

The influence of different pruning systems on the beginning of domestic plum production and the first yield

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Get the harvest as soon as possible is very important for all growers. Earlier first yield decreases vigour of tree and working hours to each tree. The aim of this research was to determine effectively pruning system for new local cultivars, who gave highest yield and fruit quality. The trial was established in 2012 at Institute of Horticulture (formerly Latvia State Institute of Fruit-Growing) and included cultivars ‘Ance’, ‘Adelyn’, ‘Sonora’, ‘Lotte’, as control used ‘Victoria’ and ‘Jubileum’, planting distance 4×2.5 m, used rootstock — *Prunus cerasifera*. Evaluation of pruning were done for systems — Heka espalier, spindle system and system without bending but only with pruning. Evaluation of average fruit weight and yield on trunk cross section area of the first yield was done in 2015. Significantly higher yield on trunk cross section area showed Heka espalier system — from 0.49 kg cm^{-2} (‘Victoria’) to 0.12 kg cm^{-2} (‘Ance’); the spindle system gave from 0.24 kg cm^{-2} (‘Victoria’) to 0.14 kg cm^{-2} (‘Ance’). Trees on pruning system without bending had very weak yield 0.17 kg cm^{-2} (‘Victoria’) to 0.08 kg cm^{-2} (‘Jubileum’ and ‘Sonora’) and some of trees without yield. Average yield of fruit had the same results: greater fruit had, if Heka espalier system were used, but smallest without bending.

Keywords: average fruit weight, *Prunus domestica* L., Heka espalier, spindle system, yield on trunk cross section area