

Evaluation results of Finnish apple rootstocks in Latvia

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A trial was established in 2011 with five rootstocks — ‘MTT1’, ‘MTT4’ and control ‘B9’ (1.5 × 4 m, five replications with two trees each), ‘MTT5’ and control ‘MM106’ (2.5 × 5 m, six replications with two trees each), and two cultivars — ‘Auksis’ and ‘Gita’. Evaluated parameters were — tree general condition, flowering and yielding intensity (points), number of root suckers, average yield (kg per tree) and yield per TCSA (g cm⁻²), average fruit mass (g), amount of non-standard fruits (%). A randomized sample from each cultivar-rootstock combination was put into storage, and taste panel was performed one time a season. The snowless winter of 2013/2014, when soil froze to 1.5 m depth and temperature at 20 cm depth was -7... -9°C, was critical to ‘MM106’. Other rootstocks did not show injury. The best results were obtained for ‘MTT4’, ranged as similar to ‘M26’ in Finland. Its vigour was similar to ‘MM106’, but start of bearing — to ‘B9’. It had better root winter-hardiness than ‘MM106’. Rootstock ‘MTT5’ was initially grouped with the medium vigour ‘MM106’, following its ranging with ‘A2’ in Finland. Yet in our trial it had vigour similar to ‘B9’, with similar start of bearing but lower first yields; it has a tendency to form root suckers. ‘MTT1’, ranged as similar to ‘B9’ in Finland, in Latvia had too weak vigour; it may be used only for vigorous cultivars. The most promising cultivar-rootstock combination was ‘Gita’ on ‘MTT4’.

Keywords: *Malus × domestica*, cultivars, vigour, productivity, winter-hardiness