

Winter injury

Cold winter temperatures usually injure flower buds before damaging older wood and canes. When buds are injured early in winter, they may appear brown and dead before spring growth resumes. Late winter injury may not be apparent until after growth begins. Severely injured buds may begin swelling, then die, whereas partially injured buds may develop only a few normal flowers. Injury can be assessed by dissecting buds: dead flower primordia are dark brown; live primordia are light green. Injury to older canes and wood is not apparent until spring growth begins. Branches and whole canes may fail to leaf out or break bud normally, then cease growth and die when warm weather occurs.

Cross-section of bud showing dead flowers and twig die-back (far right) due to winter injury.

