This research was carried out study at Eğirdir Horticulture Research Institute, in order to determine the effect of AVG on some fruit quality characteristics of 0900-Ziraat sweet cherry on graft P. avium rootstock. Varying doses of ReTain® (15 % AVG) (Valent BioSciences Laboratories Ltd. USA) (50, 100, 150 mg/l) were applied spraying onto trees. Application of AVG doses were applied before 25 days commercial harvest. In the fruits harvested following parameters were measured; fruit diameter, length, weight, kernel weight, length of fruit stalk, total soluble solids ratio, titratable acidity, pH, firmness of fruit flesh and colour L*, a*, b*, ch*, hue*). In this study, it is determined that important quality parameters of fruit diameter, weight, fruit flesh firmness and fruit color had positive effects on the AVG applications. 50 mg/l dose was the best application in terms of quality and harvest delay.