

Educational Needs at the Intersection of Pesticide Safety and IPM

Dean Herzfeld, Ph.D.

Collaboration Team and Education Facilitator
National Pesticide Safety Education Center

USDA IPM Road Map: IPM Goals

- Prevent unacceptable levels of pest damage.
- Minimize the risk to people, property, infrastructure, natural resources and the environment.
- Reduce the evolution of pest resistance to pesticides and other pest management practices.

Are also core goals of ‘Pesticide Safety Education’

Significant...

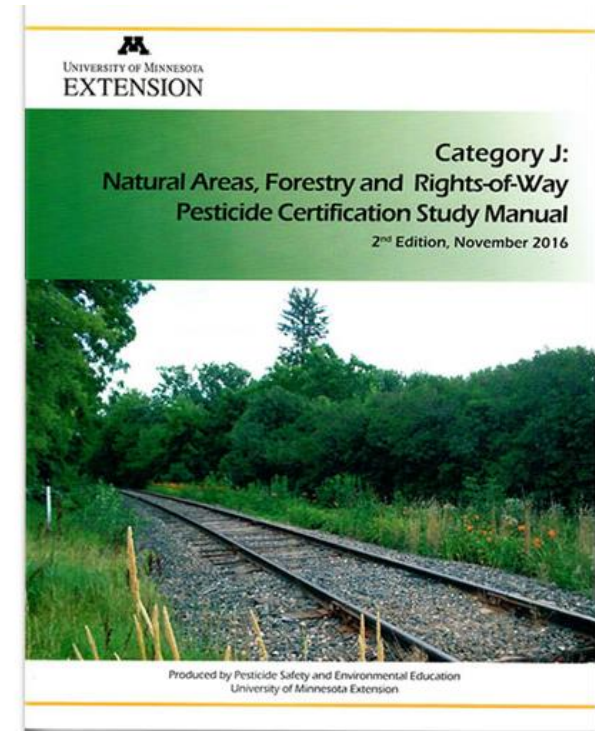
...IPM content in Pesticide Safety Education

...overlap of IPM and Pesticide Safety target learners

...overlap of USDA IPM Roadmap and
content required by federal standards for
Pesticide Certification

IPM Content in Pesticide Safety Education

- Certification and recertification of pesticide ‘users’
 - Manuals (core and certification categories)
 - Exams
 - Presentations, workshops, courses
 - Educational materials and other resources



Newly Revised 40CFR171 'C & T Rule'

Subpart B. §171.103

Standards for certification of commercial applicators.

“Persons seeking certification as commercial applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides”



Newly Revised 40CFR171 'C & T Rule'

Subpart B. §171.103

Standards for certification of commercial applicators.

(4) Pests. The proper identification and effective control of pests, including all of the following...(especially environmental concerns)

(v) Factors that influence (pest management) effectiveness or lead to problems such as pesticide resistance.

(i) Crop pest control. Applicators must demonstrate practical knowledge of crops, grasslands, and non-crop agricultural lands and the specific pests...

State Level Requirements

All states include pest management in their pesticide certification programs (core and category)

MN is one of many states specifically requiring IPM to be included in pesticide certification exams and education

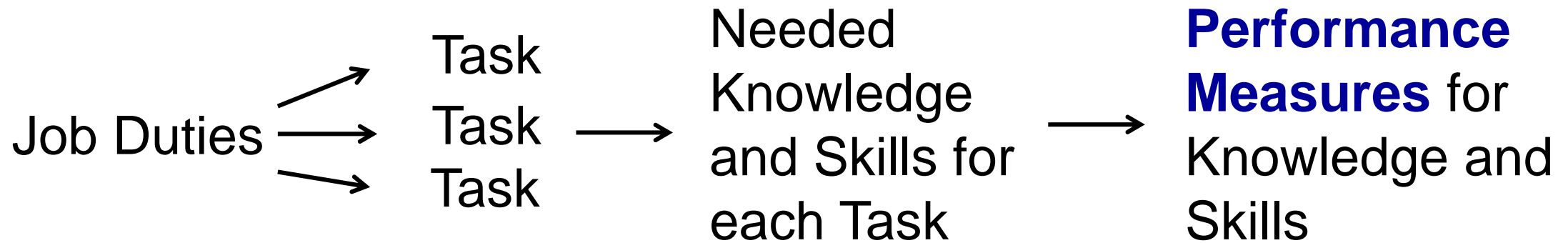
MN uses both IPM and Occupational Safety as the foundational framework for overall instructional design in the pesticide certification program

Selection of Content in Pesticide Certification Exams, Manuals and Education

Selection of Content in Certification

Exam and manual content develop

Engage diverse group of individuals who work directly with pesticide users (Content Group) to conduct a 'job analysis'



Selection of Content in Certification

Exam and manual content develop

Performance Measures are used to:

- Create exam blueprint where each performance measure could be turned into one exam item
- Create a study manual content outline
- Converted to 'Learning Objectives' to guide learners to prepare for the exam and use the manual
- As guides for content in pesticide recertification education

Selection of Content in Certification

Exam and manual content development

Where does IPM surface in this process?

Primary factor determining if a performance measure is included in a test blueprint is whether it contributes in some way to the protection of the public or the environment.

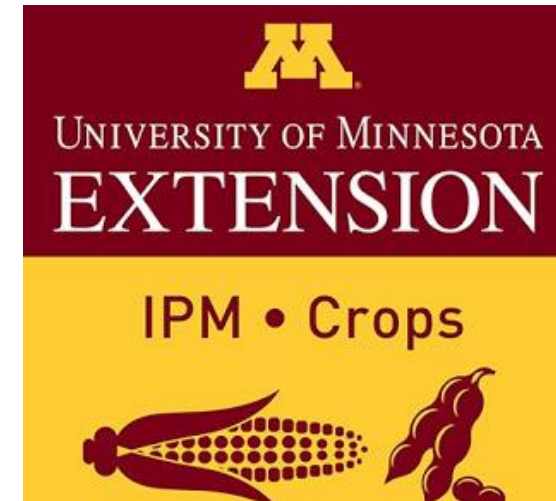
Dr. Drew Martin, Office of Indiana State Chemist
(Ph.D. in exam development)

Selection of Content in Certification

Exam and manual content development

Where does IPM surface in this process?

- Section of best pest management strategy and if a pesticide – and which pesticide – should be used
- Evaluate environmental & pesticide resistance issues
- Application site assessment of wide range of variables:
weather, sensitive sites, pest ID/life stage, others on
whether to treat or not - IPM



Selection of Content in Certification

Exam and manual content development

What about those individuals who
are only told what to apply and when and where to apply it
and are not involved in the pest management
decision-making process?

**Job analysis, focus groups and needs assessment show
they make far more IPM related decisions
than they themselves recognize**

Education in Pesticide Certification goes far beyond regulatory and safety compliance outreach

Education in Certification Goes Beyond Regulatory Compliance Outreach

...not achievable by regulatory compliance alone

- Safe food and clean water
- Healthy ecosystems
- Occupational safety
- Public health
- Strong economy
- Enhancement of quality of life

Public Health Interventions

- **Enforcement**
- **Engineering**
- **Education**

IPM and Pesticide Safety Overlap of Targeted Learners

Overlapping Learners

- Certified pesticide users – ag producers, natural resources, public health, right-of-way, structural, turf and landscape, antimicrobials, food processing, etc.
- Invasive species, home and Master Gardeners, local communities, organic, farm workers, pest management consultants, pollinators, wildlife and ecosystems....

IPM and Pesticide Safety

A national collaboration team
of diverse stakeholders
focused on development of
educational materials and resources



What's been done to date?



Role of IPM stakeholders in the collaboration team?