Program: Environmental Logic Model

**Situation:** Water and soil quality and health along with compliance of chemical use is vital for agriculture. Non-compliance can impact eligibility for cost share and/or federal funding, result in legal ramifications, and loss of business. Extension encourages Integrated Pest Management and promotes the Kentucky Pollinator Protection Plan.

**Inputs**
- UK specialist, agents and resources
  - Kentucky Department of Agriculture
  - Kentucky Department of Health and Family Services
  - Kentucky Department of Fish and Wildlife
  - Commodity Organizations
  - NRCS

**Outputs**
- Livestock producers
  - Crop producers
    - Forage
    - Grain
    - Tobacco
    - Hemp
  - Commercial horticulture growers
  - Farm workers
  - Home horticulture
  - Consumers

**Activities**
- Recognize Integrated Pest Management practices
- Gain knowledge on establishing pollinator habitats, maintenance, processing, and/or marketing honey
- Identify safe chemical management practices
  - Recognize correct use and storage methods
  - Gain knowledge of backyard streams, watersheds, stream ecology & best practices
  - Gain knowledge of water quality in urban areas

**Participation**
- Scout fields, high tunnels, greenhouses or gardens weekly
- Integrate new cultural management tactics
- Include biological controls
- Alter existing spray program to reduce likelihood of resistance development or non-target impacts
- Used Extension resources in making decisions related to pollinators, habitats and/or processing or marketing honey
- Employ best practices
- Complete Ky Pesticide Applicators Training
- Train in Worker Protection Standards
- Use personal protection equipment
- Update spray program
- Test pesticide application water
- Select alternate materials
- Adapt for good practices in chemical handling, storage and/or disposal
- Evaluate weather conditions before applying chemicals
- Communicate when using chemicals

**Assumptions**
- Used Extension resources in making decisions related to pollinators, habitats and/or processing or marketing honey
- Employ best practices

**External Factors**
- Scout fields, high tunnels, greenhouses or gardens weekly
- Integrate new cultural management tactics
- Include biological controls
- Alter existing spray program to reduce likelihood of resistance development or non-target impacts
- Complete Ky Pesticide Applicators Training
- Train in Worker Protection Standards
- Use personal protection equipment
- Update spray program
- Test pesticide application water
- Select alternate materials
- Adapt for good practices in chemical handling, storage and/or disposal
- Evaluate weather conditions before applying chemicals
- Communicate when using chemicals

**Outputs Short**
- Scout fields, high tunnels, greenhouses or gardens weekly
- Integrate new cultural management tactics
- Include biological controls
- Alter existing spray program to reduce likelihood of resistance development or non-target impacts

**Outputs Medium**
- Used Extension resources in making decisions related to pollinators, habitats and/or processing or marketing honey
- Employ best practices
- Complete Ky Pesticide Applicators Training
- Train in Worker Protection Standards
- Use personal protection equipment
- Update spray program
- Test pesticide application water
- Select alternate materials
- Adapt for good practices in chemical handling, storage and/or disposal
- Evaluate weather conditions before applying chemicals
- Communicate when using chemicals

**Outputs Long**
- Sustain Kentucky agriculture
  - Social
  - Economic
  - Environmental
- Minimize environmental impact
- Support new and beginning agriculture producers
- Implement best practice to:
  - Improve soil health
  - Conserve soil and/or water
  - Increase soil organic matter
  - Improve soil structure for water infiltration or retention
  - Increase ground cover for soil protection
  - Improve water quality
  - Protect stream banks or stream buffers
  - Plant native plants
  - Develop or update Ag Water Quality Plan
  - Develop or update nutrient mgmt plan
  - Adjust rate, timing, placement and/or source of nutrients
  - Adopt changes to improve the water quality of forested streams