

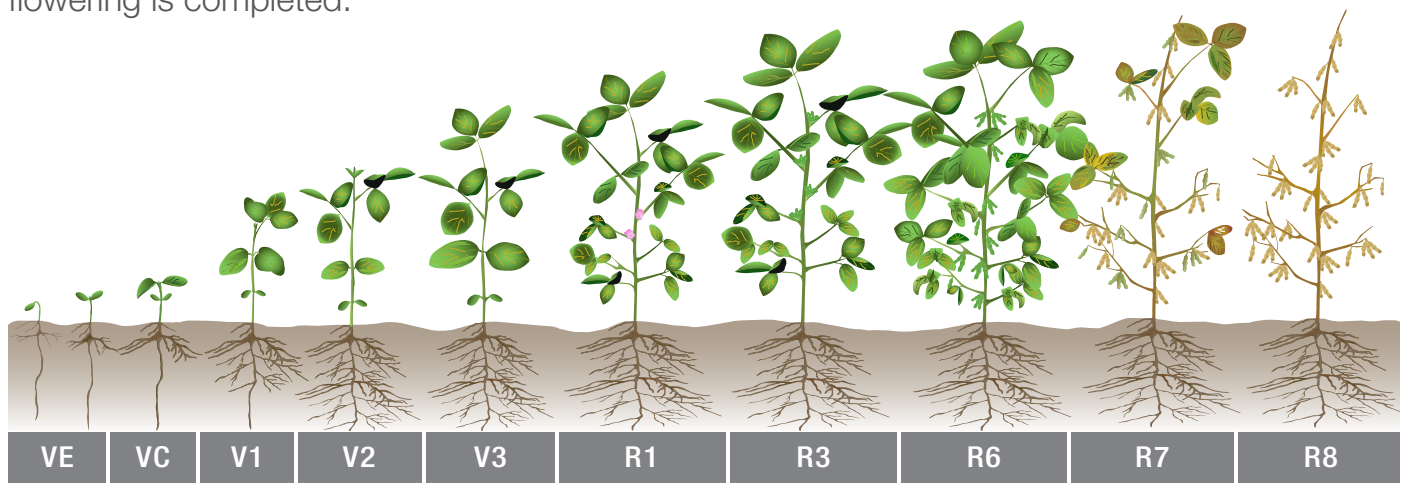


## Soybean Growth Stages

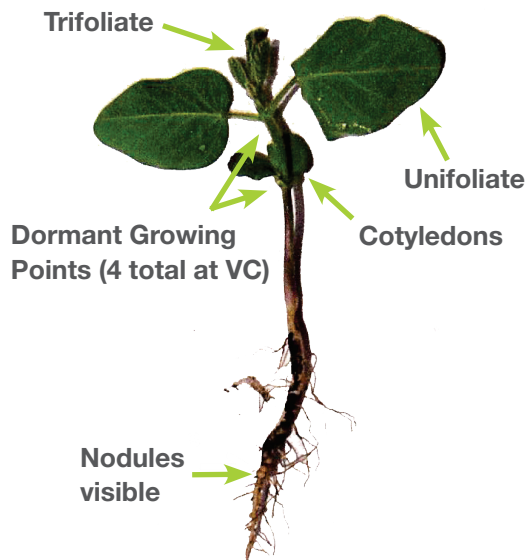
### Determining Vegetative Stages in Soybeans:

Soybeans are largely either indeterminate or determinate in growth habit. For indeterminate products, vegetative growth continues after flowering and rate of development is directly related to temperature.

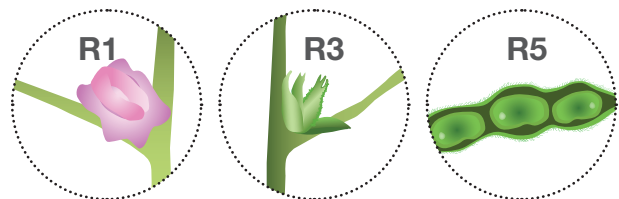
Determinate products have generally completed vertical growth by the time flowering is completed.



### Early Season Soybean Plant



### Reproductive Growth Stages



Source: University of Illinois, 1999

# Soybean Growth Stages

- VE** Cotyledons appear above the soil surface and provide nutrients for 7 to 10 days.
- VC** Cotyledons have fully expanded and unifoliate leaves have unfolded. Four dormant growing points are present at the base of the petiole (axil) of unifoliate leaves and cotyledons.
- V1** First Trifoliate: Second true node, but the first node at which a trifoliate leaf is produced. Nodules visible. New V stages develop every 5 days with normal temperatures.
- V2** Two fully developed trifoliates unfolded. The plant is roughly 8 in. tall. Nodules are actively fixing nitrogen. Cotyledons have fallen off plant. Lateral roots proliferating rapidly in the top 6 in. of soil.
- V3-V4** A dramatic increase in the number of nodules visible on roots takes place by these stages. This is typically the time that iron chlorosis deficiency syndrome is highly visible in impacted fields.
- V5-Vn** Lateral roots extend 15 in. away from main stem and grow to the center of 30 in. rows. Branches begin developing on the lowest nodes. The total number of nodes that the plant may produce is set at V5.
- R1** Beginning Bloom: R1 stage is reached when one flower is open at any node on the main stem.
- R2** Full Bloom: An open flower at one of the two uppermost nodes of the main stem with a fully developed leaf.
- R3** Beginning Pod: Pods are 3/16 in. long at one of the four uppermost nodes on the main stem.
- R4** Full Pod: Pod is 3/4 in. long at one of the four uppermost nodes on the main stem. This the most critical period for seed yield. Any stress from R4-R6 can cause more yield reduction than at any other time in plant development.
- R5** Beginning Seed: Seed in one of the four uppermost nodes with fully developed leaves is 1/8 in. long.
- R6** Full Seed: Pod containing a green seed filling the pod cavity is present at one of the top four nodes.
- R7** Beginning Maturity: One normal pod on the main stem has reached its mature pod color. At this stage, the crop is safe from a killing frost.
- R8** Full Maturity: Ninety-five percent of the pods on the plant have reached their mature color. Approximately 5 to 10 days of good drying weather is needed to bring crop to less than 15% moisture.

**Sources:** 1999. McWilliams, D.A., D.R. Berglund, and G.J. Endres. Soybean Growth and Management Quick Guide, A-1174. North Dakota State U., U. of Minnesota.

**ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Performance may vary**, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields. 2019 Bayer Group. All rights reserved. 1018\_S1

