



Extension *Extra*

ExEx 8113
September 1995
Plant Science

COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / SOUTH DAKOTA STATE UNIVERSITY / USDA

Number of Calendar Days and GDDs Needed by Corn to Mature at Given Growth Stages

by Robert Hall, Extension agronomist-crops

The number of calendar days and growing degree days needed for corn to mature from one growth stage to another are indicated in Table 1 (next page). Use caution when applying table values to specific growing conditions since they are approximations and may vary slightly according to environment and corn hybrid.

Table 1. Estimate of calendar days and growing degree days (GDD's) between corn growth stages.

Growth Stage	Vegetative or Reproductive Stage Description*	Approximate		NCIS Stage
		Days	GDD's	
VO	Germination - seeding to emergence	5 - 10	100 -150	-
VE	Coleoptile ruptures, shoot emerges	2 - 4	66	-
V1	1st leaf collar visible	3	66	-
V2	2nd leaf collar visible	3	66	-
V3	3rd leaf collar visible	3	66	-
V4	4th leaf collar visible	3	66	-
V5	5th leaf collar visible	3	66	-
V6	6th leaf collar visible	3	66	V7
V7	7th leaf collar visible	3	66	V8
V8	8th leaf collar visible	3	66	V9
V9	9th leaf collar visible	3	66	V10
V10	10th leaf collar visible	3	66	V11
V11	11th leaf collar visible	3	66	V12
V12	12th leaf collar visible	3	66	V13
V13	13th leaf collar visible	3	66	V14
V14	14th leaf collar visible	3	66	V15
V15	15th leaf collar visible	3	66	V16
V16	16th leaf collar visible	3	66	V17
V17	17th leaf collar visible	3	66	V18
V18	18th leaf collar visible	3	66	V19
V19	19th leaf collar visible	3	66	V20
V20	20th leaf collar visible	3	66	V21
Vn	nth leaf collar visible	-	-	-
VT	Tassel completely visible, silks not visible	4	100	Tassel
R1	Silks emerged, tassel shedding pollen	4	100	Silk
R2	75% of silks purple to brown color	5	125	Silk brown
R3	Silks brown, no fluid in kernels	4	100	Pre-blister
R4	Kernels are watery blisters	4	100	Blister
R5	Kernels changing color from white to yellow	4	100	Early milk
R6	Milky fluid in kernel, no solids	4	100	Milk
R7	Kernels at base of ear contain semi-solids	4	100	Late milk
R8	Most kernels contain semi-solid material	4	100	Soft dough
R9	Kernels at base of ear are beginning to dent	4	100	Early dent
R10	75% of kernels dented	5	125	Dent
R11	All kernels dented	5	125	Late Dent
R12	Kernels at center of ear not completely hard	5	125	Nearly mature
R13	Mature, black layer formed, kernel moisture 25 to 35%	5	125	Mature

*Descriptions are a combination of Hanway vegetative (V) and NCIS reproductive (R) stages.

SOURCE: Flowerday, D. 1995. *Proc. Nebraska Corn Expo*, p. 33 - 41.

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