Systematic Checklist for Diagnosing Missouri Row Crop Problems

Step 1. Plant Information

Crop: _____ Variety: _____ Growth Stage: ____

Step 2. Symptoms and Signs

What plant tissues are affected?

Leaf Stem Ear/Pod/Head Root Entire Plant Other _____

Describe symptoms that are present on:

Leaves: Spots Lesions Scorching Chlorosis Mosaic/Mottling Insect Feeding Other _____ Stems: Cankers Galls Darkening Discoloration Insect Feeding Other Roots: Girdling Galls Discoloration Rotting Insect Feeding Other Ear/Pod/Head: Spots Lesions Cracking Discoloration Rotting Insect Feeding Other_____ Entire plant: Wilting Flagging Stunting Abnormal Growth Other ____

Are there signs, or physical evidence, of pests or pathogens (e.g., insects, fungal growth) on the plant or in the stem?

Symptom Characteristics:

Where are symptoms most noticeable? Younger Growth Older Growth Other	
How are injured plants distributed throughout the field? Randomly Evenly Other	
Did symptoms appear quickly or gradually over time? Quickly Gradually Other	
Are symptoms spreading to new plants over time? YES NO Other	

Step 3. Field Information

Do weeds in the field share similar symptoms? YES NO Do neighboring fields share similar symptoms? YES NO Does the field drain properly with little to no issues of standing water? YES NO What chemicals were applied? Pesticides Herbicides Fertilizers Didn't apply What other crop management practices may be contributing? (Crop rotation, winter cover crop, tillage, irrigation, etc.)

Develop a Hypothesis:

The problem is likely caused by: LIVING ORGANISM (Biotic) ENVIRONMENT STRESS (Abiotic) BOTH Possible causes of damage: MECHANICAL WEATHER HERBICIDE INSECT PATHOGEN Your Hypothesis:

Digital or physical samples can be submitted to the MU Plant Diagnostic Clinic for further testing.



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