

Overview of the current situation oilseed rape insect pests Hungary 2017

István Farkas
Government Office of county Vas / NÉBIH

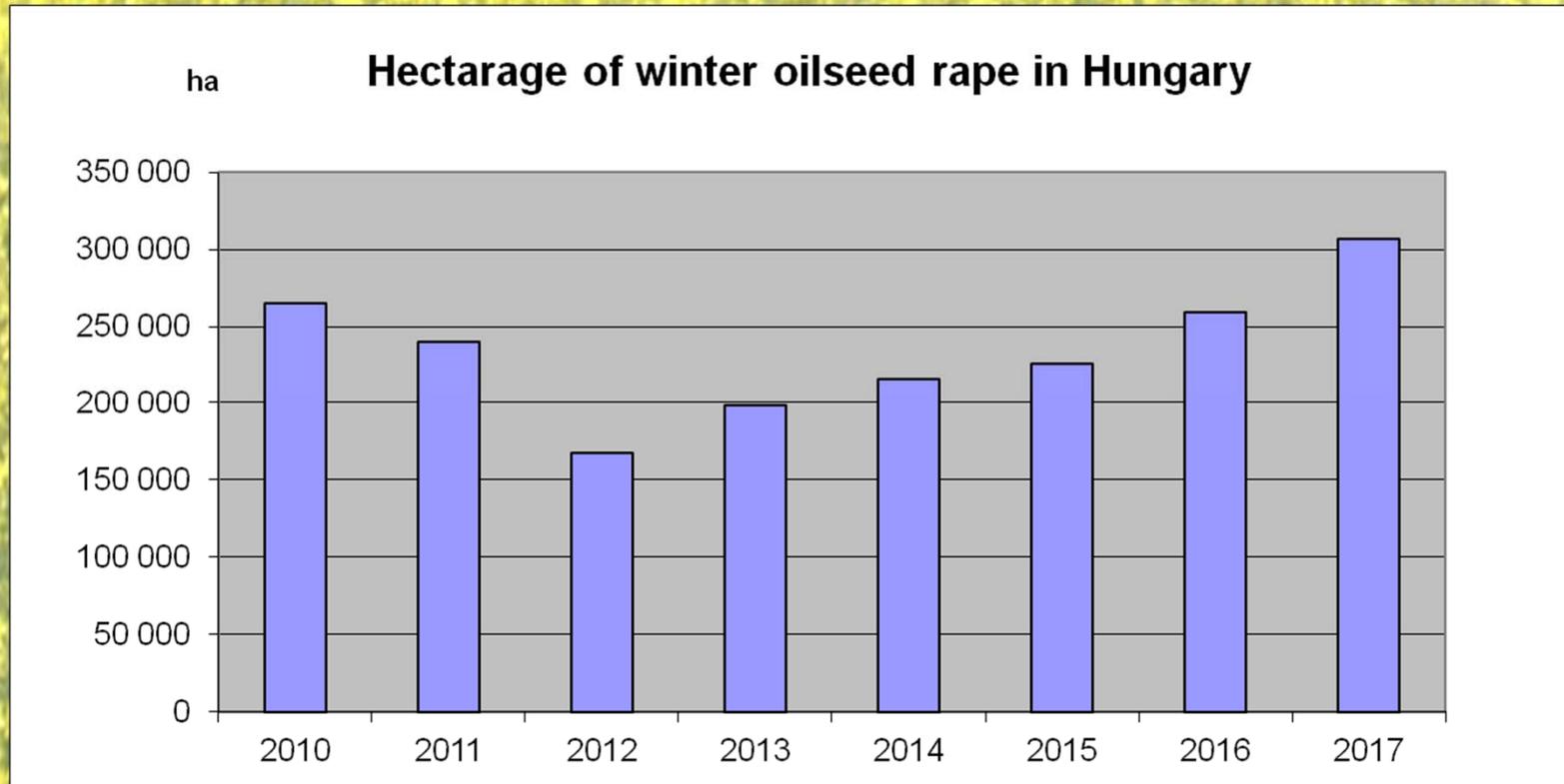
EPPO workshop on integrated management of insect pest in oilseed rape

JKI Berlin, 20.09.2017

Oilseed rape in Hungary

Production area - harvested – 2010-2017

- winter oilseed rape -306 000 ha - 5.5% of arable land
- Spring oilseed rape ~2 000 ha (estimated)



Important pests in oilseed rape - autumn



**cabbage stem flea beetle
(*Psylliodes chrysocephala*).**

! ! ! ! !



**Flea beetles
(*Phyllotreta* spp.)**

! ! ! ! !



**Cabbage root fly
(*Delia radicum*)**

! - !!



**Turnip sawfly
(*Athalia rosae*)**

! !

The withdrawal in 2013 of the neonicotinoids for seed treatments

Consequence

- **increasing number of these pests - severe damage since autumn 2014**
- **the amount of products used for foliar spraying has multiplied**
- **increase of using of low efficiency soil granulate products.**

Source: NÉBIH (National Food Chain Safety Office)

Facts

Professional organisations reached the following results:

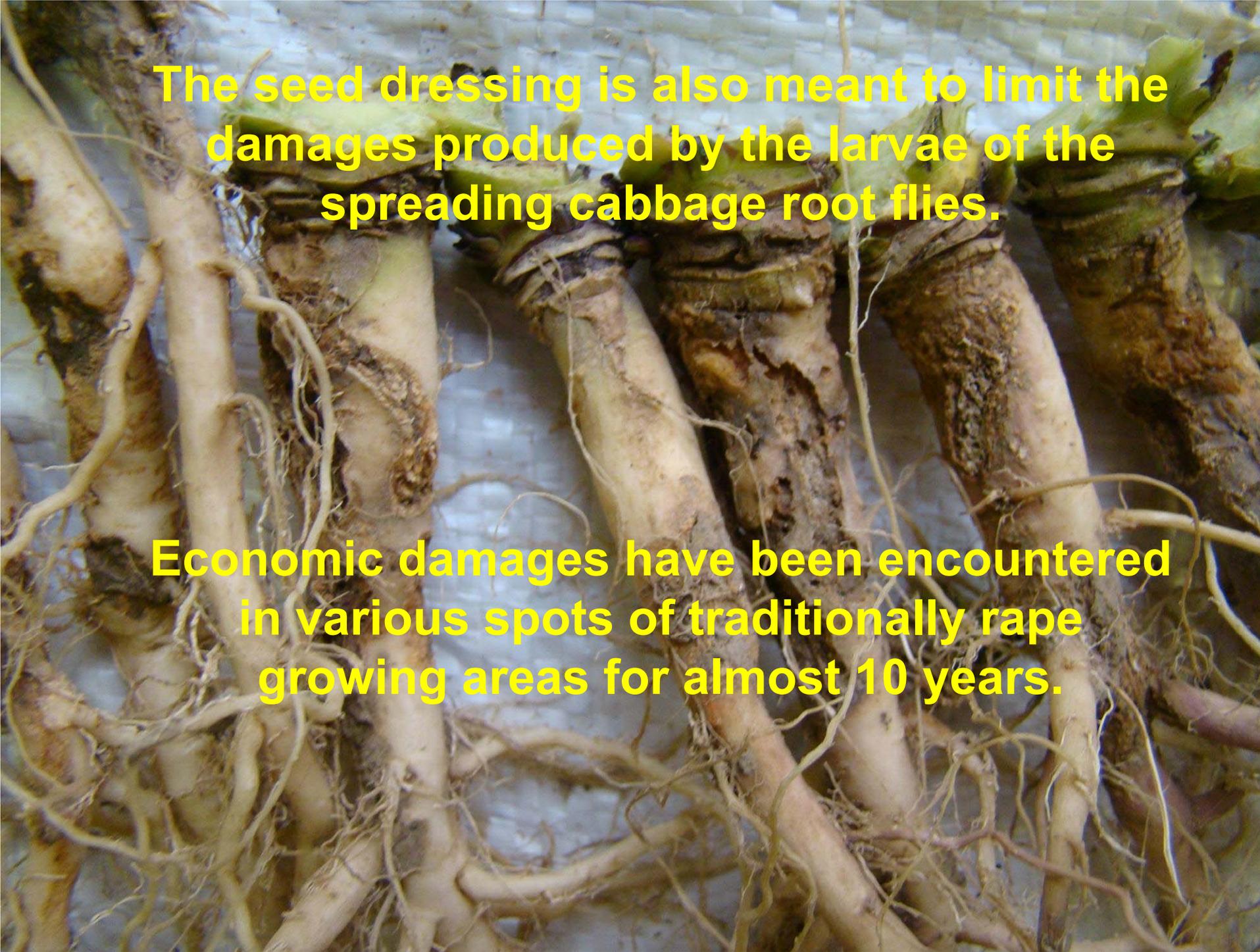
2016 - emergency use authorization for 25 000 hectares of dressed seed under severe control (Ellado; Cruiser OSR 322 FS).

2017 - emergency use authorization for more than 240 000 hectares of dressed seed under severe control.

! The sowing of dressed seeds has been an option for every farmer

and most of the farmers have chosen to live with it.

We can expect a serious decrease in the number of the autumn foliar spraying

The image shows several harvested cabbage roots laid out on a white plastic surface. The roots are light brown and fibrous. Some roots show significant damage, with dark, irregular holes and tunnels bored into the main stem and smaller roots, characteristic of root fly larvae. The text is overlaid in yellow on the image.

The seed dressing is also meant to limit the damages produced by the larvae of the spreading cabbage root flies.

Economic damages have been encountered in various spots of traditionally rape growing areas for almost 10 years.

Registered insecticides in oilseed rape for application in autumn 2017

-Several active substance groups and their related products are available

- Pyrethroids, organophosphates and combinations - such as chlorpyrifos + cypermethrin - have been largely used.

- As for flea beetle, in Hungary there seems to be no risk of pyrethroid resistance.

A.i.	Product	Rate (l,kg/ha)	Pest		
			cabbage stem flea beetle	flea beetles	turnip sawfly
Pyrethroids					
alphametrin	FENDONA 10 EC (KI)	0,1	X		X
beta-cyfluthrin	BULLDOCK 25 EC	0,3	X	X	X
cypermethrin	CYPERKILL MAX	0,05	X		X
cypermethrin	SHERPA 100 EC	0,2-0,25	X		X
cypermethrin	SHERPA 100 EW	0,2-0,25	X		X
deltamethrin	DECIS FORTE	0,075	X	X	X
deltamethrin	DECIS MEGA	0,15	X	X	X
esfenvalerate	SUMI-ALFA 5 EC	0,2-0,3			X
esfenvalerate	SUMI-ALFA 5 EW	0,2-0,3	X		X
gamma-cyhalothrin	RAPID CS	0,06-0,08	X		X
lambda-cyhalothrin	KAISO EG	0,15-0,2			X
lambda-cyhalothrin	KARATE 2,5 WG	0,3	X		X
lambda-cyhalothrin	KARATE ZEON 5 CS	0,15-0,2	X		X
lambda-cyhalothrin	KARIS 10 CS	0,075-0,1	X		X
lambda-cyhalothrin	MARKATE 50	0,15	X		X
tau-fluvalinate	MAVRIK 24 EW	0,2			X
Organophosphates					
chlorpyrifos	DURSBAN 480 EC	0,7 **, 1,0	X	X	X
chlorpyrifos	DURSBAN DELTA C	1,5***, 2,25	X		
chlorpyrifos	PYRINEX 25 CS (Pyr)	1-1,5	X	X	X
chlorpyrifos	PYRINEX 48 EC	0,6*; 1,0	X	X	X
chlorpyrifos-methyl	RELDAN 22 EC	2,0	X		X
Neonikotinoids					
acetamiprid	MOSPILAN 20 SG (S)	0,15-0,2	X		X
acetamiprid	MOSPILAN 20 SP (G)	0,15-0,2	X		X
Combinations					
acetamiprid + lambda-cy	INAZUMA	0,15-0,2, 0,125-0,2	X		X
chlorpyrifos+ beta-cyflu	PYRINEX SUPREME	0,75-1,25	X	X	X
chlorpyrifos-methyl + cy	DASKOR	0,75	X		X
cypermethrin+chlorpyrif	NURELLE-D 50/500 I	0,6	X	X	X
thiacloprid+ deltamethri	PROTEUS	0,5-0,75	X		X

Important pests in oilseed rape in spring



Cabbage stem weevil
rape stem weevil
(*Ceutorhynchus pallidactylus*,
***Ceutorhynchus napi*)**

! ! ! ! !



Pollen beetle
(*Meligethes* spp.)

! ! ! ! !



Cabbage seed weevil
(*Ceutorhynchus assimilis*)

! !



Brassica pod midge
(*Dasineura brassicae*)

! !

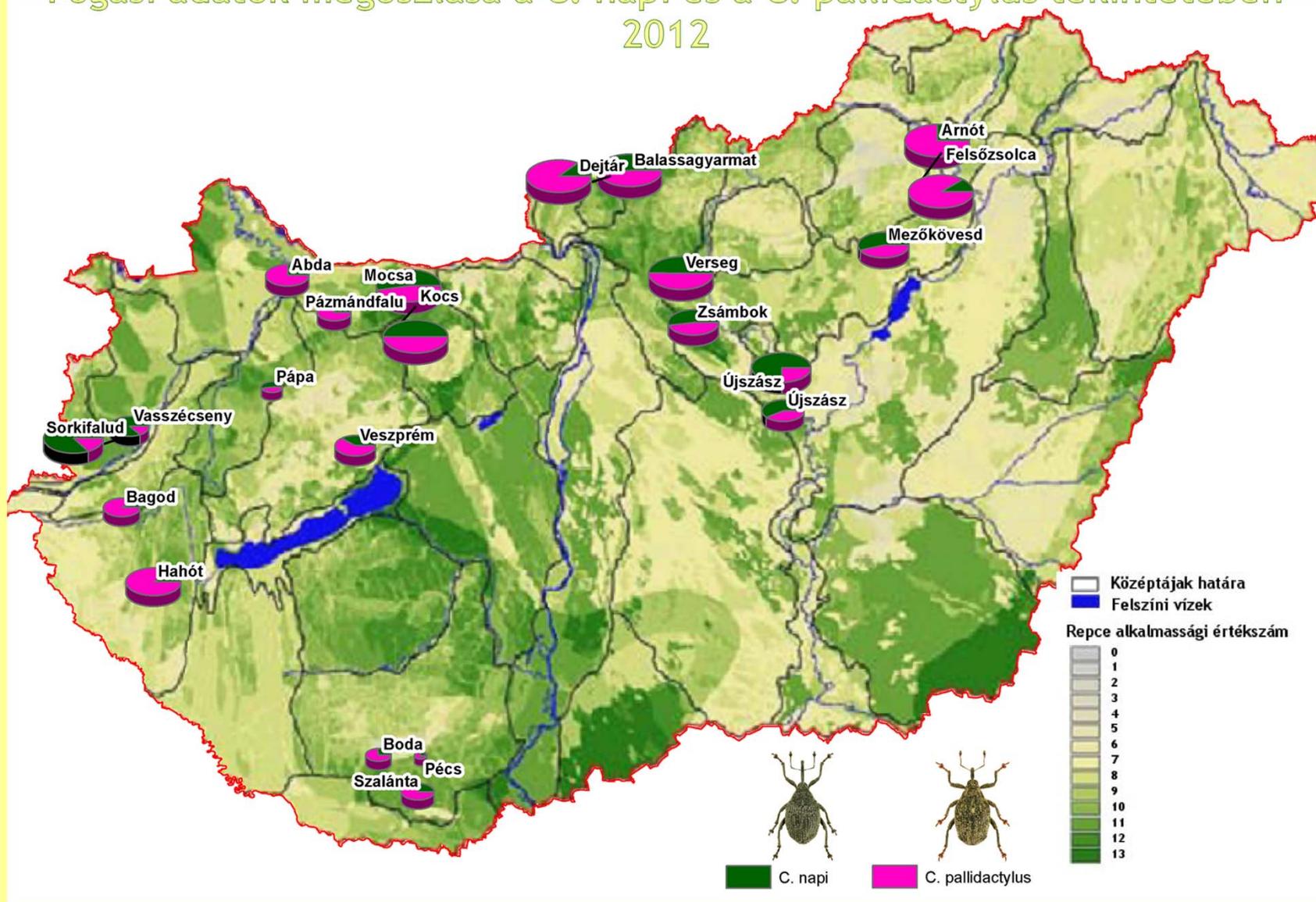
Rape stem weevil
Ceutorhynchus napi (Gyll.)



Cabbage stem weevil
Ceutorhynchus pallidactylus (Marsh.)



Catches in yellow water traps in 2012 regarding rape stem weevil (*C. napi*) and cabbage stem weevil (*C. pallidactylus*)





Pollen beetle



For the pollen beetle the best treatment period is around mid-April, the green or yellow bud stage.

The treatment against the rape stem weevil and cabbage stem weevil is effective also against the pollen beetle, **which settles on rape early.**

If the number of pollen beetles reaches the threshold (5 beetle/plant), at green bud stage, we recommend treatment.



Restrictions - organophosphates

- In order to protect the honey bee populations in the area, there have been implemented aggravating measures viewing the growth stages of the plants and the possibility to use certain types of insecticides.
- 2012 - Organophosphates are allowed to use only up to the phenological stage BBCH 50 (flower buds present, still enclosed by leaves).

↓
**Increasing use of pyrethroids
 in green bud stage**

Organophosphates	use only up to BBCH 50-scale - flower buds present, still enclosed by leaves
chlorpyrifos	CYREN EC (PYCLOREX NEO)
chlorpyrifos	DURSBAN 480 EC
chlorpyrifos	DURSBAN DELTA CS
chlorpyrifos	PYRINEX 25 CS
chlorpyrifos	PYRINEX 48 EC
chlorpyrifos-methyl	RELDAN 22 EC
chlorpyrifos-methyl + cypermethrin	DASKOR
cypermethrin+chlorpyrifos	NURELLE-D 50/500 EC
chlorpyrifos+ beta-cyfluthrin	PYRINEX SUPREME

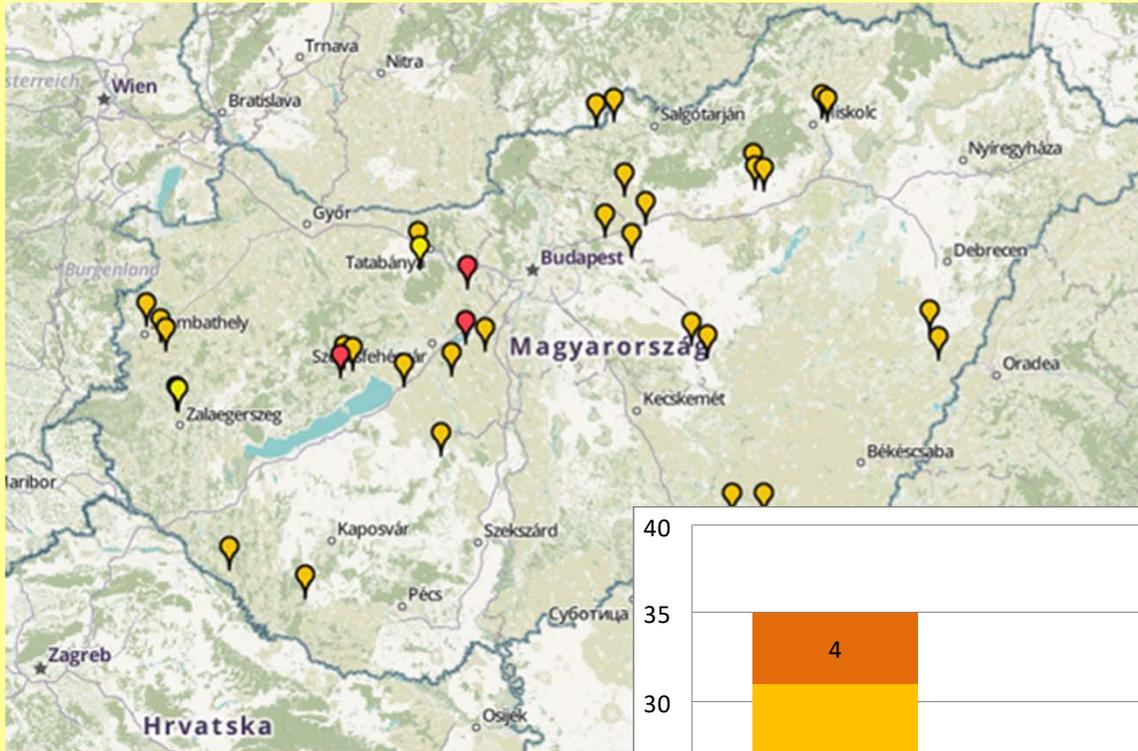


Pollen beetle



- In the past years, resistant pollen beetle populations were observed also in Hungary.
- Regarding pyrethroid resistance, the experts of the plant protection service - in cooperation with DuPont - have been implementing their own IRAC method-based tests.
- The results have been uploaded into the EVALIO system of prognostic estimates of DuPont





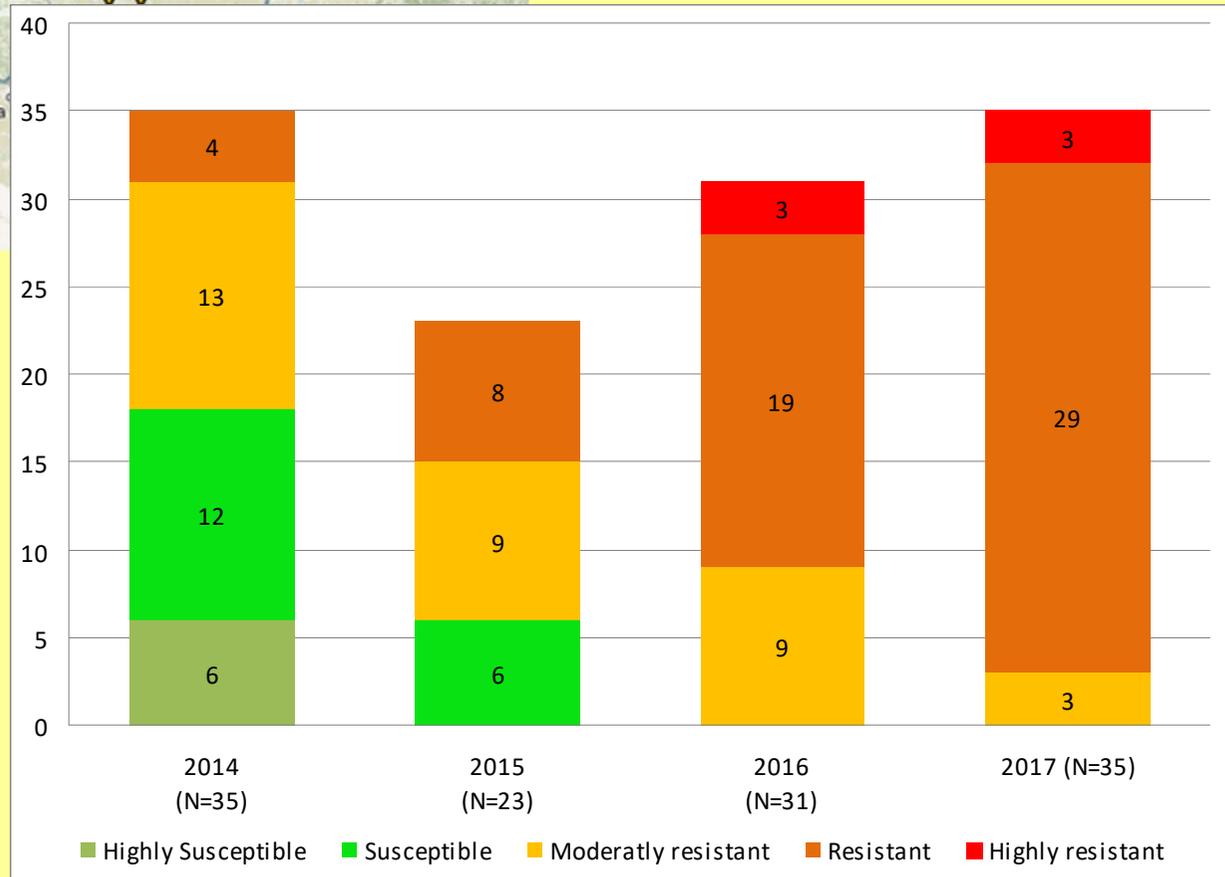
Results

All of the investigated populations show resistance, at least moderately resistant

No. of samples

Hightly resistant populations have been observed since 2016

Decline in the number of susceptible populations



Source: DuPont and PPS

Registered products for the control of pollen beetle (2017)

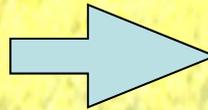
Pyrethroids	
alphamethrin	FENDONA 10 EC (KIN)
beta-cyfluthrin	BULLDOCK 25 EC
cypermethrin	CYPERKILL 25 EC (C)
cypermethrin	CYPERKILL MAX
cypermethrin	SHERPA 100 EC
cypermethrin	SHERPA 100 EW
deltamethrin	DECIS FORTE
deltamethrin	DECIS MEGA
deltamethrin	DELTA SUPER
esfenvalerate	SUMI-ALFA 5 EC
esfenvalerate	SUMI-ALFA 5 EW
gamma-cyhalothrin	RAPID CS
lambda-cyhalothrin	KAISO EG
lambda-cyhalothrin	KARATE 2,5 WG
lambda-cyhalothrin	KARATE ZEON 5 CS
lambda-cyhalothrin	KARIS 10 CS
lambda-cyhalothrin	MARKATE 50
tau-fluvalinate	MAVRIK 24 EW
zeta-cypermethrin	FURY 10 EW

Organophosphates	
chlorpyrifos	CYREN EC (PYCLOREX NEO)
chlorpyrifos	DURSBAN 480 EC
chlorpyrifos	DURSBAN DELTA CS
chlorpyrifos	PYRINEX 25 CS (Pyrifosz 25 CS)
chlorpyrifos	PYRINEX 48 EC
chlorpyrifos-methyl	RELDAN 22 EC
phosmet	IMIDAN 50 WP
Neonikotinoids	
acetamiprid	MOSPILAN 20 SG (SPILAN 20 SG, GA)
acetamiprid	MOSPILAN 20 SP (GAZELLE 20 SP)
thiacloprid	BISCAYA
thiacloprid	CALYPSO 480 SC
Piridine azomethine derivative	
pimetrozine	CHESS 50 WG (PLENUM)
Oxadiazin	
indoxacarb	AVAUNT 150 EC
Combinations	
acetamiprid + lambda- cyhalo	INAZUMA
thiacloprid+ deltamethrin	PROTEUS
chlorpyrifos-methyl + cyperm	DASKOR
cypermethrin+chlorpyrifos	NURELLE-D 50/500 EC

Recommendation

Rape and cabbage stem weevil

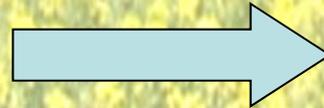
If treshhold reached:



organophosphat (chlorpyrifos ethyl, methyl) containing products) **till BBCH 50**

Pollen beetle

**If treshhold reached
(backward plants
5 beetles/plant)
Resistant population**



**at green bud stage:
indoxacarb, pimetrozine
(pyrethroid resistant population)**



**at yellow bud stage/during
flowering: thiacloprid
acetamiprid**



New challenge - hairy scarab (*Tropinota/Epicometis hirta*).



This orchard pest has appeared in the oilseed rape fields, as well.

In the past years the Hungarian growers have been spraying against them on certain fields.

There is a scent and color trap (developed by plant protection research institute), which also helps us monitor the swarming of the pest.

The newest challenge is the increasing damage caused by **slugs** in winter oilseed rape fields.





Thank you for your attention

2012 - CHESS 50 WG (PLENUM) 2011 - AVAUNT 150 EC

zöldbimbós állapotig (BBCH 51)

Indoxacarb (MoA22A) were introduced for pollen beetle control in 2011 and the growers in areas with pyrethroid resistance switched to these new actives.

Pymetrozine (MoA9B)

Decreased susceptibility to thiacloprid has recently been found at some locations, whereas indoxacarb is still very effective against pollen beetles. Insecticide

resistance in other oil seed rape pests has not been investigated
that chlorpyrifos-ethyl has been used almost exclusively for the first spring applications in CZ and SK.