

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.