



The addition of potassium nitrate to rest-breaking chemicals in subtropical tree crops improved their efficacy by 20-30%.

Several experiments were conducted in southeast Queensland, Australia, to determine whether combinations of new rest-breaking chemicals could induce more uniform bud break and increase flowering of a range of low-chill temperate and subtropical species (low-chill stone fruit, i.e. nectarine cv Springbite, persimmon and custard apple).

The most successful rest-breaking chemicals were Armobreak (alkolated amine) and Waiken (mix of fatty acid esters), but only when combined with potassium nitrate, which greatly improved their efficacy by 20-30%. Potassium nitrate alone has a mild rest-breaking ability. In custard apple when sprayed together, Waiken (emulsified vegetable oil) 3% and potassium nitrate 5% resulted in statistically significantly greater number of laterals and flowers per meter main branch length than the control treatment or Waiken 3% alone on current season wood (Figure 1). Potassium nitrate has a synergistic effect with other dormancy- breaking substances, improving branching, flowering, fruit-set and early fruit maturation.

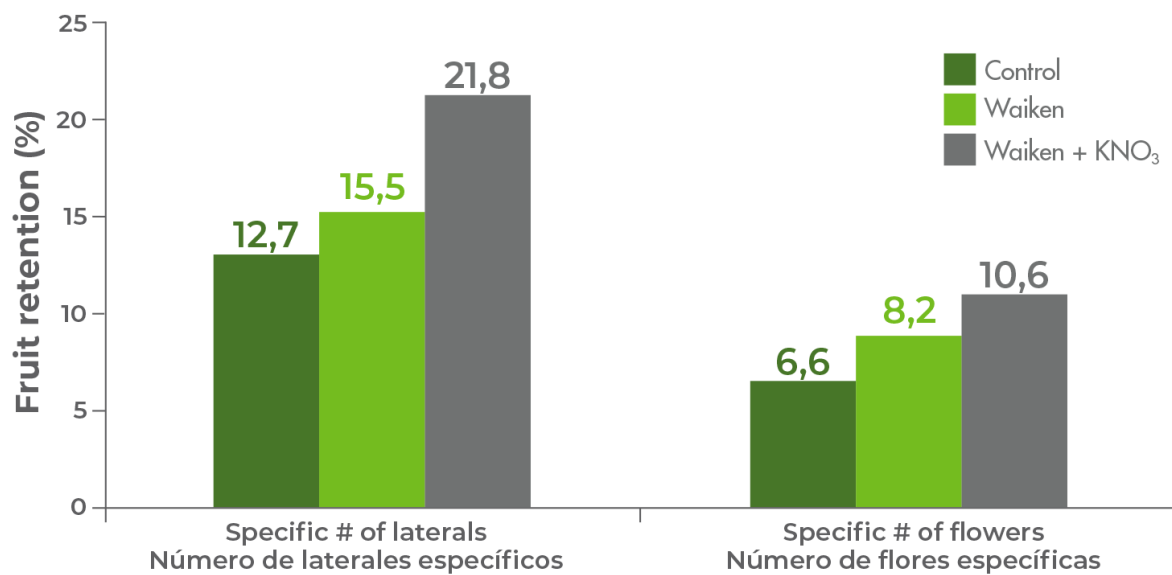
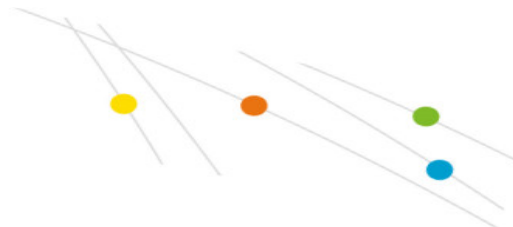


Figure 1. Effect of Waiken 3% and KNO₃ 5% sprays in custard apple on number of laterals and flowers per meter branch length on current season wood.