

# Uporaba fotoselektivnih mreža u voćarstvu (rezultati projekta LIFE.SUSAFRUIT)

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*21. Poslovno znanstveni klub, Zagreb, 20. rujna 2016.*



[www.life-susafruit.eu](http://www.life-susafruit.eu)

# Projekt: LIFE.SUSAFRUIT

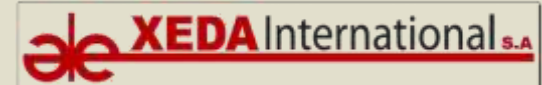
## Tri države:

- Hrvatska
- Italija
- Francuska



## Šest partnera:

- Sveučilište u Zagrebu Agronomski fakultet
- Sveučilište u Bologni
- Sveučilište u Torinu
- Agra
- Apofruit
- Xeda



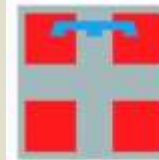
# Podrška projekta



CROATIAN  
ENVIRONMENT AGENCY



Regione Emilia-Romagna



REGIONE  
PIEMONTE

CReS 



TUTTI FRUTTI 

# Web stranica projekta

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News

- 16/12/2014 Announcement: 1st Progress meeting, Turin, 27th and 28th January 2015... [Read more](#)
- 16/12/2014 Announcement: Workshop "The apple and peach: innovations in integrated fruit..." [Read more](#)
- 14/11/2014 LIFE13 Regional A14-07 meeting, Budapest, 11th November 2014... [Read more](#)
- 10/05/2015 The experimental orchards set against moth (*Cydia rosella* and *Cydia pomonella*)... [Read more](#)

Project

European Commission has approved funding for project "Low pesticide IPM in sustainable and safe fruit production" (LIFE SU SA-FRUIT) under the *LIFE* programme in theme Environment Policy & Governance. LIFE SU SA-FRUIT is one of 125 winning projects among the 351 proposals received in this call. Budget of the project is €1.5 million, and the EU will provide more than €900,000.

The project aims to develop, apply and demonstrate an economically-viable strategic plan to implement integrated pest management, by promoting the use of low chemical approaches in fruit and post-harvest fruit production in typical Croatian and Italian agro-ecosystems. The project intends to create an environmentally-friendly management system for fruit production and storage, by making more efficient use of resources and ensuring food safety to not compromise.

Plant pests and diseases cause important yield and quality losses in fruit crops. Due to the hazardous effects of agrochemicals on both humans and the environment, there is a growing trend towards agro-ecosystems based on the management of ecological interactions and the use of integrated pest management (IPM).

The project is expected to deliver several outputs, including:

- the setting up and validation of prototypes of exclusion nets to be applied in fruit orchards
- the setting up and validation of a prototype for hot water treatment of fruit in postharvest
- the establishment of 12 demonstration orchard sites in Croatia and Italy, where SAs, including exclusion nets, autoculation with pheromones, biocontrol and sanitation practices will be used
- the establishment of 4 demonstration packhouse sites were in Croatia and in Italy, where SAs, including hot water treatment machines, and other alternative postharvest practices will be used
- a list of Best Agricultural Practices (BAPs), to be used in integrated production of fruit

These practices will be communicated and diffused throughout all the stakeholders, thanks to several training, communication and dissemination activities, including among the others, training courses, seminars and technical visits for farmers, technical workshops for packhouses, consumer-oriented workshops, and trial conferences.

Low pesticide IPM in sustainable and safe fruit production

Visit our YouTube channel

gragra CIPOFRUIT

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Languages: English, Italian, Croatian, Spanish, French

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# POKUSI 2015.

## 4 vrste mreže:

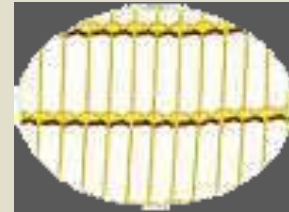
(2,4 x 4,8 mm; 60 g/m<sup>2</sup>)

- Agritenax bijela (0,27 EUR/m<sup>2</sup>)
- Agritenax žuta (0,34 EUR/m<sup>2</sup>)
- Agritenax crvena (0,34 EUR/m<sup>2</sup>)

(0,9 x 1 mm)

- Drosophila stop normal

(0,95 EUR/m<sup>2</sup>)



Krapina: jabuka sorte 'Braeburn'



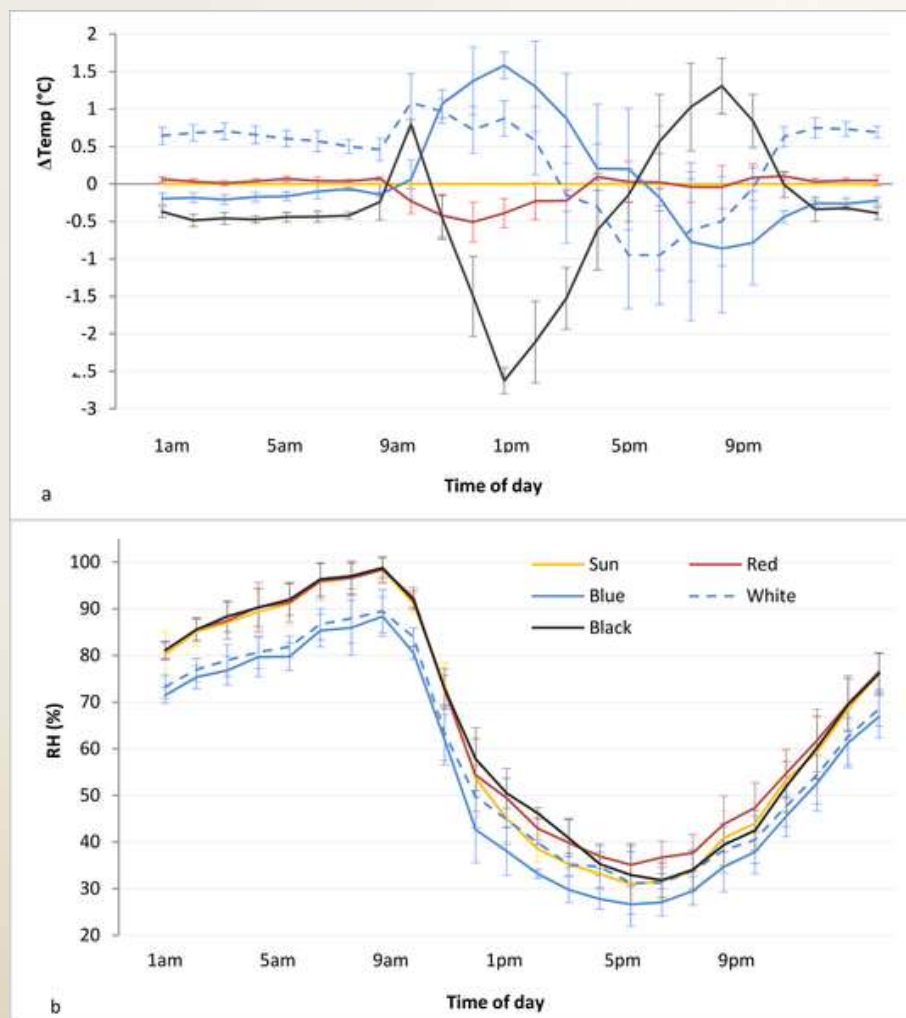
Vratišinec: breskva sorte 'Suncrest'





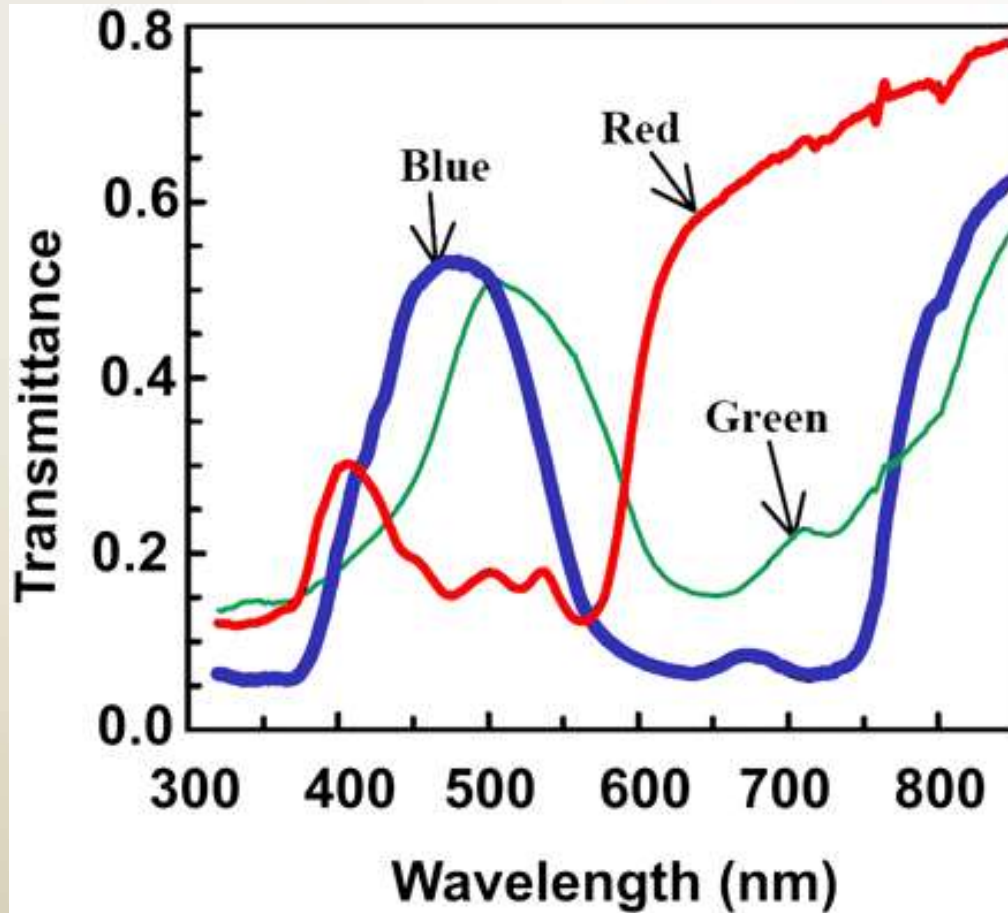


# Temperatura (a) i relativna vlažnost zraka (RH; b) ispod obojanih foto-selektivnih mreža



Zoratti L, Jaakola L, Häggman H, Giongo L (2015) Modification of Sunlight Radiation through Colored Photo-Selective Nets Affects Anthocyanin Profile in *Vaccinium* spp. Berries. PLoS ONE 10(8): e0135935. doi:10.1371/journal.pone.0135935  
<http://journals.plos.org/plosone/article?id=info:doi/10.1371/journal.pone.0135935>

Utjecaj foto-selektivnih mreža na sastav svjetlosnog spektra



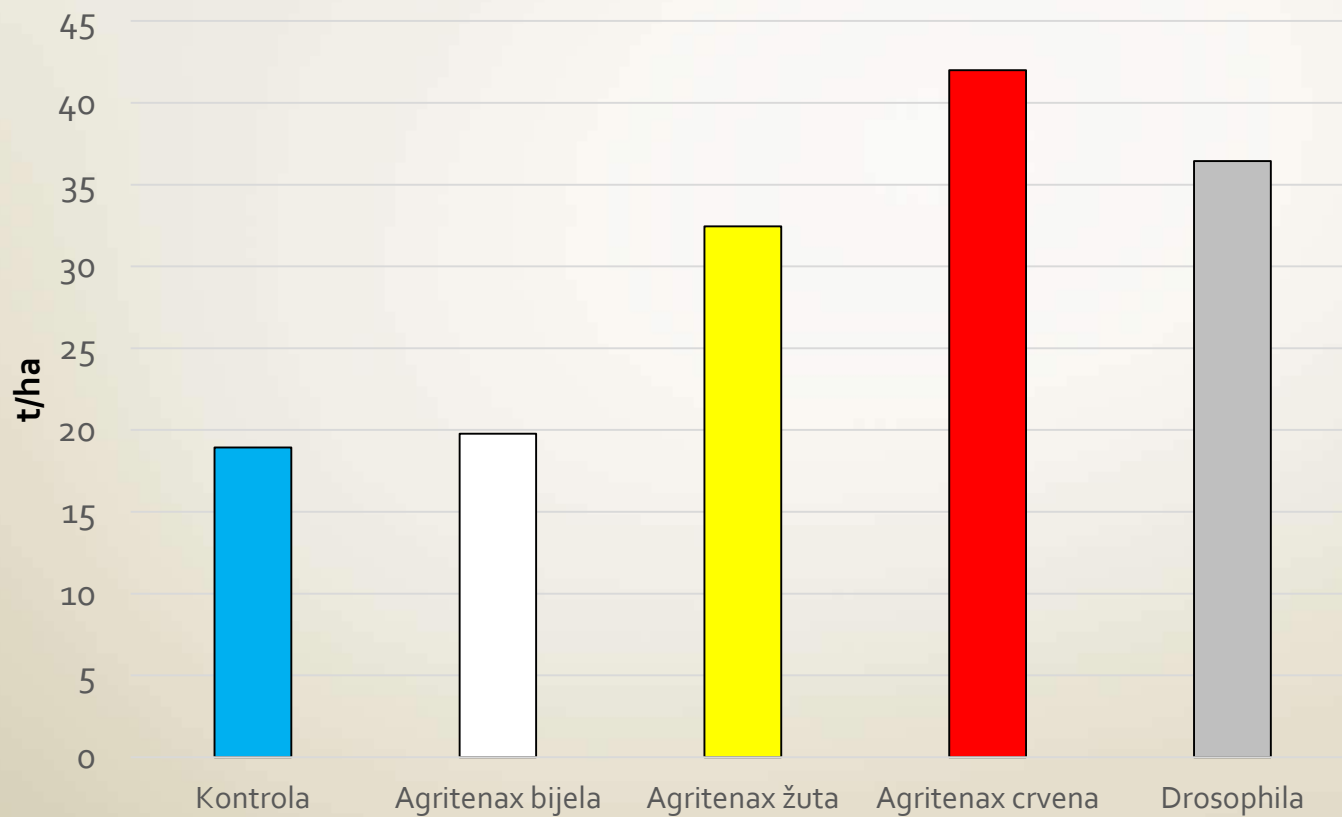
## Utjecaj foto-selektivnih mreža na zadržavanje štetnika



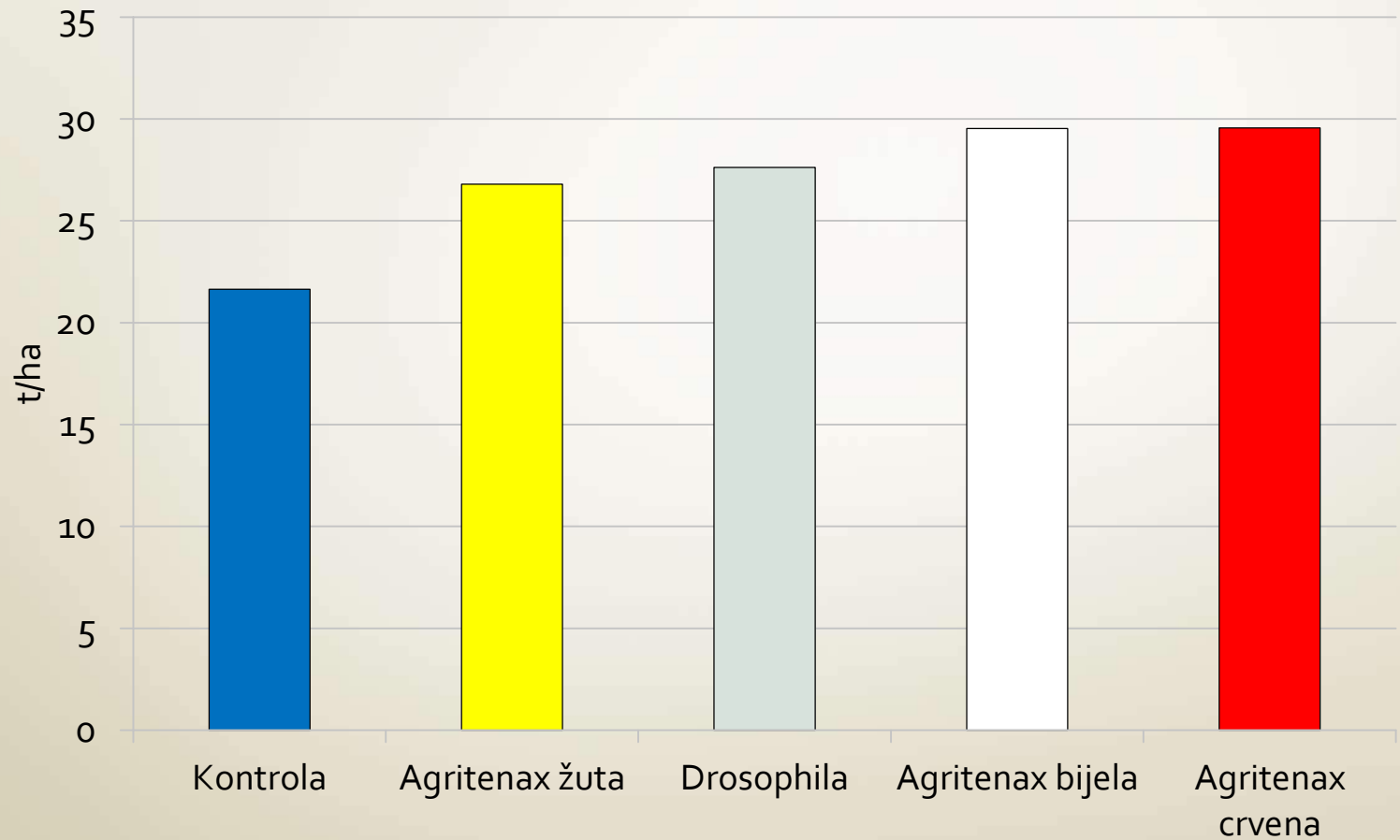


**Rezultati:** Učinak mreža na kakvoću  
plodova

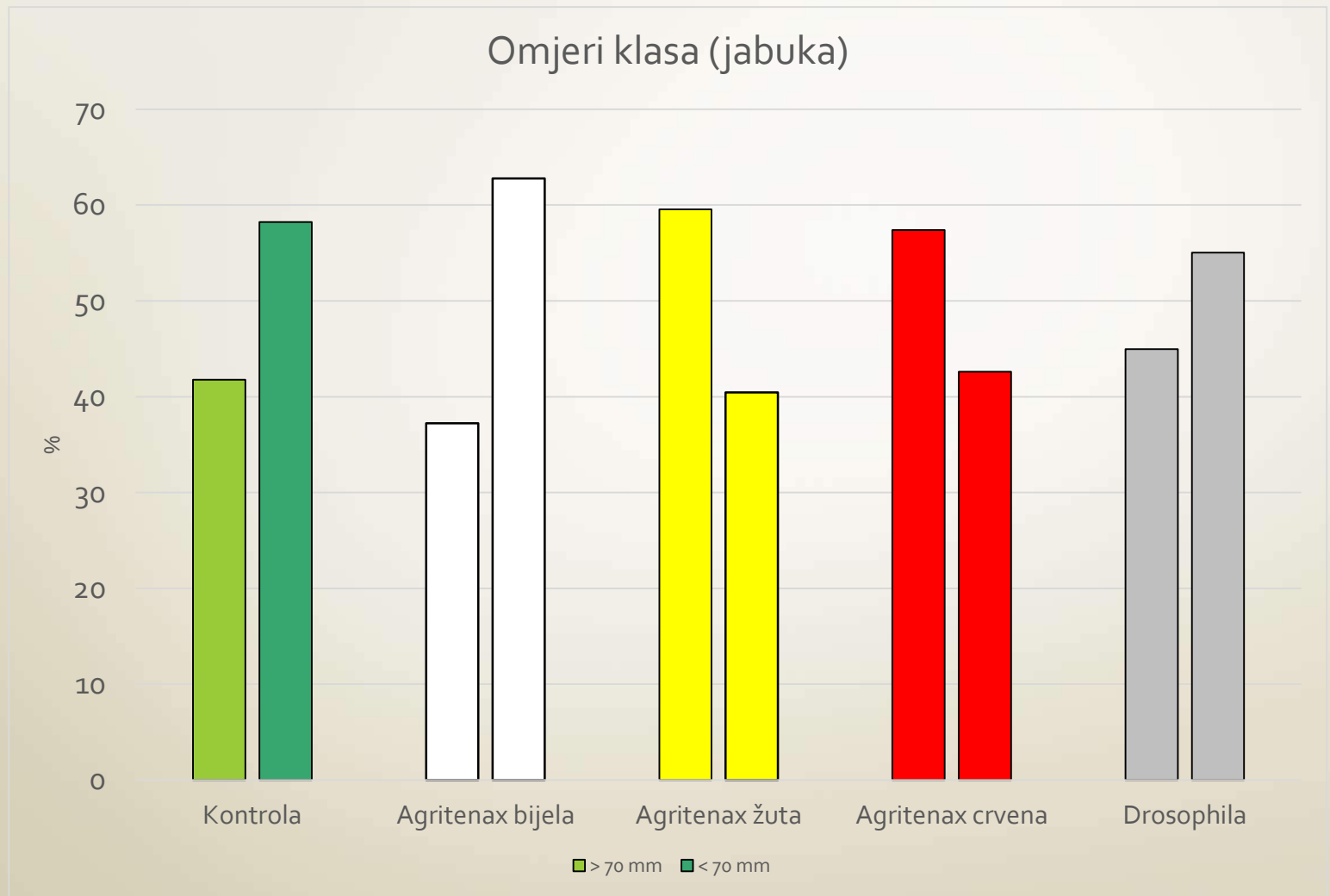
## Prirod (jabuka)



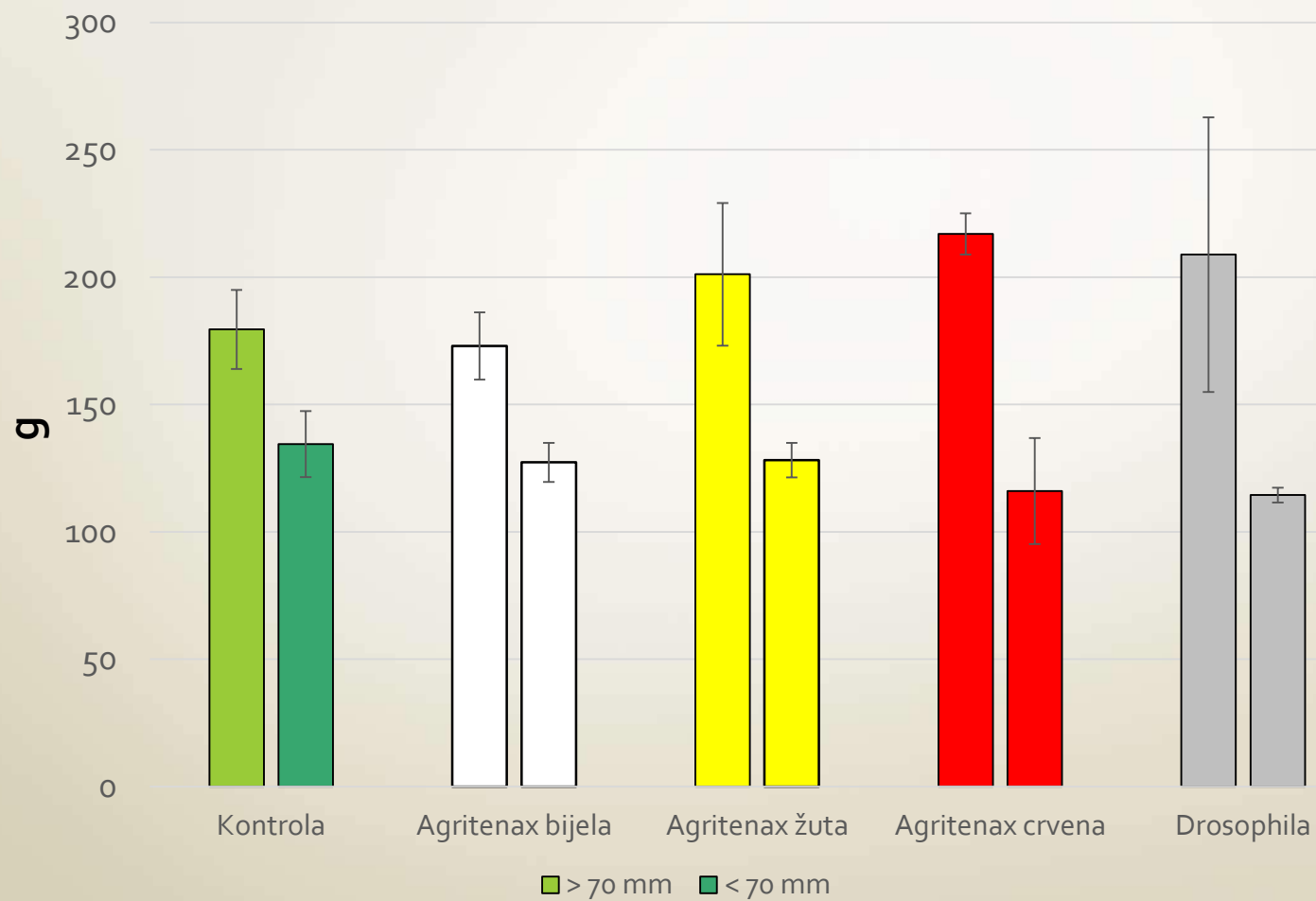
## Prirod (breskva)



## Omjeri klasa (jabuka)

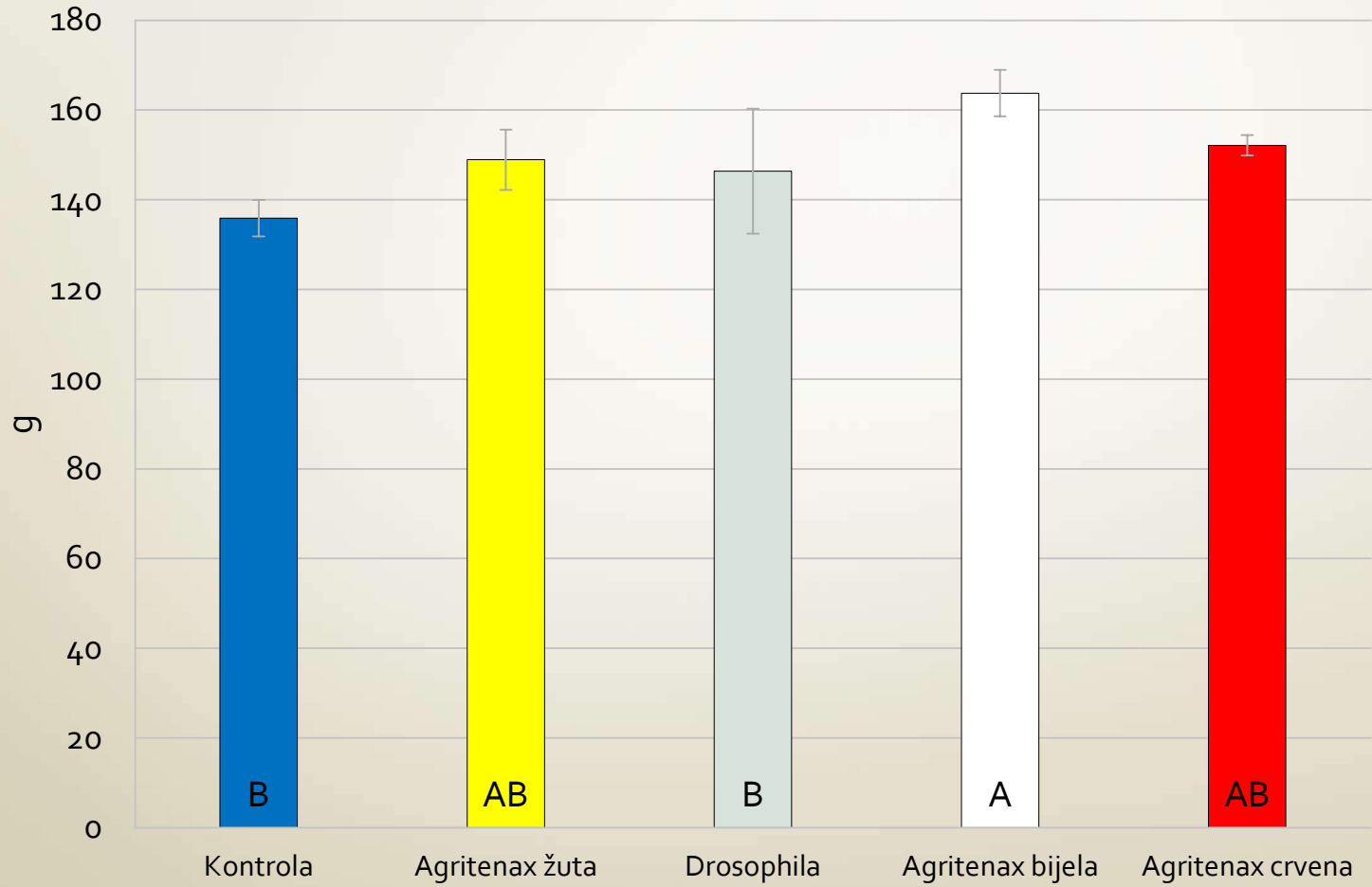


## Masa ploda (jabuka)

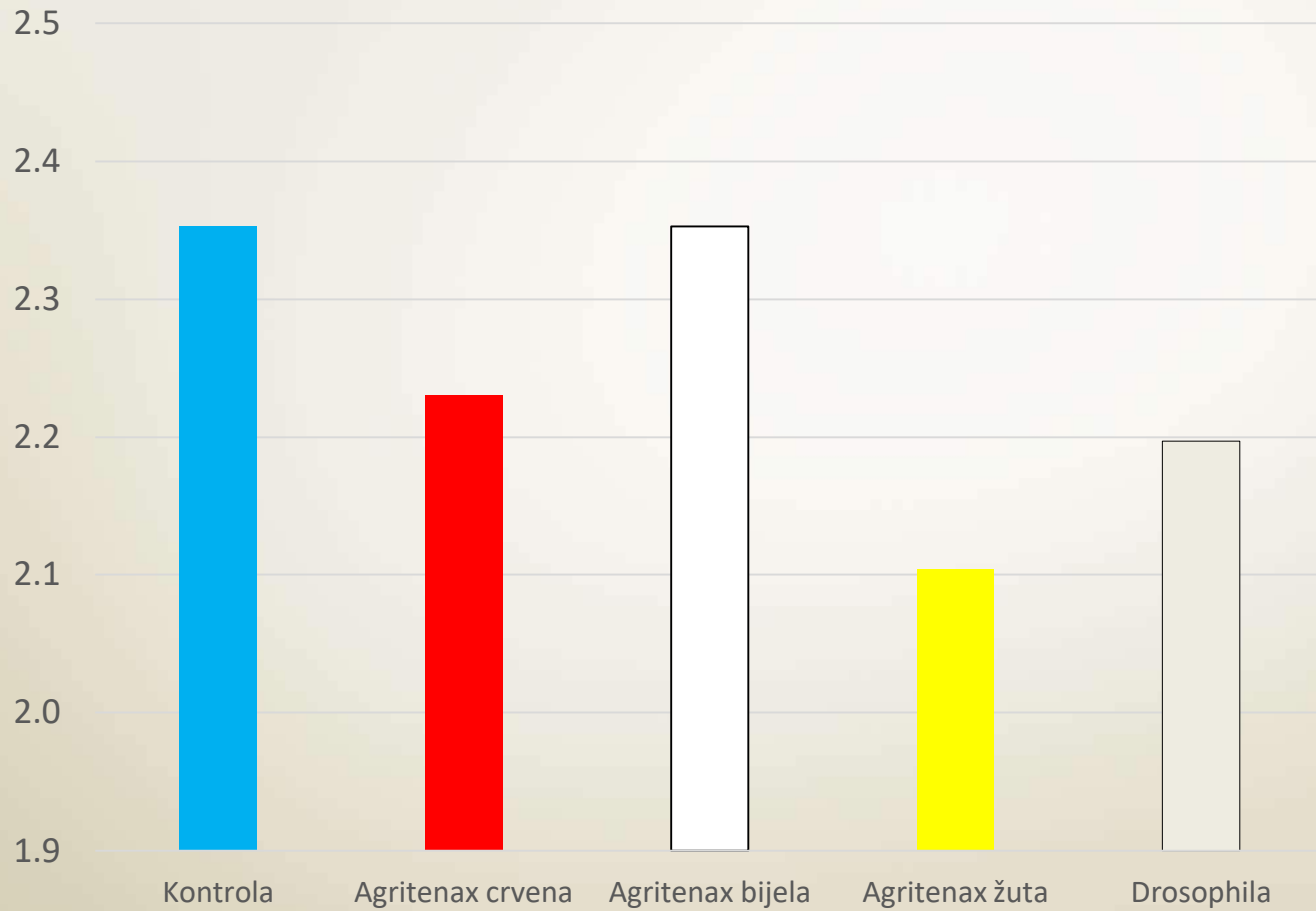




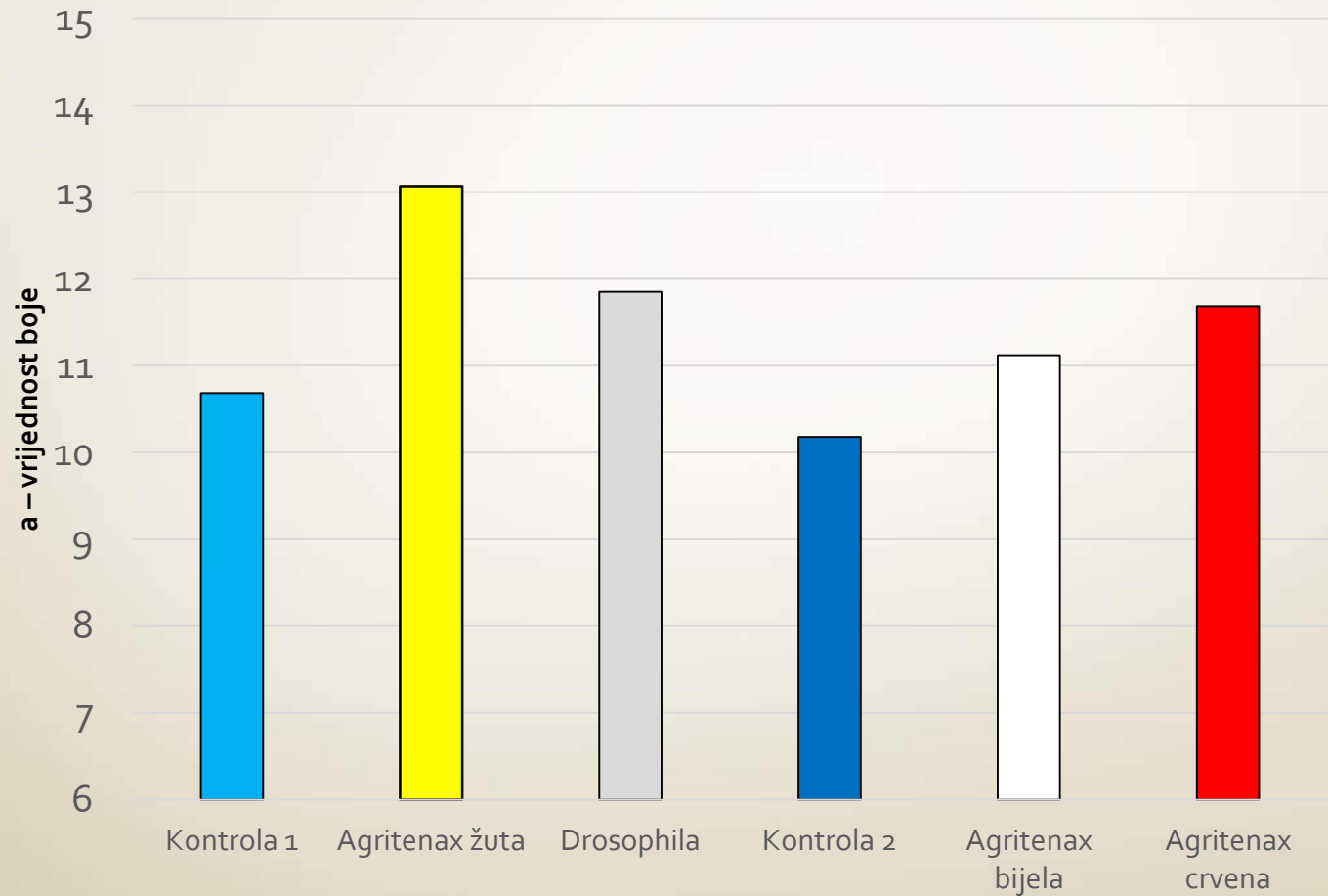
## Masa ploda (breskva)



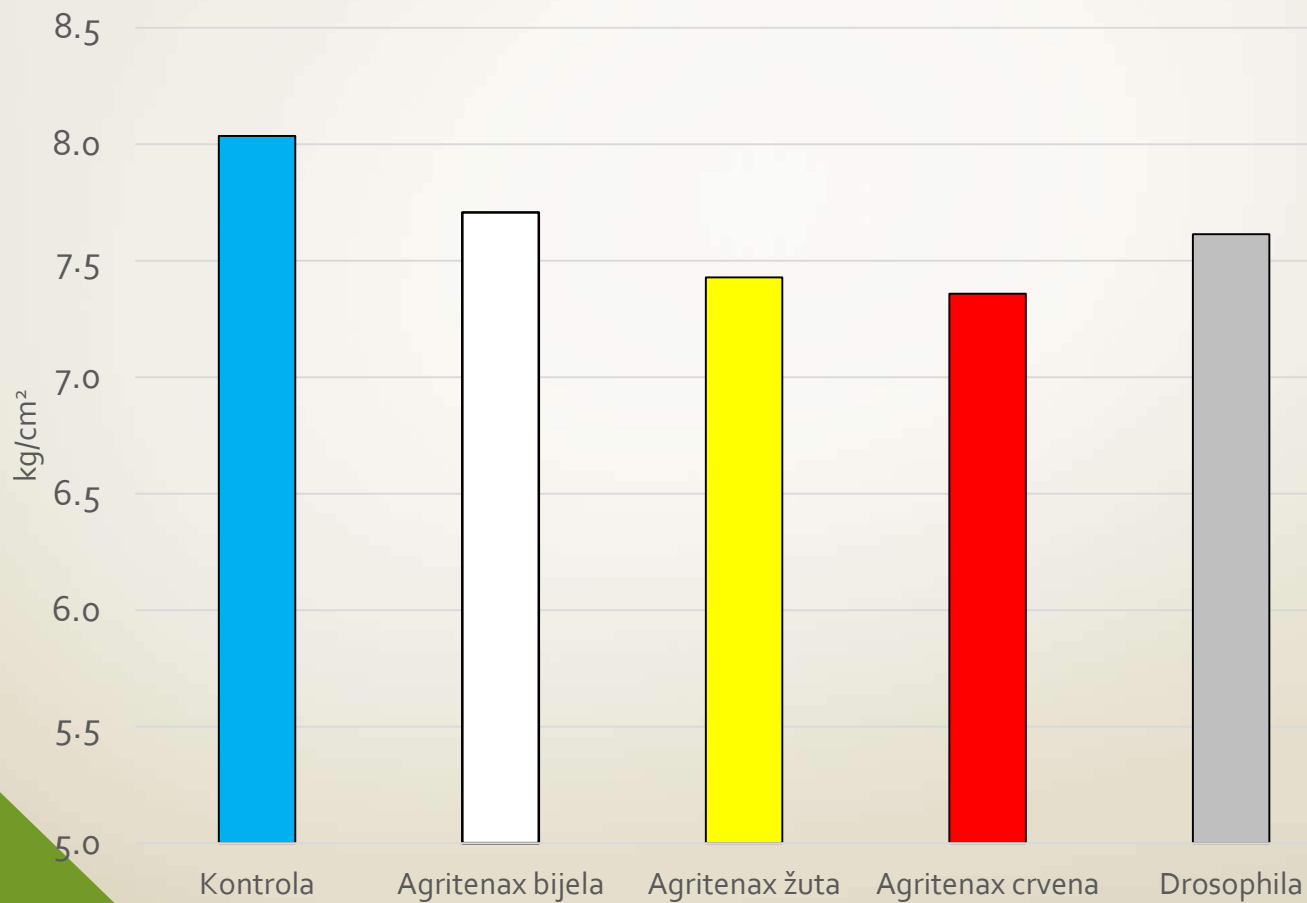
Indeks obojenosti (jabuka)



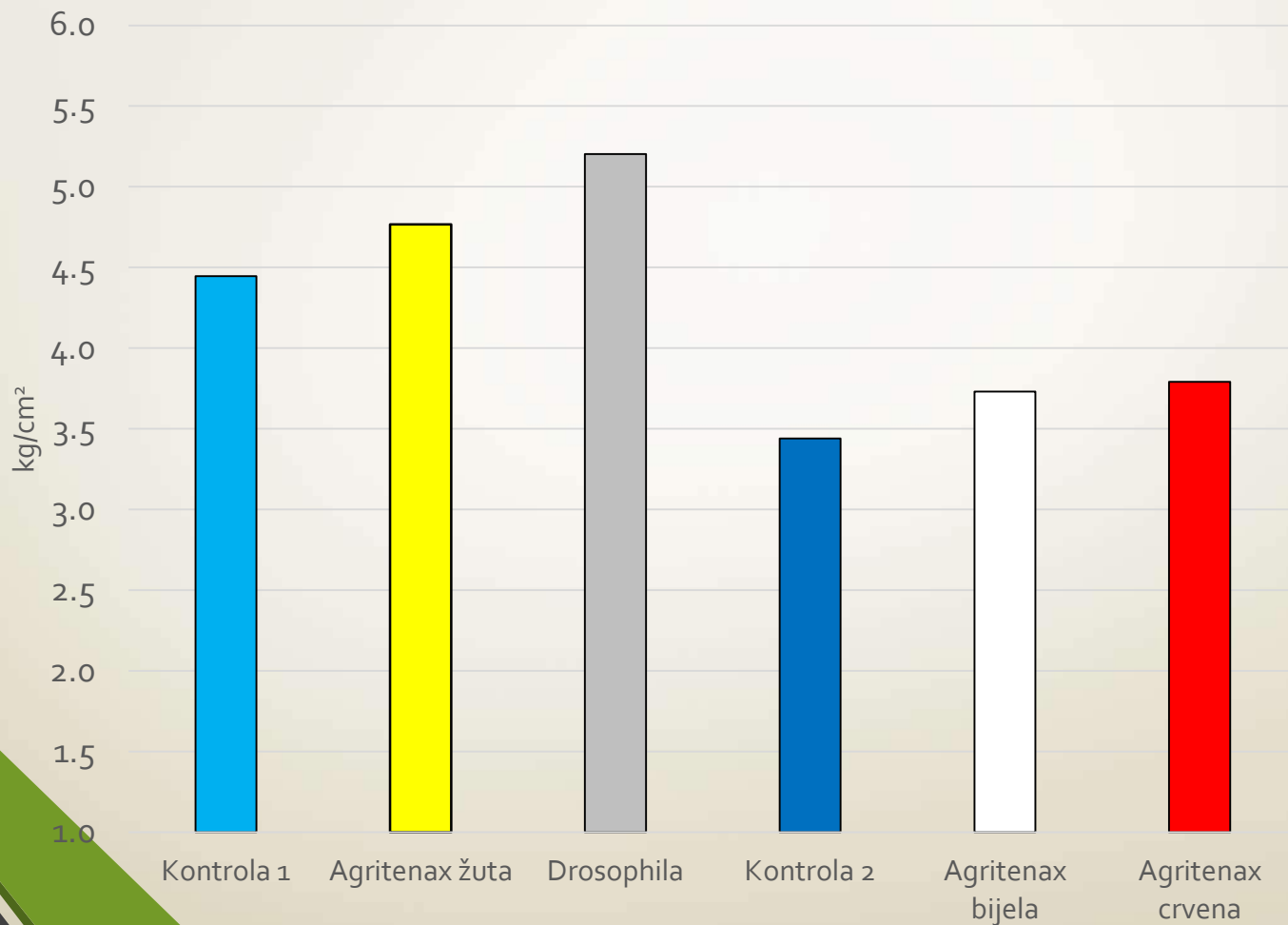
## Breskva - intenzitet crvene boje



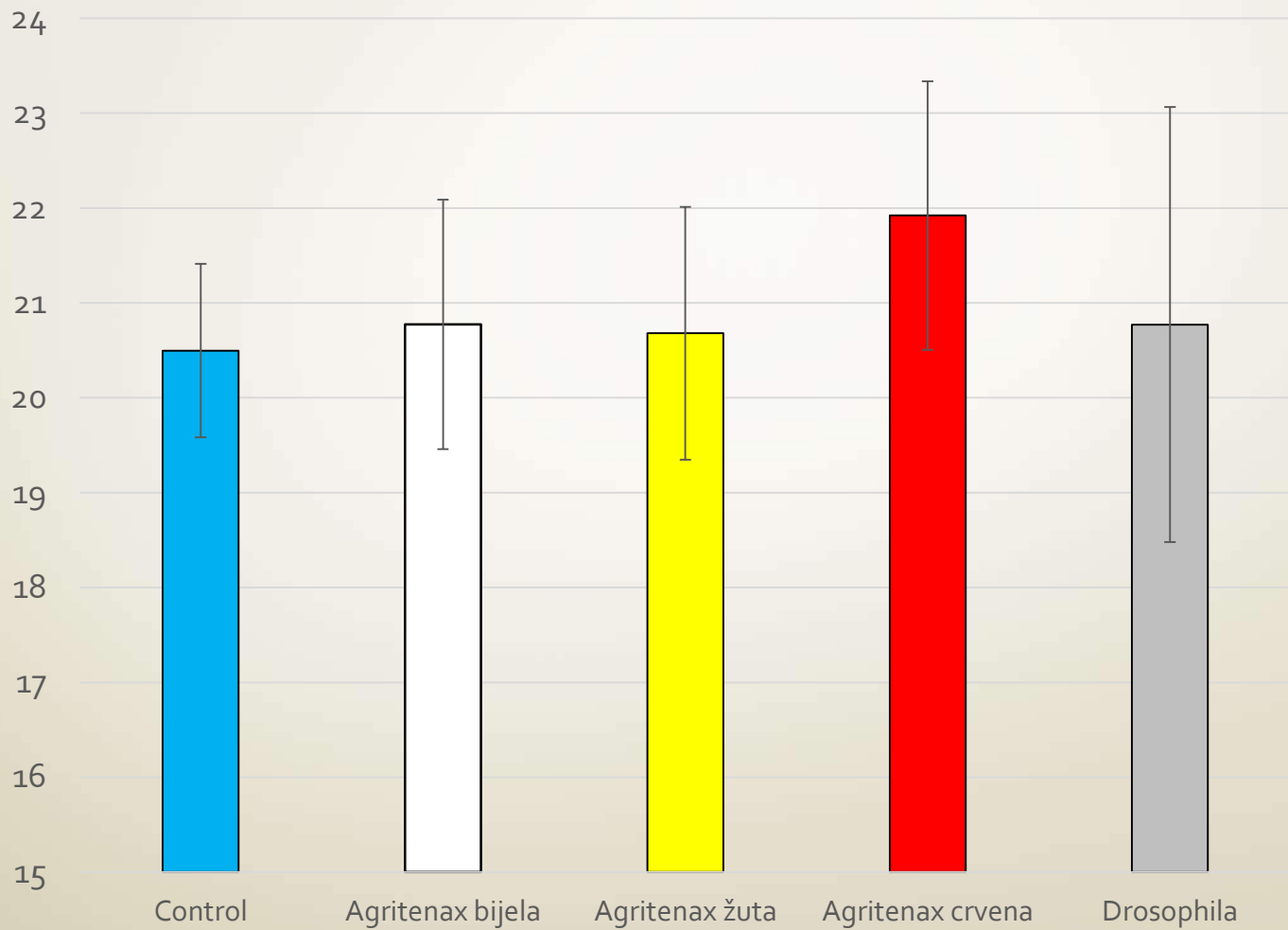
## Jabuka - tvrdoća



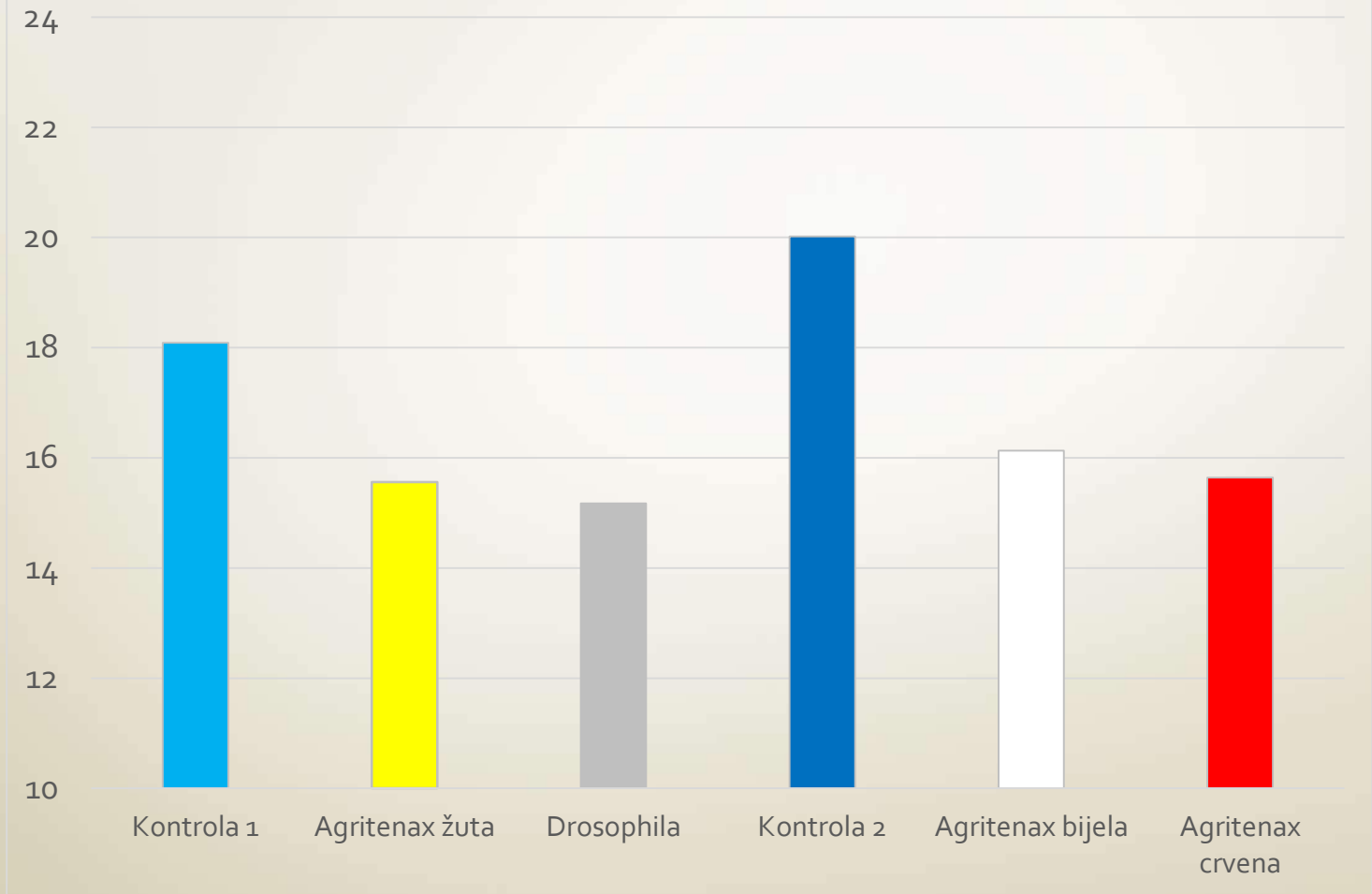
## Breskva - tvrdoća



## Jabuka (omjer šećera i kiselina)



## Breskva (omjer šećera i kiselina)



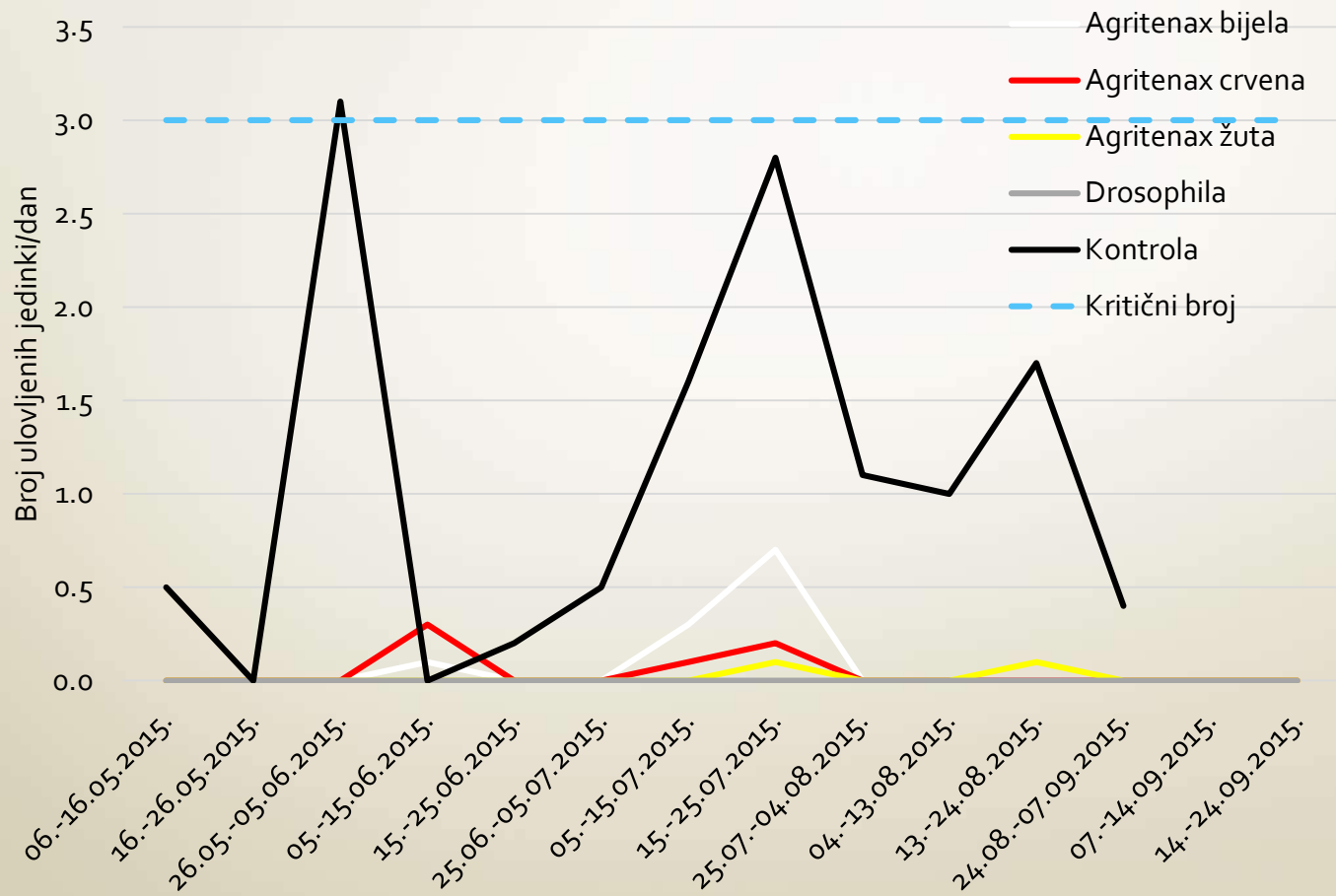


Rezultati: Učinak mreža na štetnike



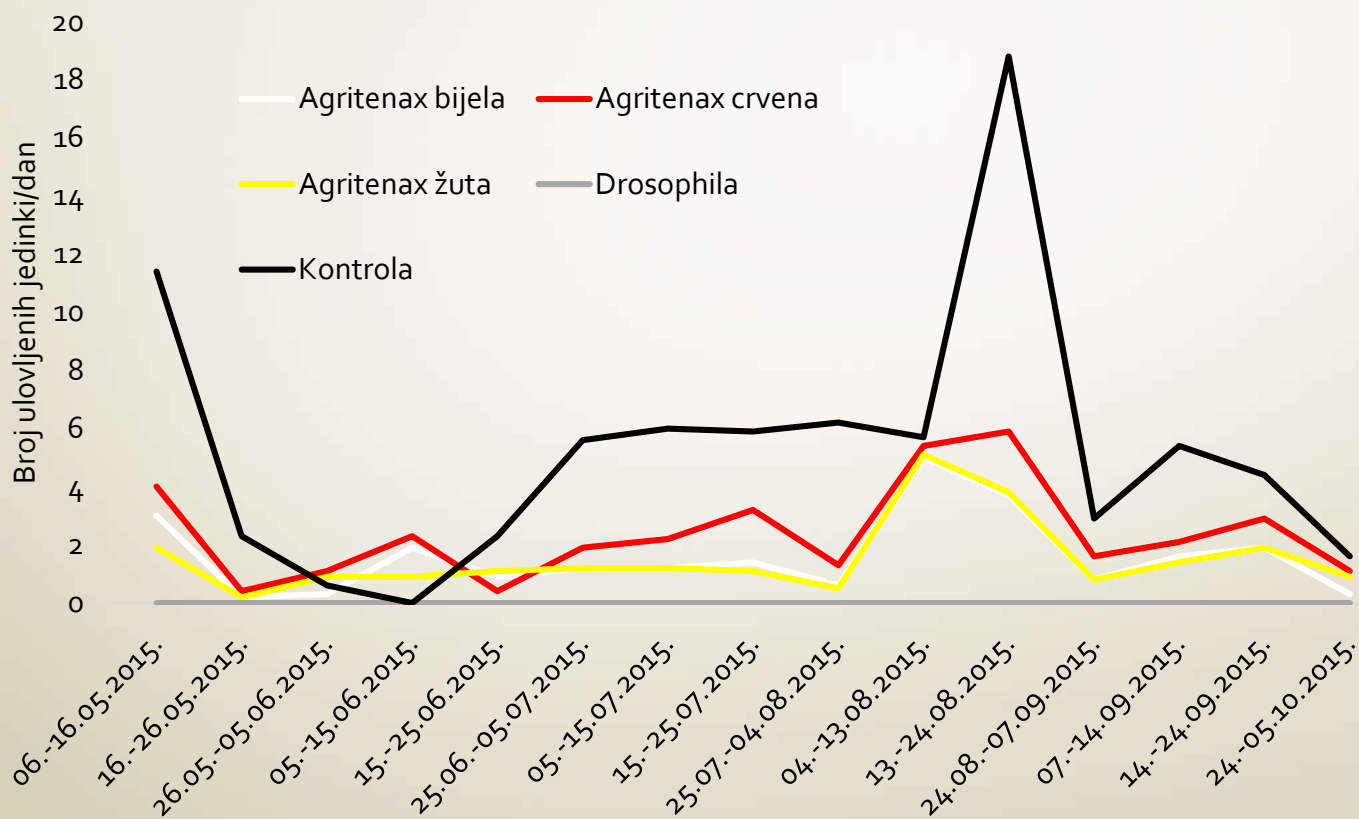


## Jabučni savijač *Cydia pomonella* (jabuka)



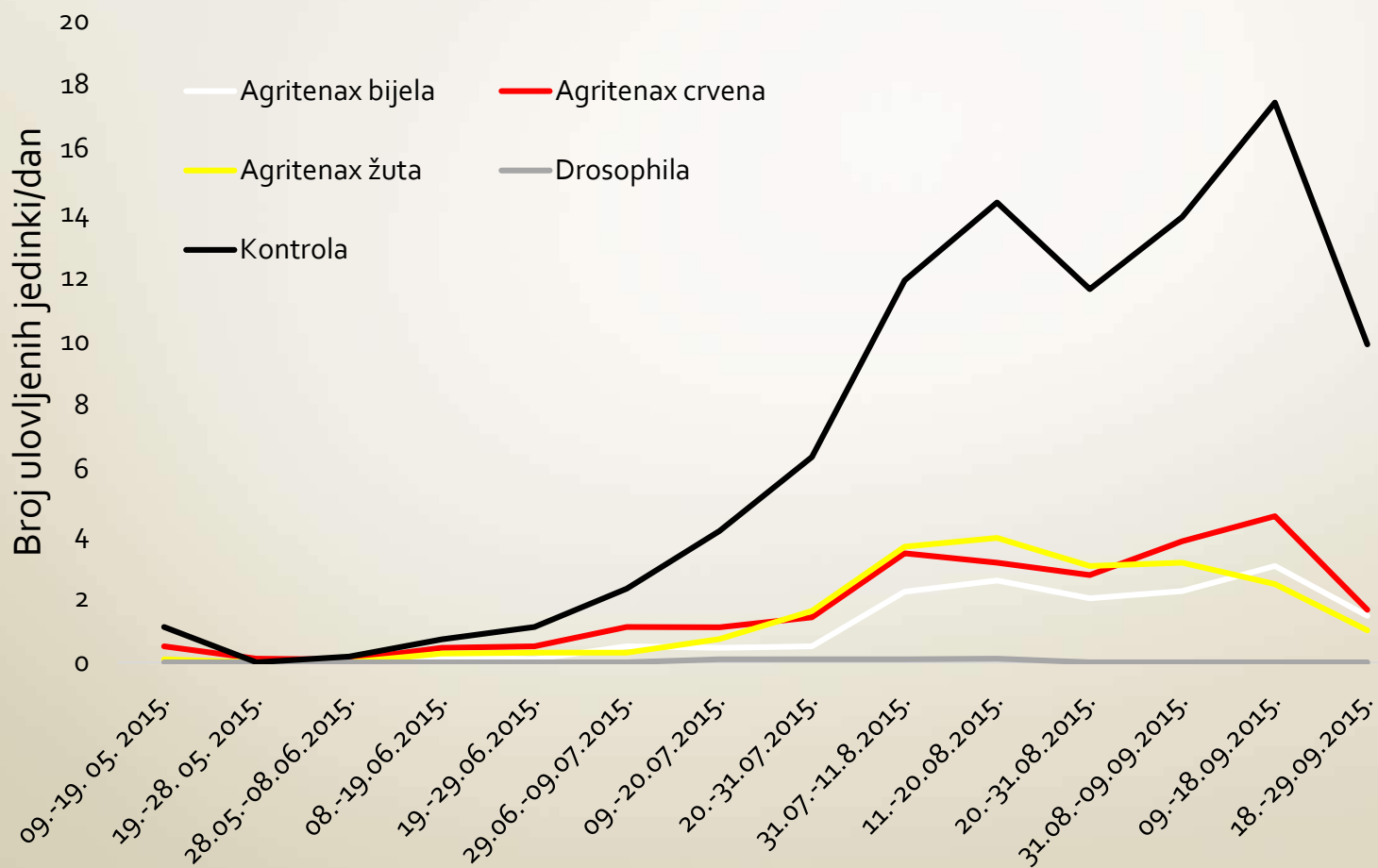


## Breskvin savijač *Grapholita molesta* (jabuka)



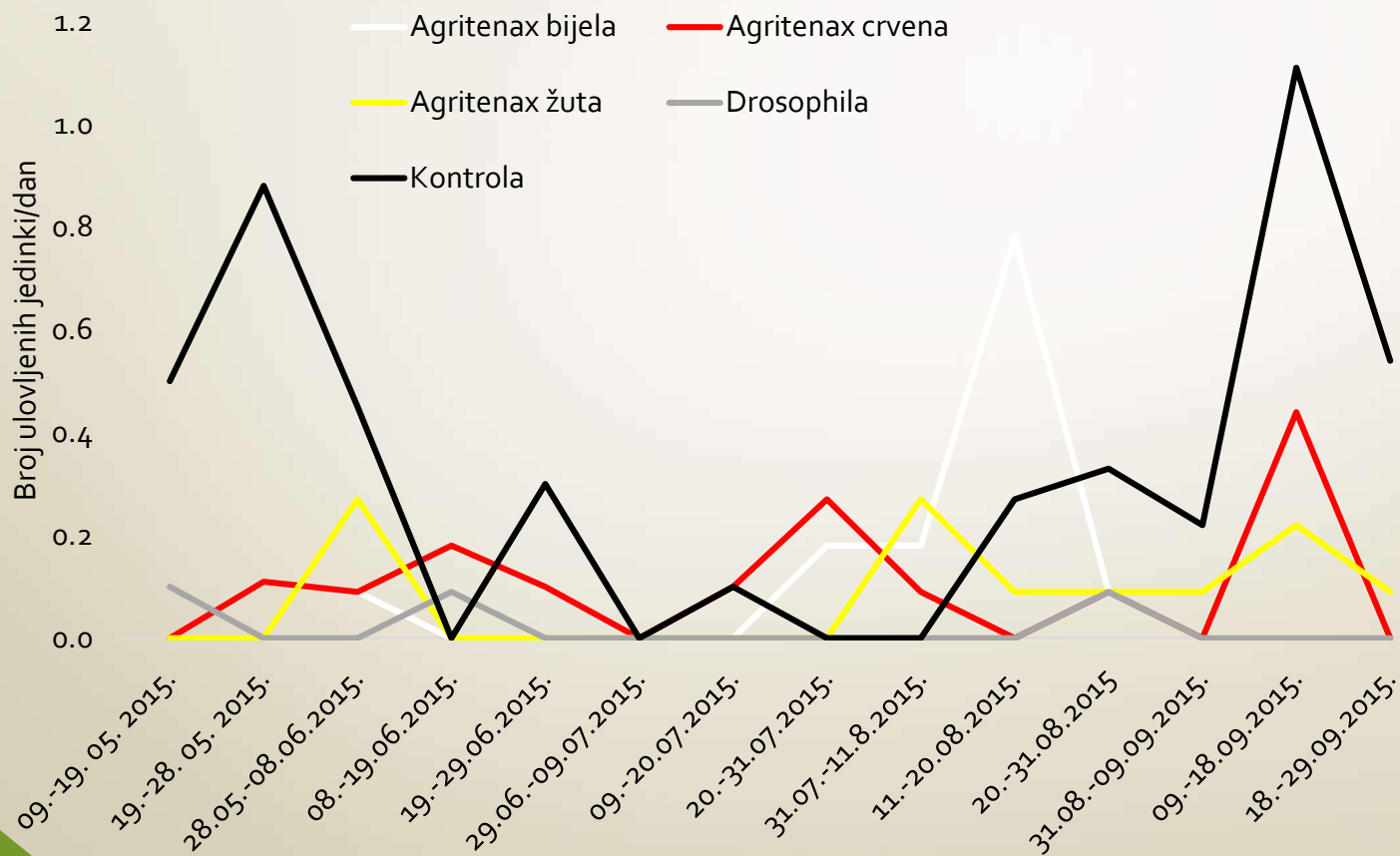


## Breskvin savijač *Grapholita molesta* (breskva)

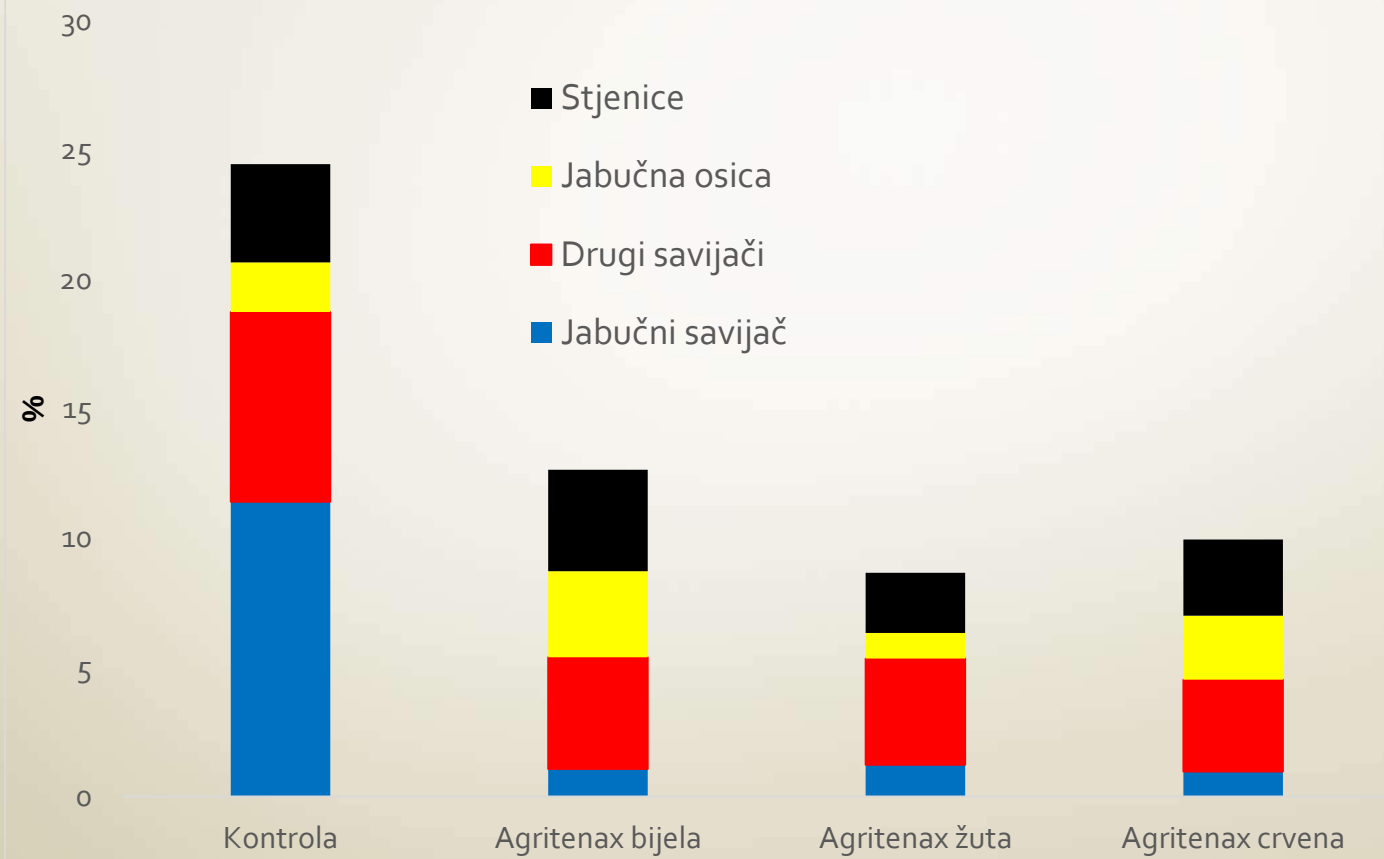




## Breskvin moljac *Anarsia lineatella* (Čakovec - breskva)



## Udio oštećenih podova (jabuka)



# Zaključak



Jabuka

- prirod
- masa ploda
- omjer šećera i kiselina

Breskva

- prirod
- Intenzitet obojenja
- ujednačena tvrdoća

A  
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C  
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N  
A

# Ovogodišnji pokusi



# Zaključak



## Prednosti

- zaštita od tuče i štetnika
- poboljšanje kakvoće i priroda
- ušteda na troškovima proizvodnje

## Mane

- povećavaju cijenu podizanja voćnjaka
- potrebno ih je prilagoditi vrsti i podneblju



Hvala na pozornosti!



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