrated management to minimize impact of birds (and other mammals crows, turkeys, etc.) on grain crops

M. Integrated Management of Significant Pests Affecting Stored Commodities

* fundamental pest survey and assessment of pests affecting stored grains and silage