

## LOGIC MODEL

Name of Program: Field Crops

Situation: To support decision-making by farmers in the production, harvest, and storage of agronomic crops, including corn, soybeans, wheat, hay/forage, and other field crops.

Goal: To enhance Indiana Stakeholders' understanding of crop production issues; and to support decision-making by farmers in the production, harvest, and storage of agronomic crops, including corn, soybeans, wheat, hay/forage, and other field crops.

<b>INPUTS</b> <b>What we invest</b>	<b>OUTPUTS</b> <b>Activities</b> <b>What we do</b>	<b>OUTPUTS</b> <b>Participation</b> <b>Who is reached</b>	<b>Short: What do we think participants will know, feel, or be able to do after participating in the program?</b>	<b>Medium: How do we think the participants will behave or act differently after participating in the program?</b>	<b>Long: What kind of impact can result if the participants behave or act differently after participating in the program?</b>
<ul style="list-style-type: none"> <li>• Field staff</li> <li>• Campus staff</li> <li>• Purdue Agricultural Centers (PACs)</li> <li>• Sustainable Agriculture Research and Education (SARE) Program</li> <li>• Partnerships:               <ul style="list-style-type: none"> <li>○ ISDA</li> <li>○ Indiana Corn and Soybean Association</li> <li>○ NRCS</li> <li>○ IN Farm Bureau</li> <li>○ Soil &amp; Water Conservation Districts</li> <li>○ USDA</li> <li>○ OISC</li> <li>○ Purdue ACRE Research Farm</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Purdue Ag Center Field Days</li> <li>• Educational Workshops &amp; Conferences</li> <li>• On-farm research</li> <li>• Programs in Pesticides –PARP, CCH</li> <li>• Information/ resources on plant diseases – Plant Disease &amp; Diagnostic Lab</li> <li>• Climate change</li> <li>• Forages</li> <li>• Soil Health–Cover Crops, Residue Management and Manure usage</li> <li>• Water Mgmt. - Irrigation and Field Drainage</li> <li>• Grain Storage and Management</li> <li>• Precision Agriculture</li> <li>• Nutrient Mgmt.</li> <li>• Alternative Crops</li> <li>• Education Materials</li> <li>• Media Releases and social media</li> <li>• Training for CCA's providing Continuing Education hours to meet requirements</li> <li>• One source among many of information for clients</li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural producers / farmers</li> <li>• Commercial Agrichemical (Fertilizer and Pesticide) Applicators</li> <li>• Allied Industry (Implement Dealers, Seed Sales, Banking)</li> <li>• Commodity groups</li> <li>• Governmental Agencies (USDA, ISDA, IDNR, OISC)</li> <li>• Consultants</li> <li>• Certified Crop Advisors (CCA)</li> <li>• Youth</li> <li>• General public</li> <li>• Underserved / Underrepresented clients</li> </ul>	<ul style="list-style-type: none"> <li>• Participants/Youth will learn about field crops (INDICATOR = # of participants/youth informed about field crops)</li> <li>• Participants will learn about issues related to modern crop production (INDICATOR = # of participants informed about cropping issues)</li> <li>• Participants will learn about <u>issues</u> related to modern agronomic production (INDICATOR = # of participants informed about agronomic issues)</li> <li>• Participants will learn about <u>agronomic technologies</u> (INDICATOR = # of participants informed about agronomic technologies)</li> <li>• Participants will learn about <u>agronomic management practices</u> (INDICATOR = # of participants informed about agronomic management practices)</li> </ul>	<ul style="list-style-type: none"> <li>• Participants will adopt recommended practices for field crops. (MEASURE = # of participants who self-report that they adopted a recommended practice for their operation) <b>NIFA GF1.4.a</b></li> <li>• Participants will utilize our fertilizer recommendations as developing their fertility program for field crops</li> <li>• Participants will adopt recommended fertilizer and pesticide recommendations for field crops (MEASURE= # of participants who self-report that they adopted the recommendations <b>NIFA GF1.4.a</b>)</li> <li>• Participants will adopt practices that will make them more resilient to climate change (Measure = # of participants that adopted changes to their farm make them more resilient <b>NIFA CC2.3</b>)</li> <li>• Participants will adopt recommended <u>technologies</u> for agronomic crops (MEASURE = # of producers indicating adoption of recommended technologies) <b>NIFA GF2.3</b></li> <li>• Participants will adopt recommended <u>management practices</u> for agronomic crops. (MEASURE = # of producers indicating adoption of recommended practices) <b>NIFA GF2.3</b></li> </ul>	<ul style="list-style-type: none"> <li>• Producers Adapt safety handling standard of pesticides (Measure=reduction in number of pesticide spills or drift complaints)</li> <li>• Adopted agronomic management practices will result in improved crop yields and production efficiencies (MEASURE = # of producers indicating increased dollar returns per acre and/or reduced costs per acre due to adopted agronomic practices) <b>NIFA GF1.3</b></li> <li>• Final crop quality will improve due to the adoption of more efficient production, harvest, and storage techniques (MEASURE = # of producers indicating increased dollar returns per acre due to overall crop quality improvement) <b>NIFA GF2.4</b></li> <li>• Water quality will improve due to more efficient utilization of pesticides, nutrients, and soils (MEASURE = Routine water quality tests of major water bodies and tributaries will show a decrease in soil particles and agriculturally-related chemicals of concern)</li> </ul>

### ASSUMPTIONS

1)Continued demand for agronomic crops for food, livestock, fuel, and fiber.

- 2)Field crop sector remains strong.
- 3)Overall soil productivity remains constant or improves.
- 4)Continued demand for field crops

**EXTERNAL FACTORS**

- 1)Impacts from weather variability/climate change
- 2)Funding and resource acquisition
- 3)Public sector/retailer/governmental concerns over production parameters such as GMOs, pesticide usage, soil and nutrient loss, and hypoxia/water quality
- 4)Variable weather (climate change)
- 5)Regulation changes

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