

25 YEARS OF AVOCADO ROOTSTOCK DEVELOPMENT IN SOUTH AFRICA

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The production potential of fruit tree crops depends on the choice of rootstock, whether it be either their ability to resist diseases or to impart greater productivity to the scion. In the late 1970s, avocado root rot caused by *Phytophthora cinnamomi* severely impaired the South African avocado industry which was based on seedling rootstocks. This necessitated the importation of root rot tolerant rootstocks from California for vegetative propagation to establish genetically uniform and productive avocado orchards. Out of the range of imported avocado rootstocks evaluated under South African growing conditions, only the 'Duke 7' rootstock provided uniform, productive and reasonably healthy trees, and therefore became the industry standard rootstock for many years. In the 1980s, several survivor trees on seedling rootstock were identified in diseased South African avocado orchards. Rootstock shoots were induced on these trees, the material propagated and evaluated in field trials in comparison with the 'Duke 7' rootstock. At various test sites the Westfalia rootstock selection 'Dusa'TM out-performed 'Duke 7' with regard to tree health and yield. Based on these results the superior rootstock 'Dusa'TM has recently been released in several countries. Further, the Westfalia rootstock breeding program generated new plant material which was then screened for its root rot tolerance. Seedling selections with healthy roots were included in field trials to confirm their root rot tolerance and evaluate their production potential.