

Inspection, calibration and other ways of improving the efficiency of air assistance sprayer in the purpose of applying small and medium application rates in fruit production

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In the last twenty years in Serbia there is noticeable trend in the increase of orchards. Planting and caring of the orchard demands significant financial resources, but as well it secures gain. Special attention to the care of the orchard deserves the protection against illnesses and pests. Chemical protection is the most commonly used of all measures of plant protection. Chemical protection of orchards usually is performed by air assistance sprayers. In the world, there is actual minimize usage of liquid per hectare, that is treating orchards with small application rates from 150 to 500 l/ha or even smaller from 150 to 250 l/ha. In Serbian practice is most commonly used medium application rates from 500 to 1000 l/ha or large application rates from 1000 to 1500 l/ha. Inspection of air-assisted sprayers, correct calibration, different ways of there adaption can help fruit growers in Serbia to introduce small and medium application in fruit production.

In May 2009. inspection of sprayers and air assistance sprayers according EN 13790 become obligatory measure in Serbia. Last 3 years Faculty of Agriculture from Novi Sad done over 30 inspection and calibration of air-assisted sprayers on voluntary level. Good Agricultural Practice (GlobalGAP Standard) can help us to do these inspections. Most of this inspection and calibration was result of introducing GlobalGAP standard in Serbian fruit production.

Authors of this paper-work has made a „Guideline for handling and calibration of equipment for pesticide application“ to be used by farmers in Serbia. Last 2 years we have held a lot of training courses for fruit growers in aim to help them to improve pesticide application with there air-assisted sprayer.

This year we started with experiment in 13 years old apple orchard. In half of this orchard we apply small application rate (381 l/ha) during whole vegetation period and in second part of orchard we use medium application rate (759 l/ha). In October we will have results which will shown us is there any different in biological efficiency of this two application rates.

We hope so that all this activity will help us to introduce small and medium application rates instead of large in fruit production.