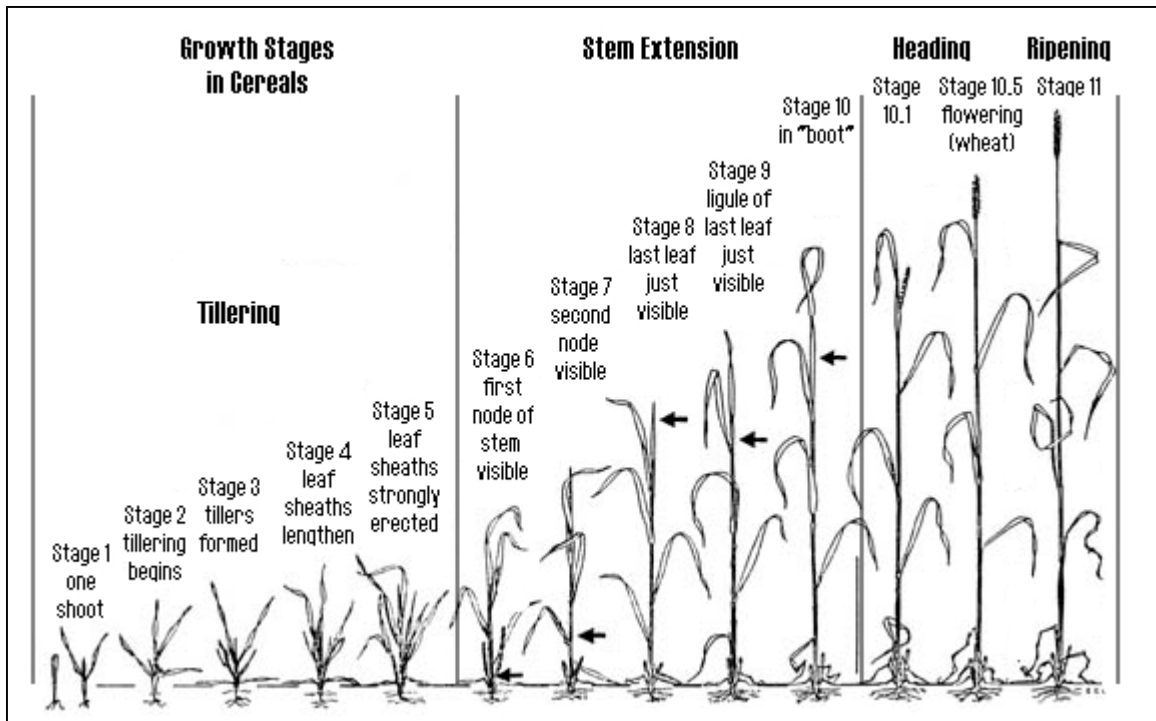




Physiological Feekes Growth Stages in Winter Wheat



According to Large (1954) cereals develop as follow Feekes Growth Stages

Stage

TILLERING

- 1 One shoot (number of leaves can be added) = "braiding"
- 2 Beginning of tillering
- 3 Tillers formed, leaves often twisted spirally. In some varieties of winter wheats, plants may be "creeping" or prostrate
- 4 Beginning of the erection of the pseudo-stem, leaf sheaths beginning to lengthen
- 5 Pseudo-stem (formed by sheaths of leaves) strongly erected

STEM EXTENSION

- 6 First node of stem visible at base of shoot
- 7 Second node of stem formed, next-to-last leaf just visible
- 8 Last leaf visible, but still rolled up, ear beginning to swell
- 9 Ligule of last leaf just visible
- 10 Sheath of last leaf completely grown out, ear swollen but not yet visible

HEADING

- 10.1 First ears just visible (awns just showing in barley, ear escaping through split of sheath in wheat or oats)
- 10.2 Quarter of heading process completed
- 10.3 Half of heading process completed
- 10.4 Three-quarters of heading process completed
- 10.5 All ears out of sheath

FLOWERING (WHEAT)

- 10.5.1 Beginning of flowering (wheat)
- 10.5.2 Flowering complete to top of ear
- 10.5.3 Flowering over at base of ear

10.5.4 Flowering over, kernel watery ripe

R I P E N I N G

- 11.1 Milky ripe
- 11.2 Mealy ripe, contents of kernel soft but dry
- 11.3 Kernel hard (difficult to divide by thumb-nail)
- 11.4 Ripe for cutting. Straw dead

Reference

Large, E.C. 1954. Growth stages in cereals. Plant Pathol. 3:128-129.

