Soybeans Following Soybeans

- High soybean prices relative to corn can favor shifting acreage away from corn to more soybean production.
- In some cases, this may involve planting fields to soybeans in two consecutive years.
- Planting soybeans in the same field in consecutive seasons is generally not recommended by extension agronomists; however, there are several management considerations that can help maximize productivity for growers pursuing this strategy.

Yield Potential

- Growers should expect lower yields in second year soybeans.
- Research results have varied, but a yield reduction of 3-5% compared to soybeans following corn is not an unreasonable expectation.
  - 2.3% average yield reduction in an 8-yr Univ. of Kentucky study with individual year reductions up to 13% (Grove, 2017).
  - 6.5% average yield reduction in a 4-yr study in Ontario (OMAFRA, 2009).
  - 0% average yield reduction in a long-term Univ. of Wisconsin study (Lauer et al., 1997).
- Plant stress caused by environmental conditions, diseases, or insects can easily increase yield losses in second year soybeans.

Management Considerations

Field Selection

- Avoid poorly-drained soils due to higher risk of Pythium, Phytophthora, sudden death syndrome, and brown stem rot.
- Consider cover crops in fields with slopes prone to erosion – soybeans produce less residue than corn and decompose more quickly.
- Avoid planting a field to the same soybean variety two years in a row.
- Test for SCN and select SCN-resistant varieties.
- Resistive varieties can reduce SCN reproduction by 70-80%.

Seed Treatments

- Use a fungicide seed treatment to protect against diseases such as Pythium and Phytophthora that can increase in severity under continuous soybean production.
- Pioneer® brand soybeans treated with ILeVO® fungicide seed treatment provides control of sudden death syndrome and certain soil-borne nematodes such as soybean cyst and root knot nematodes.
- Soybeans treated with ILeVO fungicide treatment produced significantly higher grain yield (4.9 bu/acre) in high SCN environments in DuPont Pioneer testing (O’Bryan and Burnison, 2016).
- In moderate SDS environments the addition of ILeVO fungicide treatment increased grain yield 4.5 bu/acre.

Soil Fertility

- Growers often routinely rely on carryover fertilizers for soybean when rotated with well-fertilized corn. Soybean after soybean may require additional fertilizer, especially potassium.

Disease Management

- Many diseases can overwinter on soybean residue, some can be managed with fungicide, some cannot.
  - Stem canker and pod and stem blight can overwinter on residue but fungicides are not as effective on these.
  - Septoria brown spot and frogeye leaf spot are two diseases that can be managed with foliar fungicides.
  - Scout fields regularly to check for disease problems.

Weed Management

- Any weed escapes in the previous soybean crop are likely to result in greater weed management challenges in second-year soybean.
- Use multiple modes of action
  - Soil residual herbicides applied pre-emergence and with a post-emergence application can help manage problem weeds.

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