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ABSTRACTS OF PAPERS

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Maximising sugar beet performance in a changing climate

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BEET YELLOW VIRUS A POSSIBLE THREAT TO SUGAR BEET PRODUCTION IN SERBIA?

There are three main yellowing viruses that damage the beet crop in Europe: *Beet yellows virus* (BYV), *Beet mild yellowing virus* (BMYV) and *Beet chlorosis virus* (BChV). Although not a true yellowing virus, *Beet mosaic virus* (BtMV) is found in sugar beet in Europe and can cause damage. The yellowing viruses are transmitted by aphids. The recent ban of neonicotinoids in the EU endangered sugar beet production in terms of crop protection against aphids. Since, Republic of Serbia agenda is to become member state of the EU, in order to do that it is necessary to completely synchronise legislation with the EU in all domains, including agriculture and crop protection. That is why it is expected that this ban of neonicotinoids will be implemented in the near future in Serbia also in sugar beet growing. Although earlier research classified Serbia as a country where damage might occur occasionally without significant yield loss, in the last two years (2018 and 2019), BYV presence was confirmed in the fields of the Institute of Field and Vegetable Crops, Novi Sad. During mid of May 2019, the presence of BtMV was confirmed, also transmitted by aphids. First BYV symptoms in 2019 occurred mid of June and the presence of BYV was confirmed by ELISA. Aphids monitoring during the 2019 vegetation period showed existence of over 50 different aphid species. The most dominant species were *Aphis fabae* and *Aphis spiraecola*. The presence of *M. persicae*, the most significant vector of yellowing viruses in Western Europe, was very low. Further studies will be done to examine possible vectors of viruses and to assess effect of yellowing viruses on sugar yield.