Soybean seed quality

Identifying disease symptoms, insect damage, and more at harvest

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MATURE GREEN SEED

- Green discolouration on surface or through whole seed
- Can occur in extremely dry years or with fall frost
- Excess greening will cause grade discounts
- Both germination and vigour are severely impacted
- Only minor improvements in storage



WHITE MOULD

- Seed is small, discoloured, and shrivelled
- Stems and pods will have a white cottony mould on them
- Distinct black bodies (similar to mouse dropping) in seed sample
- Occurs in cooler and wetter years
- Lush soybean canopies make the disease worse



PHOMOPSIS SEED DECAY

- Seeds are cracked, shriveled, lightweight, and some may have a chalky white appearance
- Black fungal specks (pycnidia) may be visible on seed
- Disease is favoured by warm, wet, humid weather during pod-fill and beginning maturity stages
- Delayed harvest will increase symptoms



SOYBEAN MOSAIC VIRUS

- Seeds have dark streaks extending from the hilum region
- Leaf symptoms are often confused with growth regulator injury and may have a mosaic pattern
- Infection occurs in plant clusters or on single plants
- Planting diseased seed is the primary way fields are infected but this virus is also spread from plant to plant by aphids



BEAN POD MOTTLE VIRUS

- Infected seed has a mottled appearance and will have dark streaks extending from the hilum region
- Unlike soybean mosaic virus, this virus is not spread efficiently through seed
- Most important source of disease transmission is feeding by bean leaf beetles



PURPLE SEED STAIN

- Infected seed varies from pale to dark purple discolouration of the seed coat
- Infected seed does not always show symptoms
- Warm, wet weather during flowering and plant maturity increases the severity



DOWNY MILDEW

- Infected seeds appear dull and are light
- Inside of pods and seeds may be covered in a whiteish, fluffy mycelium mass that can be easily rubbed off
- High humidity with moderate temperatures and extended periods of leaf wetness favour disease development



INSECT DAMAGE

- Seed size, weight, and quality is greatly affected
- Seed may have pieces missing
- Damaged seed is a result of feeding (mostly on the pods) from bean leaf beetles or grasshopper

