

Technology for Organic Raspberry Production

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Дата: 09.03.2017 *Брой:* 3/2017



For the first time in Bulgaria, an innovative technology has been developed for organic production of raspberries of the cultivars Willamette and Lyulin. The scientific product can be used by producers or cooperative associations engaged in the production of organic raspberry fruit. The team that developed the new technology includes Assoc. Prof. Dr. Elena Tsoleva; Assoc. Prof. Dr. Iliyana Krishkova; Assoc. Prof. Dr. Tsenko Vachev; Assoc. Prof. Dr. Ganka Baeva; Assoc. Prof. Dr. Evlogi Markov.

Cultivars: Willamette and Lyulin

Soil type: meadow alluvial.

Planting scheme: 2.50 x 0.50 m or 800 plants/da.

The following levels of fertilization with organic fertilizers are maintained: N (10–15 kg/da), P₂O₅ (8–10 kg/da) and K₂O (15–16 kg/da).

Irrigation: drip irrigation with an irrigation rate of 80% ET.

Environmentally friendly methods and means have been developed for the control of raspberry pests, which include: risk assessment of disease caused by soil phytopathogenic fungi of the root system and stem pests before establishing an industrial plantation.

Key diseases: *Fusarium oxysporum* and *Fusarium avenaceum*.

Key pests: raspberry agrilus (*Agrilus aurichalceus*), raspberry gall midge (*Resseliella theobaldi*), raspberry bark beetle (*Coroebus rubi*).

The methods and means for control of raspberry pests include:

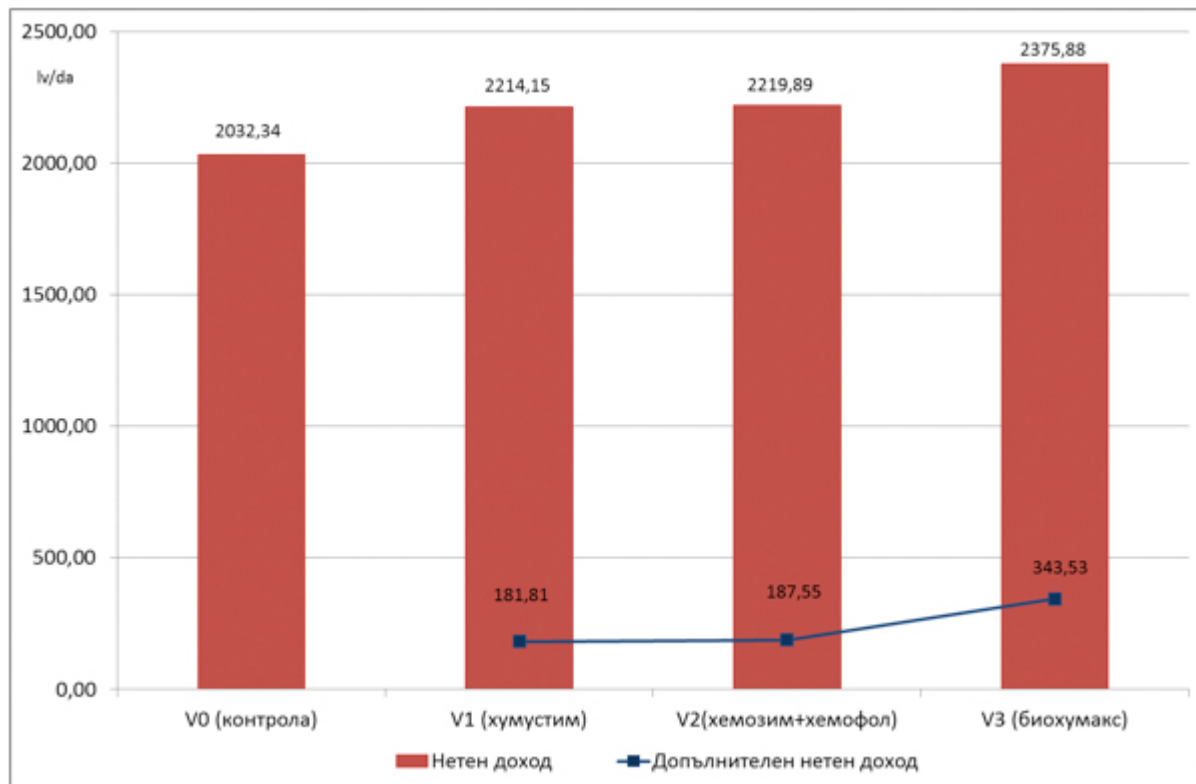
- risk assessment of disease caused by soil phytopathogenic fungi of the root system and stem pests before establishing an industrial plantation;
- use of raised beds for planting the crop.

Advantages of the technology:

- Spraying with bio-fungicides and insecticides is reduced. For overall protection of the plantations, three combined sprayings are applied.
- High-quality organic fruit production with very good taste qualities and safe for human health;
- Conservation of biodiversity through the establishment of provocative crops with flowering vegetation.

Economic efficiency

Lyulin - Net income - **2376 BGN/da**, Rate of profitability - **234%**



Willamette - Net income - **2210 BGN/da**, Rate of profitability - **193%**

* The Institute of Agriculture in Kyustendil received the "Golden Medal" award at AGRA 2017 for the developed "Technology for organic production of raspberries".