

CHEMICAL REGULATION OF TIMING AND SYNCHRONY OF BUD
BREAK AND FLOWERING IN DIFFERENT WOOD TYPES OF APPLE

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Bud break and flowering of apples is protracted in New Zealand's maritime climate due to a more gradual increase in temperatures during early spring and a high propensity for development of floral buds on one-year old woody shoots, which typically develop later than on older spur wood. Various horticultural sprays (HiCane®, Waiken®, Erger G, Urea, Armobreak +KNO₃) were tested for their effects on the timing and synchrony of bud break and flowering of one-year old shoots and spur wood of apple cv. 'Royal Gala' in two regions and seasons. Hi-Cane® or Erger G treatments were without effect on the synchrony of bud break or bloom, but advanced them by up to 8 days. Armobreak + KNO₃ advanced bud break and bloom by only 3-4 days, but also reduced the flowering period within each wood type in one experiment. The impacts of these responses on horticultural practices such as chemical thinning and harvest management will be discussed.