

GROWTH and DEVELOPMENT STAGES of the CHICKPEA PLANT

The following illustrate developmental stages of chickpea or garbanzo bean (*Cicer arietinum*), and should be applicable to all growing environments and divergent cultivars. Stems are branched, erect or spreading, sometimes shrubby and much branched; stems, foliage and immature pods may be olive, dark green or bluish green in color. No specific descriptors are currently published to distinguish the different growth stages of chickpea; therefore the following descriptors are proposed by the Legume ipmPIPE (H. F. Schwartz, facilitator) to facilitate communications between legume specialists, stakeholders and insurance industry representatives.

Vegetative Growth Stages

Count the number of visible nodes on the main stem up to the node that includes the highest fully developed leaf. Leaves have 3 to 8 pairs of small leaflets that are oval in shape.

VE – seedling emergence

V1 – the first multifoliate leaf has unfolded from the stem

V2 – the second multifoliate leaf has unfolded from the stem

V3 – the third multifoliate leaf has unfolded from the stem

V4 – the fourth multifoliate leaf has unfolded from the stem

Vn – the nth multifoliate leaf has unfolded from the stem

Reproductive Growth Stages

The self-pollinated plant produces 1 – 2 flowers at the tip of axillary branches. Pods may contain up to 3 seeds, and are oval in shape; and at maturity, the plants and pods turn yellow to tan.

R1 – early bloom, one open flower on the plant

R2 – full bloom, most flowers are open

R3 – early pod visible

R4 – flat pod, pod has reached its full size and is largely flat.

R5 – early seed, seed in any single pod fill the pod cavity

R6 – full seed, all seeds fill the pod cavity which is rounded

Physiological Maturity

R7 – the leaves start yellowing and 50% of the pods have turned yellow

R8 – 90% of pods on the plant are golden-brown

More information on chickpea and its characteristics are available from resources including: *Compendium of Chickpea and Lentil Diseases* – F. J. Muehlbauer & C. Weidong, APS Press release in 2010; *Description and Culture of Chickpea* – F. J. Muehlbauer et al., 1982, Wash. State Univ. Ext. Bull. 1112.