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Successes and Challenges of Implementation of the Convention - Georgian State Programme Against Brown Marmorated Stink Bug

Agenda item 16

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English only

1. Brown marmorated stink bug (BMSB) *Halyomorpha halys* (Stäl) (Heteroptera - Pentatomidae) is an invasive pest naturally occurring in Japan, southern China and Korea. Since late 1990's the BMSB populations become established in North America and the mid 2000's in Europe. The feeding of BMSB adults and nymphs are reported on more than 300 possible host plants. As widely known only broad spectrum insecticides such as pyrethroids, carbamates and neonicotinoids are capable of providing effective control of BMSB. However, most of currently available treatments control only BMSB present in the orchard at the time of the application. Therefore, due to continuous migration of BMSB from outside sources into managed crops, multiple applications of insecticides are needed for effective BMSB control. This high frequency of insecticide applications used for BMSB treatments in addition of being not economically viable, also proved to be very detrimental to beneficial insects such as predators and parasitoids present in the orchard.

2. In Georgia, a BMSB population was first observed during 2015 growing season with the first significant injuries on hazelnut reported in 2016. High levels of infestation were observed in Samegrelo region, while moderate injuries were reported in Guria and western Imereti regions. Estimated economic impact on hazelnut industry totals approximately to USD 52.7 - 68.6 million in 2016 (report of international experts presented Nov 20, 2016). Based on similarities in environmental conditions in Mid-Atlantic region in US, Northern Italy and Georgia, it is estimated that BMSB has two generations per growing season in the western Georgia.

3. Recent BMSB monitoring studies in Georgia documented the viability of monitoring of BMSB adults and nymphs by commercially available traps and lures. Employing traps in the orchard is a very reliable indicator of stink bugs present in the area. As available lures are less attractive to BMSB during the beginning of the growing season (April- July), additional sampling by visual searches and plant beating around traps and most attractive host plants can be reliably used to detect the presence of BMSB.

4. In 2016-2017 Ministry of Agriculture of Georgia implemented wide phytosanitary measures to control BMSB population. The strategy and action plan against BMSB was developed in close cooperation with US and European experts in November 2016 encompassing three main directions: (i) risk communication, monitoring and chemical treatment. The governmental order N588 "About the measures against Brown Marmorated Stink Bug" along with the budget was adopted early 2017 by the Georgian Government. The National Food Agency of Georgia (NPPO) supported by USAID/REAP project started the implementation of the state programme and action plan.

5. The goal of the programme and action plan is to reduce and control the pest population utilizing technologies with minimal impact to the environment to minimize damage of the agricultural cultivars and forest species and associated economic losses.

6. Expected outcomes are as follows:

- Losses to the agricultural and forest plant species, urban settlements, city parks and consequently, to the individual farmers and country economic are minimized;
- Plant protection service of the Ministry of Environmental Protection and Agriculture including special technique is modernized so that country's capacity to combat other pests is increased ;
- Data collected on the biology, migration routs and size of population that is reflected in the database and used to optimize phytosanitary measures and programmes against BMSB;

7. Activities undertaken by 2017:

- The pest the monitoring system was worked out: 21 000 attracting pheromons were placed in 351 villages across the whole country;
- Based on the monitoring results area of chemical treatment was determined, based on the pest biology data the date of starting pesticide application was announced;
- Local municipalities were provided with appropriate insecticide, bag pack application aggregates and Personal Protective Equipment (PPE);
- For chemical applications Bifentrin containing insecticide was used based on the recommendations of the world leading specialists and proved in Georgia as most effective against this pest;
- More than 110 000 ha area was treated with pesticides in Guria, Imereti and Samegrelo regions using special equipment (tractor and truck aggregates) and aerial application. Pesticides and technical equipment were delivered to the Ministry of Agriculture of Adjara A/R and Gali region of Abkhazia A/R;
- Based on the Georgian Government decision pesticides, pheromone lures and informatory booklets were distributed free of charge to the 230,000 families in Samegrelo, Guria, Adjara and Imerety municipalities (places with mass spread of the pest);
- As a part of communication campaign with support of USAID/REAP project more than 700 000 informatory leaflets were printed, videos prepared and broadcasted via central and regional TV channels; more than 1000 communication materials were shared through mass media (TV, radio, information agency, printed media, internet media); social network, web-page and hot line of the National Food Agency was activated; 12 000 copies of the special issue of the newspaper of the Ministry of Agriculture - "Chveni Sopeli"were printed and distributed in regions.

8. Activities for 2018 are on the way.