

Official controls of IPM in the Slovak Republic

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„**Integrated pest management**“ is a careful consideration of all available methods of plant protection and consequently implementation of appropriate measures that restrain development of populations of harmful organisms and keep using of plant protection products and other actions at levels **that are reasoned from economical and environmental points of view and decrease or minimise risk for human health and environment.** „Integrated pest management “ puts the accent on growing of health crops by the lowest possible invasion of agro ecosystems and supports natural mechanisms for pest regulation;

DIRECTIVE 2009/128/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides



In the Slovak republic

- Act of NR SR No. 405/2011 Coll. on plant health care and on change of act of NR SR No. 145/1995 Coll. on administrative fees as amended by later acts**
- Ordinance of Ministry of Agriculture SR No. 487/2011 Coll. on integrated pest management and on its enforcement**

Act No. 405/2011

- **§ 36 section 2** – national action plan integrates a support of development and implementation of IPM and alternative approaches and techniques (**letter c**) + measures for lowering of risks and influences of using of plant protection products on human health and environment (**letter b**)
- **§ 40 letter d)** – enabling statute for issuing of regulation
- **§ 43 section 6** – the ministry sends a message about specification of conditions of IPM up to 30 June 2013 to the Commission. The professional user is obliged to apply provisions of IPM against harmful organisms as of 1 January 2014.

Penalties

- § 39 section 1 – penalty from 600 till 3 300 Euros:
 - letter i) – user uses plant protection product above authorised field of application, out of accord with conditions of use listed in label approved by the Controlling Institute or out of accord with conditions listed in special provision (national legislative about nature protection and national legislative about public health protection)
 - letter o) – user uses plant protection product out of accord with § 8 section 1 letter a) (good praxis in plant protection)

Regulation No. 487/2011

- § 1 and § 2 – nearly identically with the annex No. III of the Directive No. 2009/128/EC

„Compendium“ of the national legislative

- the legislative is a very general, does not solve details, there are no „direct“ penalties for violation of IPM

Good praxis in plant protection

(definition)

- the praxis that secures the right selection, dosing and timing of plant protection products for plants treatment, in accordance with conditions of their authorised use – due to the feasible efficacy with minimal necessary amount, with reflection of local conditions and possibilities of cultivation and biological controls

Good praxis in plant protection

(basic rules)

- use a prevention (mechanical and biological protection)
- selection of plant protection product
- range of use
- determination of the dose
- **determination of the most suitable date for treatment:**
 - regular observation of health status of crops
 - use of so-called critical numbers of occurrence and threshold of economic damage
 - signalisation
 - to treat in reasonable cases only, when the best effect is assured
- instructions for use from the label

Principles of IPM in legislative 1

1. Main measures:

- **rotation of crops** (the widest number of crops if possible);
- **soil cultivation** (e.g. rest fields, date and sowing rate, ploughing, direct sowing, minimized soil cultivation or non-ploughing systems – at intervals of several years to perform one entire farm year by traditional soil cultivation);
- **varieties, seeds and propagating materials**;
- **fertilization, liming and irrigation**, eventually un-watering;

Principles of IPM in legislative 2

1. Main measures :

- **prevention** of spreading of harmful organisms through hygienic measures (e.g. by regular cleaning of machines and other equipment);
- **protection and support of useful organisms:**
 - the most important and the most efficient in comparison with conventional agriculture
 - to use available commercial useful organisms
 - cheaper way is the support and protection of useful organisms in agro ecosystem
 - examples from praxis are mainly from permanent cultures – viticulture, fruit orchards, or from vegetable vestures

Principles of IPM in legislative 3

2. **Monitoring** of harmful organisms (including species composition of weeds), **forecasts** and systems of early diagnosis, **consulting**.
3. The professional user must decide (following the results of monitoring), **whether he applies** measures for plant protection and when. He has to consider **threshold values** stated for given region, specific areas, crops and climatic conditions. **(selection of plant protection product in accordance with real vesture threat)**.
4. Instead of chemical methods, we have **to prefer** permanent sustainable **biological, physical and other non-chemical methods**, if they offer feasible protection against pests.

Principles of IPM in legislative 4

5. Applied plant protection products must be **the most specific** for targeted species and must have **the lowest side effects** on the human health, non-targeted species and environment.
6. Use of pesticides at the necessary level, **e.g. by lowering the doses, by decreasing the number of applications or by partial application.**
 - to use the lower limit of authorised amount of plant protection product
 - early incidence of marginal parts of vesture
 - in case of weak or almost no infectious pressure of diseases, to extend the interval between individual treatments

Principles of IPM in legislative 5

7. If the risk of resistance is known and if many of harmful organisms need repeated application of plant protection products, we should use available **anti-resistant strategies**, due to the efficiency's sustain. That can include use of several products **with different principles of action**.
8. The professional user should (following the records on use of plant protection products and on monitoring of harmful organisms) **check the efficiency** of used measures for plant protection.

Controls in the Slovak republic

**According to the
label!**

Controllable parameters

- **maximum numbers of treatments during season – almost for all usages**
- **maximum doses of active substance per hectare and per year (or more years consecutively) – in case of need**
- **range of dosing – if mentioned**
- **interval between treatments – if mentioned**

Proposals for improve of control

- to sample plant protection products during application, or direct from sprayer's tank
- to sample production at residues at the time of harvest (to aim to real used pesticides as well as potentially used pesticides not listed in evidence of controlled subject)
- solid control of evidence of consumption, bought and warehousing plant protection products

Proposals for improve of other preventive measures

- to implement obligatory schemes into GAEC (rotation of crops, mechanical soil cultivation, preferable use of non-chemical and biological treatment)
- to determine rules of anti-resistant strategy
- to determine threshold values for treatment against harmful organisms
- to improve indifferent guidance, monitoring of harmful organisms including signalisation

Integrated production in frame of Programme for Rural Development 2007-2013 (assumption for 2014-2020 as well)

Selection of plant protection products (according to international organisation IOBC - International Organisation for Biological and Integrated Control)

- **vineyards** – strictest, cuprum (2 kg/ha and year), mancozeb (2-times), triazols (3-times), phthalimides, sulphur (4-times), without pyrethroids and organic phosphates, stated maximum numbers of treatments
- **orchards** – without pyrethroids and organic phosphates, numbers of treatments according to labels
- **vegetables** – both pyrethroids and organic phosphates mostly once according to active substances together, numbers of treatments according to labels, restrictions for mancozeb and sulphur

Integrated production in vineyards

- to be registered in vineyard registry,
- to apply authorised biological and chemical plant protection products only,
- to apply pesticides with **cuprum up to 2 kg/ha and year**,
- to apply **at most 50 kg/ha of nitrogen** annually including barnyard manure, fertilization with phosphorus and potassium perform following the soil and foliage analyses only,
- **to perform at most 6 applications of plant protection products annually** against *Plasmopara viticola* or *Uncinula necator* except biological products and 2 applications of plant protection products against *Botrytis cinerea* after 1st August except biological products,
- to secure at least in every second between rows **continuous herbal vesture** by grassing,
- to secure that number of vigorous roots of vine do **not fall under 60 % of out planting**,
- to keep **updated records**.

Integrated production in fruit growing

- to be registered in fruit orchards registry,
- to apply authorised biological and chemical plant protection products only,
- to secure regular **cutting and shaping** of trees annually,
- to secure **monitoring the progress of air humidity and temperature**, mainly during season and use available **signalisation methods**,
- to secure analyse of **soil samples** by accredited institution at least once per 3 years and the first analyse must be carried out in the third year at latest,
- to secure **analyses of fruits** of every fruit specie once per 2 years,
- to secure **the minimal number of individuals per hectare** of the fruit orchard,
- to notify the Controlling Institute every **change of orchard's use**, mainly grafting, uprooting, change of number of individuals, at least up to 15 days since its inception,
- to keep **updated records**.

Integrated production in vegetable growing

- to apply authorised biological and chemical plant protection products only, published under special provision. For agriculture crops cultivated **within rotation of crops** on the field listed in sub-measure, to use plant protection products within the range of their authorised use with active substances that are permitted for integrated production of vegetables.,
- to secure **monitoring the progress of air humidity and temperature**, mainly during season and use available **signalisation methods**,
- to secure analyse of **soil samples** by accredited institution at least once per 3 years,
- to secure taken samples and analytic **analyse of vegetables** mainly on chemical substances and nitrates according to the annex No. 15,
- to use **seed** that has certificate of origin and quality of standard seed as well as certified potatoes seed,
- to keep **updated records**.

land



water



nature



Thank you for attention