

Bulb Crops General Sampling & Growth Stages

Shoots

Timing: Begin sampling at stage 1.2 (mid vegetative) and go to stage 6.2 (mid flowering).

Sample volume: 20-30 leaves, depending on size

Sampling: Collect the Youngest Fully Expanded Leaf (YFEL) from 30 randomly selected plants in a representative area of the crop. Retain the entire leaf for analysis. Return to the same sampling area for subsequent samples.

Bulbs

Timing: Sample after flower removal at stage 8.1. Collect a subsequent sample to monitor changes/improvement due to remedial action 10-14 days after the first sample.

Sample volume: 20 bulbs

Sampling: Collect 20 randomly selected mother bulbs in a representative area of the crop. Retain the whole bulb for analysis. Return to the same sampling area for subsequent samples.

| Primary Stage | Secondary Stage | Description | Comments |
|---------------|-----------------|-------------|---|
| 1 | | | <i>Vegetative growth</i> |
| | 1.1 | | Early vegetative |
| | 1.2 | | Mid vegetative |
| | 1.3 | | Late vegetative |
| 5 | | | <i>Flower bud development</i> |
| | 5.1 | | Early flower bud development (bud can be felt above ground) |
| | 5.2 | | Bud one quarter up the foliage |
| | 5.3 | | Mid bud development (bud half way up the foliage) |
| | 5.4 | | Bud three quarters up the foliage |
| | 5.5 | | Late bud development (bud above foliage) |
| 6 | | | <i>Flowering</i> |
| | 6.1 | | Early flowering |
| | 6.2 | | Mid flowering |
| | 6.3 | | Flower removal |
| 8 | | | <i>Bulb growth</i> |
| | 8.1 | | Daughter bulbs formed |
| | 8.2 | | Daughter bulbs at medium size |
| | 8.3 | | Daughter bulbs sized up and white |
| | 8.4 | | Daughter bulbs sized up 50% coloured |
| | 8.5 | | Bulbs mature |

Growth Stage numbering system is in accordance to the extended BBCH, a uniform coding of phenologically similar growth stages for all plant species

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