

Agronomic Directions

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Corn Pollination

Adapted from *Agronomic Spotlight, Monsanto Technology Development & Agronomy*

Next to planting and stand establishment, corn pollination and fertilization is arguably the most important phase of crop development. It is also one of the least controllable aspects of corn production, since its success or failure is primarily influenced by environmental conditions. Yield potential is established earlier in the season; row number is determined shortly after ear initiation at V5 and ear length is not completely set until just before tasselling. Successful pollination can help determine the extent to which yield potential is met.



Pollen shed begins shortly after the corn tassel is fully emerged from the whorl (VT Stage) and lasts typically one week with peak shed by about day 3. Emerging silks mark the R1 growth stage and often emerge 2 days after pollen shed begins. Silks are largely made up of water, making them susceptible to heat and drought. Insects can also be detrimental during pollination including adult Western and Northern corn rootworm beetles as well as adult Japanese beetles. These adult species may clip silks and prevent fertilization and kernel set.



Top: Northern Corn Rootworm adult
Bottom: Western Corn Rootworm adult

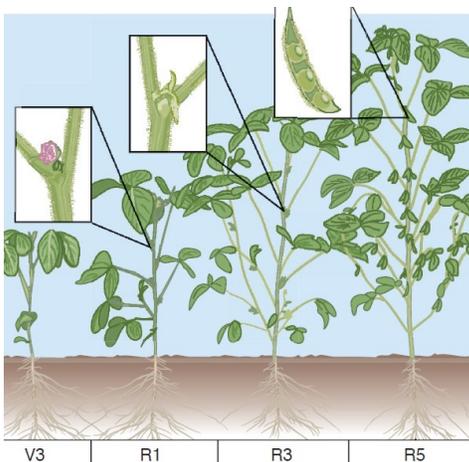


Japanese Beetle silk-feeding; ISU

Tassels are quickly appearing in fields across our region. The two week weather forecast is showing ideal temperature conditions for pollination with highs in the mid to upper 80's and lows in the mid to upper 60's. Projections for this year's corn crop has silking 2-3 days behind the 5 year average. With weather looking ideal (especially for mid-late July) it is still important to scout your corn fields for silk feeding and checking economic thresholds for control. In-season fungicide application timing is upon us as well; VT to R1 crop stage.

Soybean Fungicide & Insecticide Timing

The timing for spraying fungicide on soybeans is R3 up to R5 stage. Most soybean diseases are favored by warm and humid conditions, which some areas have experienced the past couple of weeks. There has not been much for insect activity, but that's not to say there won't be any. Soybean aphid forecasts are currently at low risk for much of the corn belt, but weather forecasts are favoring their development with cool dry temperatures. Continue to scout for aphid population increases in the coming week. You may need to decide whether to add insecticide to your fungicide application at this time or wait and see if aphids or any other insects show up.



R3 Beginning pod: pod 0.5 cm long at one of the 4 uppermost nodes on main stem, flowers appear rapidly

R4 Full pod: pod 2 cm long, rapid pod growth, beginning of seed development, flowering at upper nodes

Soybean Sudden Death Syndrome

Sudden Death Syndrome (SDS) is favored by high soil moisture during the vegetative growth stages and unseasonable cool temperatures prior to or during flower and pod set. This year's rain has increased our risk of SDS and foliar fungicide cannot protect plants from the disease. If SDS becomes an issue on your farm, we can help you select varieties with excellent SDS resistant ratings. Remember there are a few other diseases that may be confused with SDS such as brown stem rot and stem canker. Look for lesions on the outside (stem canker) and browning in the pith (brown stem rot) to distinguish from SDS.



Iowa State University Extension