Phenological growth stages and BBCH-identification keys of hop

Hop Rossbauer et al., 1995, *(Humulus lupulus L.)* ,Page 1

Source: Compendium of Growth Stage Identification Keys for Mono- and **Dicotyledonous Plants Extended BBCH** scale 2nd Edition1997 electronic version elaborated by M. Enz and Ch. Dachler,Novartis;

Code	Description	Code	Description
Principal growth stage 0: Sprouting		**Principal growth stage 2: Formation of side shoots**	
00	Dormancy: rootstock without shoots (uncut)	21	First pair of side shoots visible
01	Dormancy: rootstock without shoots (cut)	22	2nd pair of side shoots visible
07	Rootstock with shoots (uncut)	23	3rd pair of side shoots visible
08	Beginning of shoot-growth (rootstock cut)	2	Stages continuous till . . .
09	Emergence: first shoots emerge at the soil surface	29	Nine and more pairs of side shoots visible (secondary side shoots occur)
Principal growth stage 1: Leaf development		**Principal growth stage 3: Elongation of bines**	
11	First pair of leaves unfolded	31	Bines have reached 10% of top wire height
12	2nd pair of leaves unfolded (beginning of twining)	32	Bines have reached 20% of top wire height
13	3rd pair of leaves unfolded	33	Bines have reached 30% of top wire height
1	Stages continuous till . . .	3	Stages continuous till . .
19	9 and more pairs of leaves unfolded	38	Plants have reached the top wire
		39	End of bine growth
Principal growth stage 5: Inflorescence emergence		**Principal growth stage 6: Flowering**	
51	Inflorescence buds visible	61	Beginning of flowering: about 10% of flowers open
55	Inflorescence buds enlarged	62	About 20% of flowers open
Principal growth stage 6: Flowering		63	About 30% of flowers open
67	About 70% of flowers open	64	About 40% of flowers open
68	About 80% of flowers open	65	Full flowering: about 50% of flowers open
69	End of flowering	66	About 60% of flowers open