

Reproductive Soybean Development Stages and Soybean Aphid Thresholds

X1134

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R1 Stage soybean plant (beginning bloom)

One open flower at any node on the main stem.

A node is the part of the stem where a leaf is (or has been) attached.

Stage length 0 to 7 days: average 3

Aphid thresholds depend on actively increasing populations. Examine 20-30 plants once or twice weekly to determine population dynamics.

Action Threshold - 250 aphids/plant when population actively increasing.



soybean aphid

Photo © Iowa State University



R2 Stage soybean plant (full bloom)

Open flower at one of the two uppermost nodes on the main stem with a fully developed leaf.

Stage length 5 to 15 days: average 10

Action Threshold - 250 aphids/plant when population actively increasing. This guideline incorporates an approximate 7-day lead time between scouting and treatment to make spray arrangements.



R3 Stage soybean plant (beginning pod)

Pod is 3/16 inch long at one of the four uppermost nodes on the main stem with a fully developed leaf.

Stage length 5 to 15 days: average 9

Action Threshold - 250 aphids/plant when population actively increasing. In replicated trials conducted throughout the Midwest in 2003, the 250 aphids/plant action level worked best from late vegetative through R3 stages.



R4 Stage soybean plant (full pod)

Pod is 3/4 inch long at one of the four uppermost nodes on the main stem with a fully developed leaf.

The most critical time for soybean yield: Stress at this time can not be recovered and results in more yield loss than at any other time.

Stage length 4 to 26 days: average 9

Thresholds not currently determined, but populations exceeding 250/plant and actively increasing need monitoring and treatment at grower discretion.*



R5 Stage soybean plant (beginning seed)

Seed is 1/8 inch long in the pod of one of the four uppermost nodes on the main stem with a fully developed leaf.



Stress continues to be a major concern in soybean yield.

Stage length 11 to 20 days: average 15

Thresholds not currently determined, however actively increasing populations exceeding 250 aphids/plant need monitoring and treatment at grower discretion.*



R6 Stage soybean plant (full seed)

Pod containing a green seed that fills the pod cavity at one of the four uppermost nodes on the main stem with a fully developed leaf.



At the end of this stage full yield potential has been realized, future yield losses are the result of harvest difficulty and not yield potential.

Stage length 9 to 30 days: average 18

Spraying after R6 has not been documented to protect yield.



R7 Stage soybean plant (beginning maturity)

One normal pod at any node on the main stem has reached its mature (brown or tan) pod color.

Plants will continue to lose leaves and dry down as the season progresses.

Stage length 7 to 18 days: average 9

Spraying at this time has not been documented to protect yield.

Photo © Iowa State University



R8 Stage soybean plant (full maturity)

95% of the pods have reached their mature (brown or tan) color.

5 to 10 days of drying weather will result in 15% moisture soybeans.

*Thresholds for R4-R5 beans continue to evolve. Spraying at R4-R5 has been documented to protect yield. Growers and consultants are strongly advised to keep current with UWEX treatment recommendation updates.

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