

ЗАХИСНИКИ  
СОНЦЯ



# Zoltan Papp

Категорійний менеджер  
по гербіцидам,  
Corteva EMEA



Геліантекс™

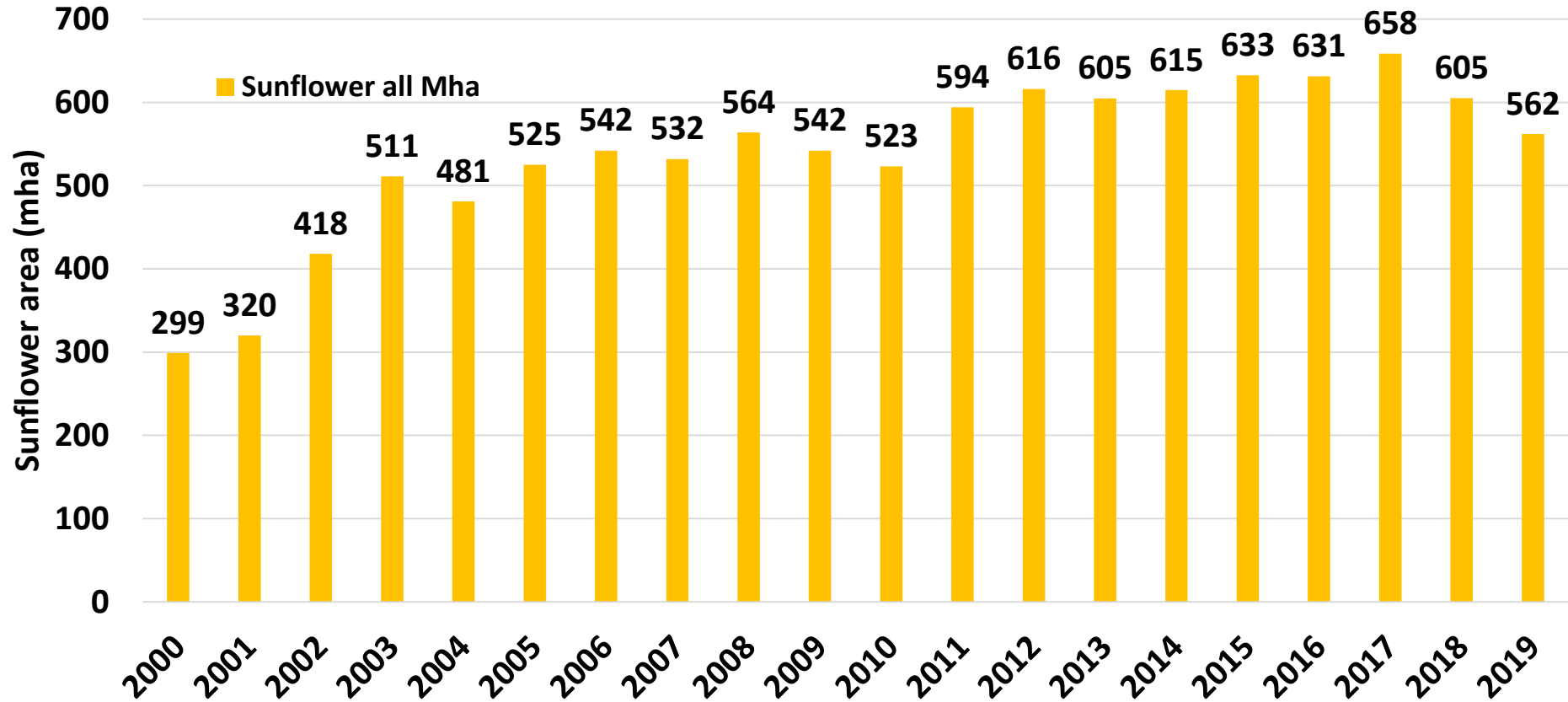
Arylex™ active

ГЕРБИЦИД

A close-up photograph of several bright yellow sunflowers with dark brown centers, set against a clear blue sky. The sunflowers are the main focus of the image. A semi-transparent grey box is overlaid on the top left, containing the title text. A large green diagonal shape is on the right side of the image.

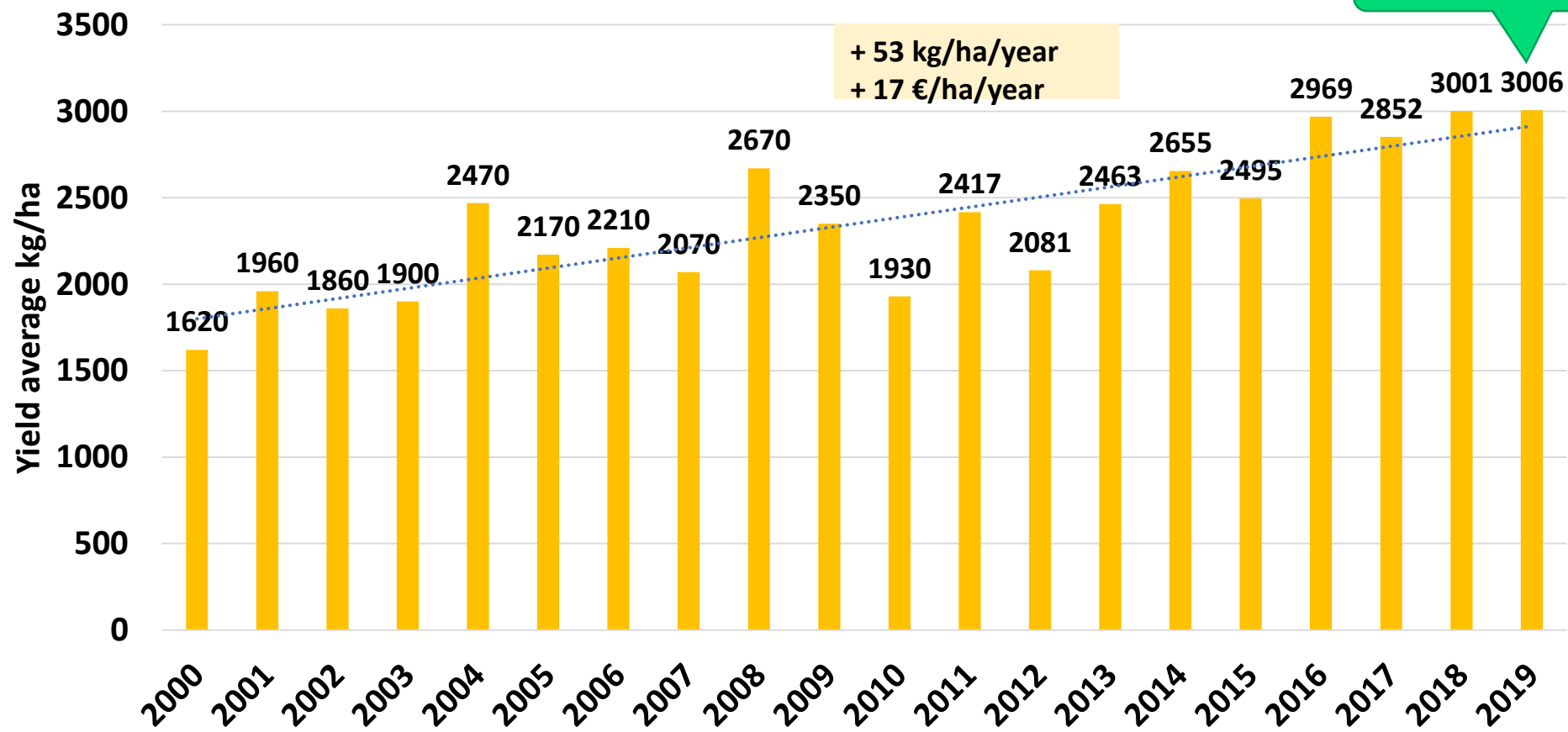
# Sunflower production in Hungary

# Sunflower sowing area in Hungary (mha)



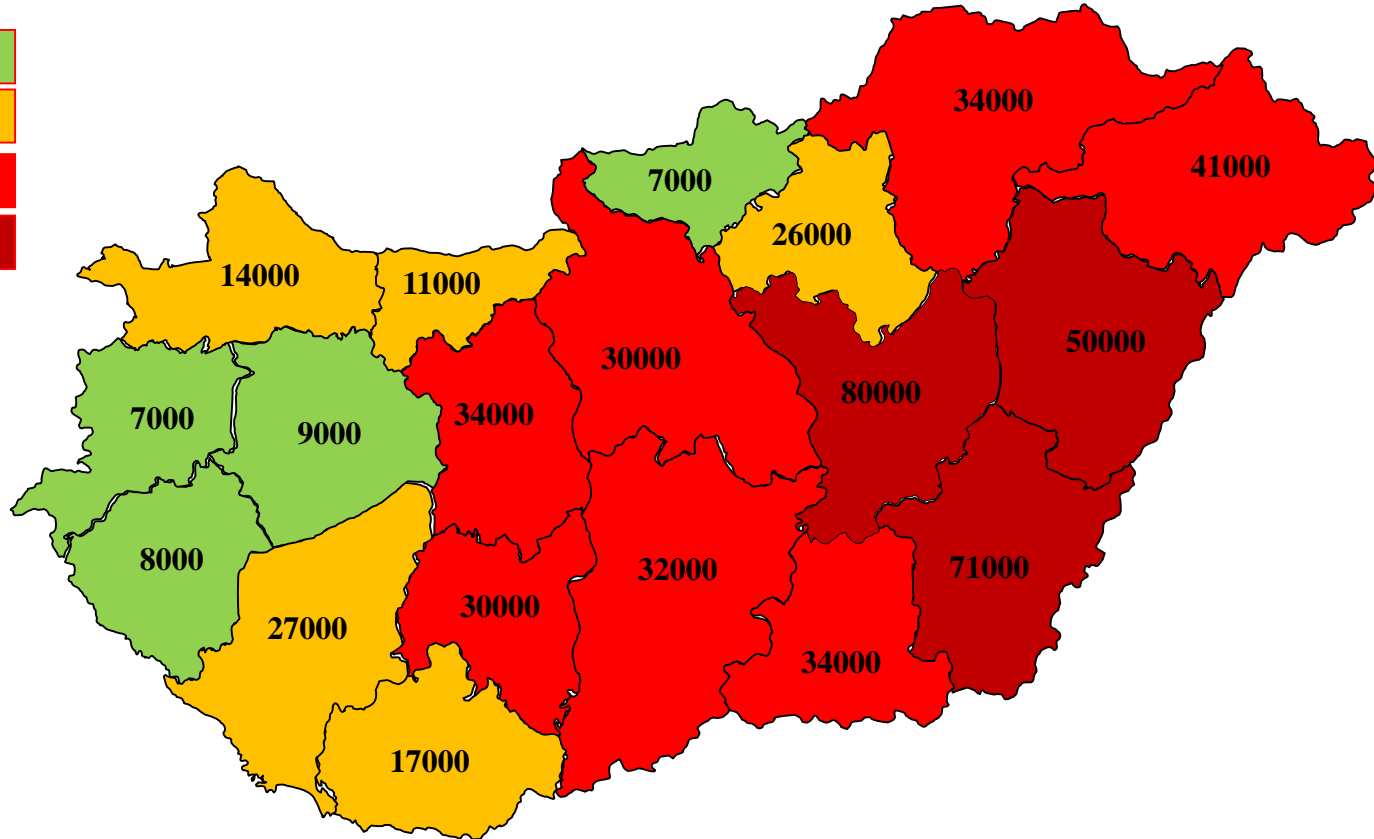
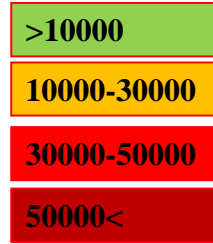
# Average yield of sunflower in Hungary (kg/ha)

Record!

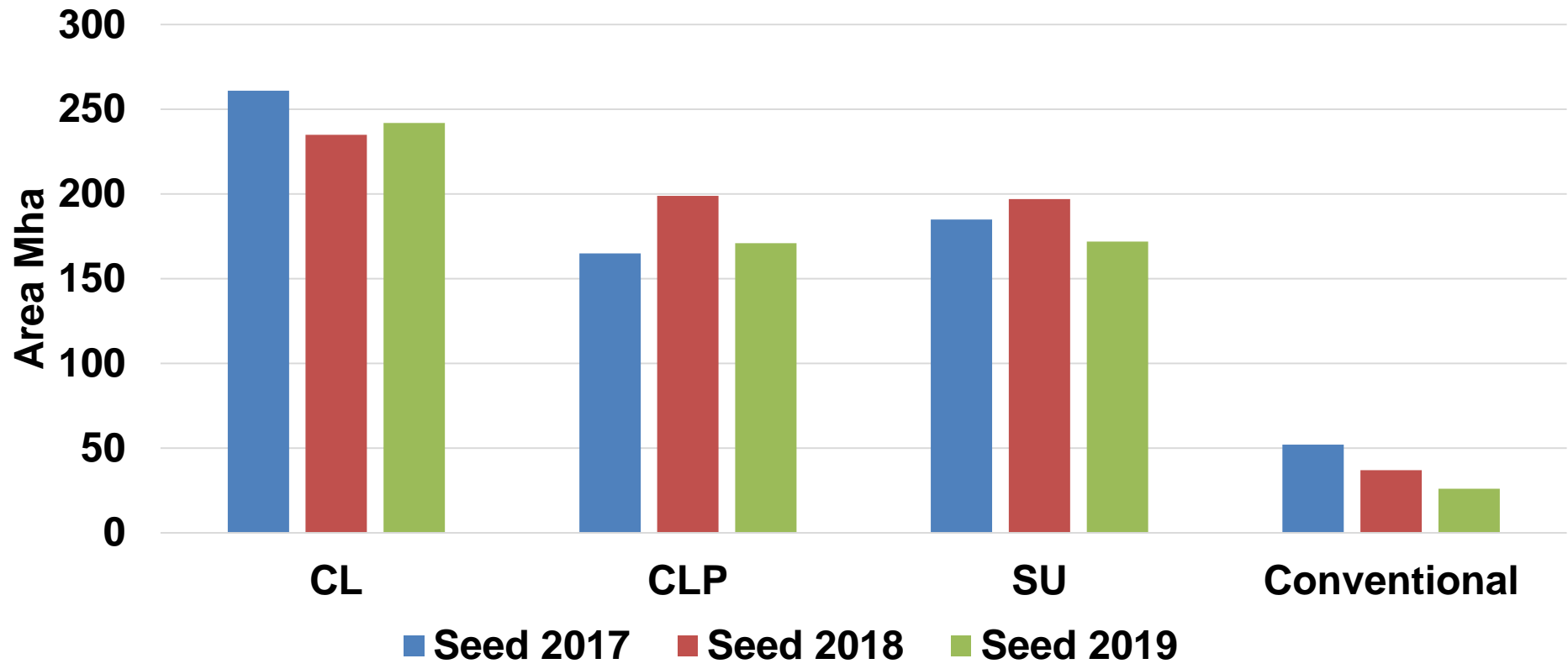


# Sunflower sowing area in Hungary in 2019

ha



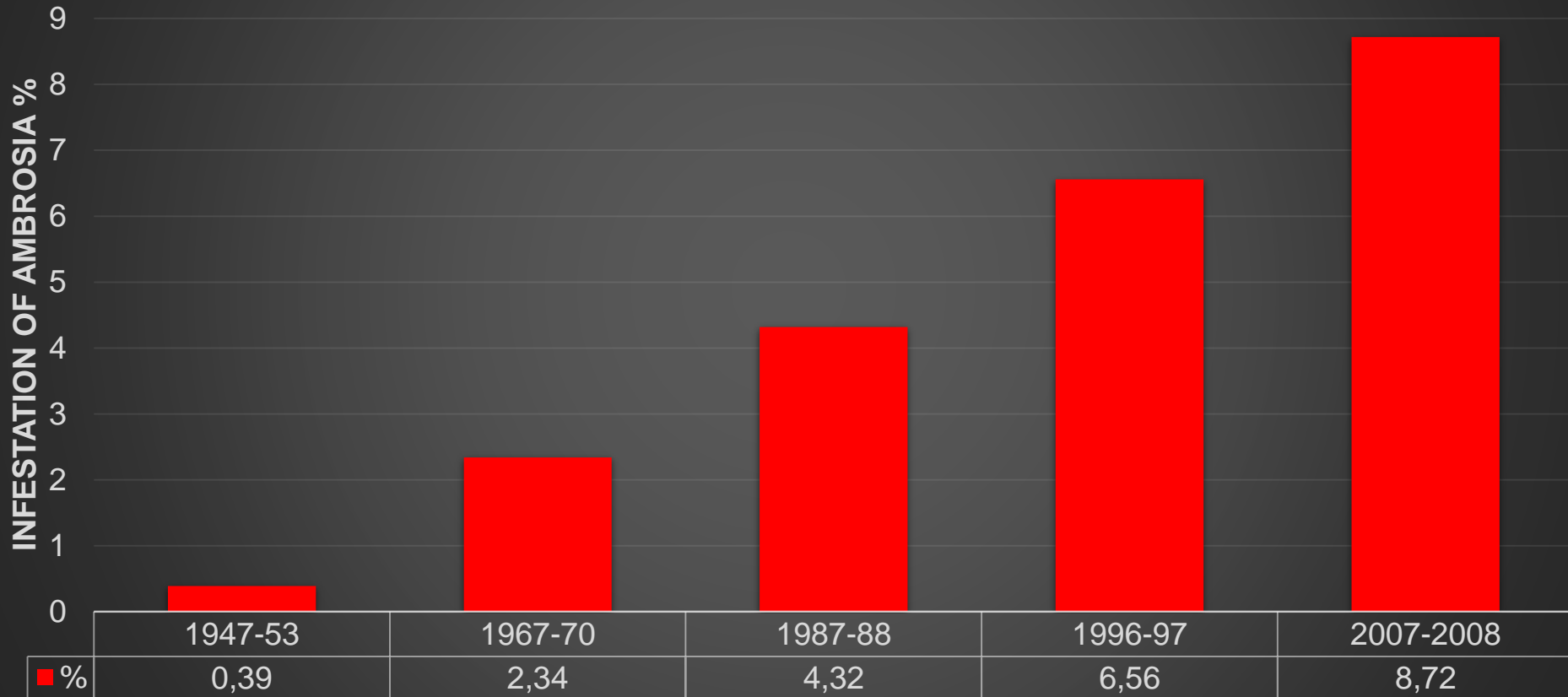
# Ratio of CL, CLP, SU and conventional seed in Hungary (Mha)



# Main summer weeds in sunflower (based on 5. Hungarian Weed Survey 2007-2008)

	BLW	%	Grasses	
1	Ambrosia artemisiifolia	8,72	Echinochloa crus-galli	8,36
2	Chenopodium album	6,76	Setaria pumila	3,15
3	Amaranthus retroflexus	2,76	Panicum miliaceum	1,9
4	Cirsium arvense	1,99	Sorghum halepense	1,46
5	Datura stramonium	1,9	Elymus repens	1,06
6	Amaranthus chlorostachys	1,83	Digitaria sanguinalis	0,82
7	Persicaria lapathifolium	1,11	Setaria viridis	0,81
8	Hibiscus trionum	1,06	Cynodon dactylon	0,65
9	Abutilon theophrasti	0,97		
10	Xanthium strumarium	0,68		

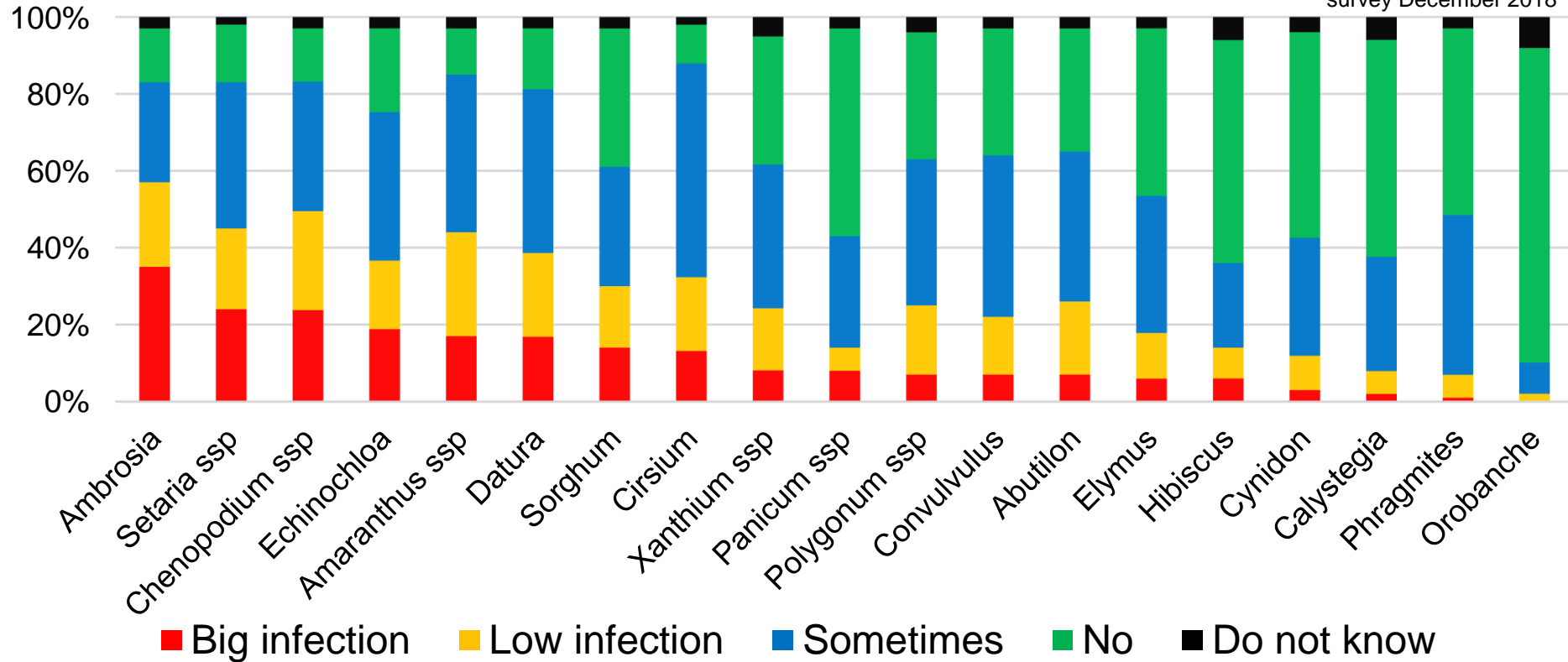
# Infestation of Ambrosia in Hungary based on five Hungarian weed survey





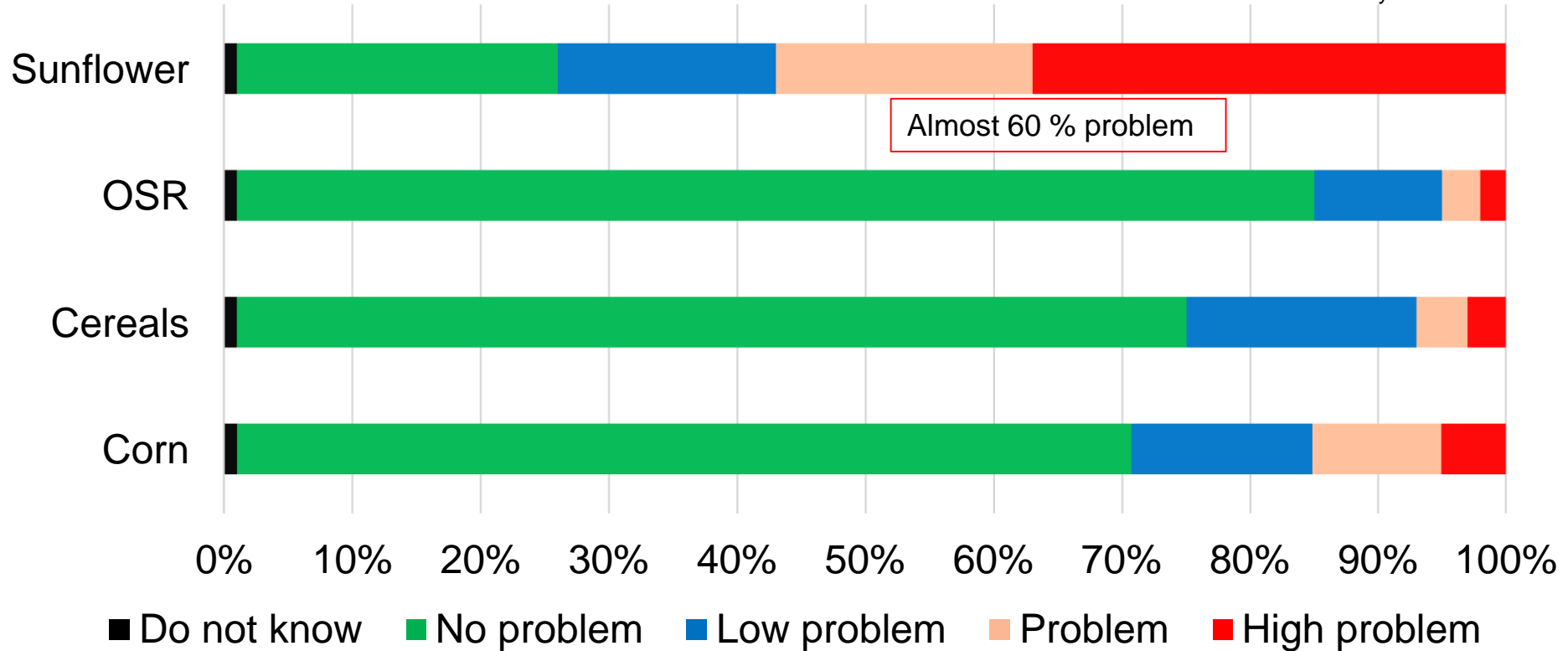
# What weeds do cause problem for farmers in sunflower?

Source: Market Insight, market survey December 2018

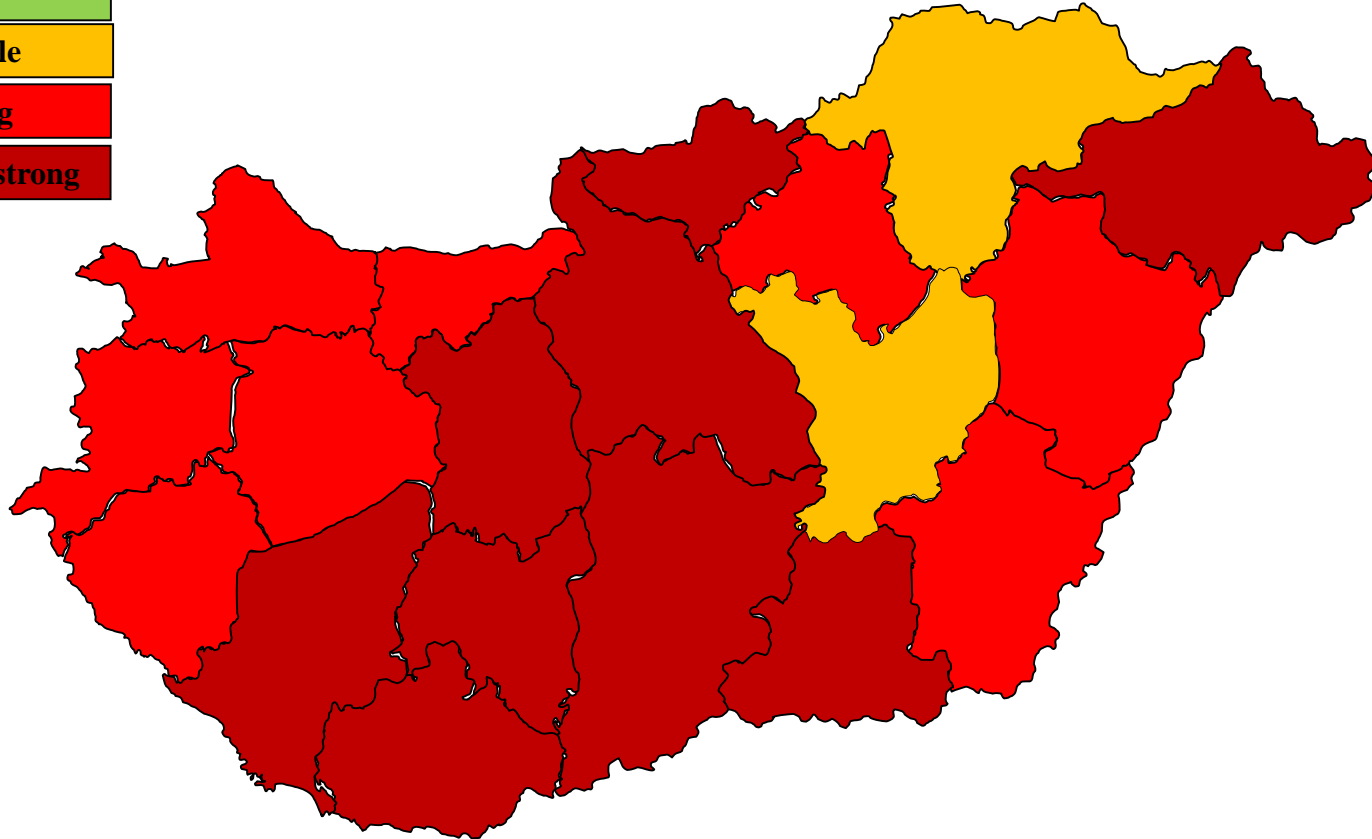


# How big problem do cause to fight against Ambrosia for farmers?

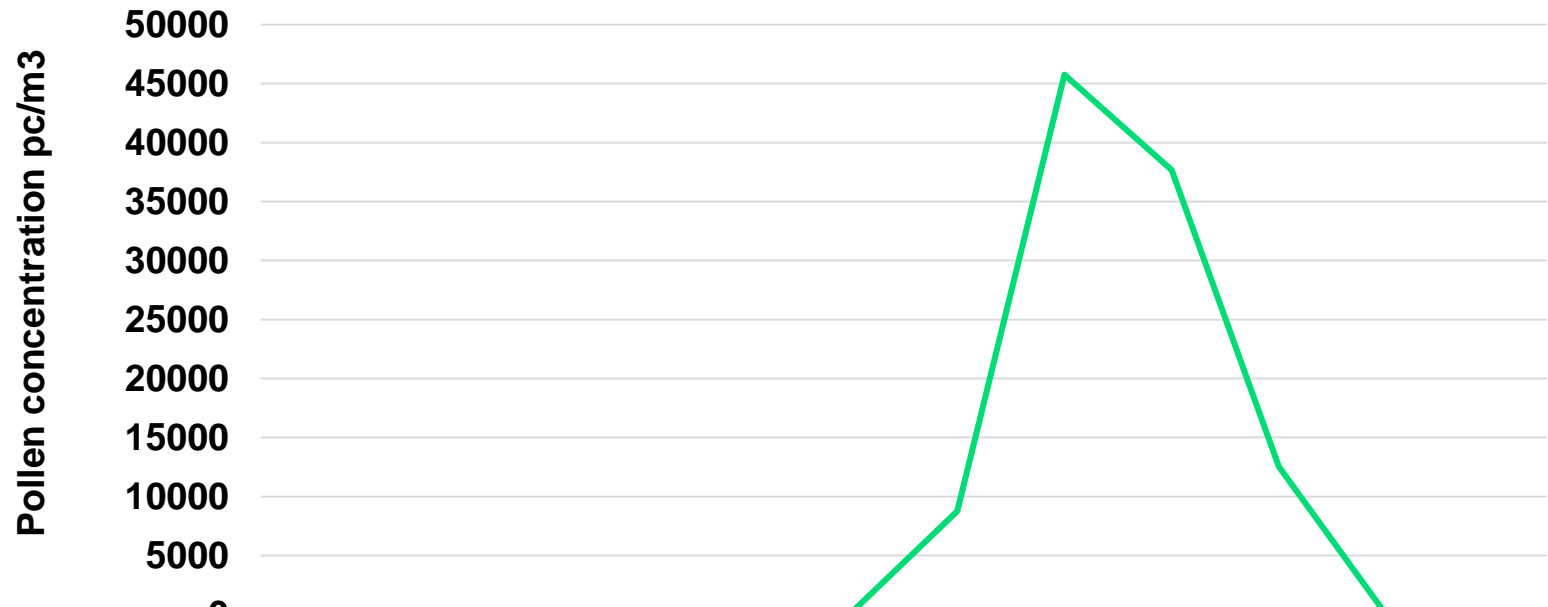
Source: Market Insight, market survey December 2018



# Ambrosia artemisiifolia infection in Hungary



# Average pollen concentration of Ambrosia in Debrecen pc/m<sup>3</sup>

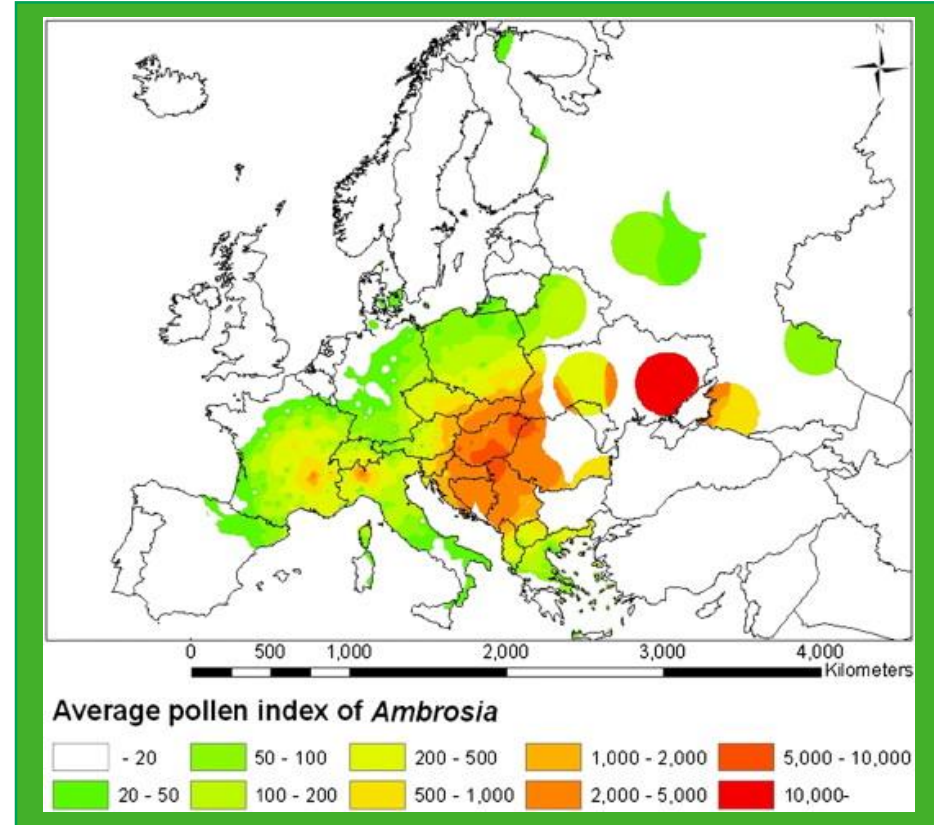


	Janu ary	Febr uary	Marc h	April	May	June	July	Aug ust	Sept emb er	Octo ber	Nov emb er	Dece mbe r
— Pollen concentration pc/m <sup>3</sup>	0	0	0	0	0	43	8753	45750	37673	12531	0	0

# Enhancing of healthy problem



**77 MILLION  
ALLERGIC  
BY 2060**



# Case of Ambrosia pollen allergic

PEOPLE WHO SUFFER IN ALLERGIC OF  
AMBROSIA POLLEN

2500000

2000000

1500000

1000000

500000

0

1950

1960

1970

1980

1990

2000

2010

■ Case of allergic

1560

65340

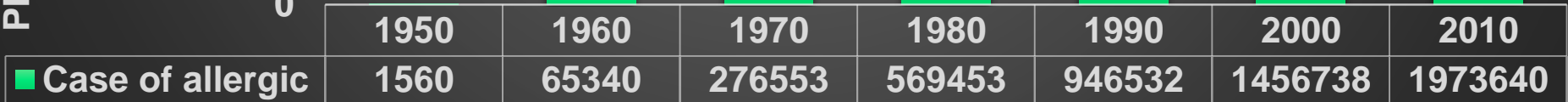
276553

569453

946532

1456738

1973640





**Viballa™**



# Viballa™ // Helianthex™

	Viballa™	Helianthex™
<b>Active</b>	3 g/ha Arylex	3 g/ha Arylex
<b>Concentration</b>	3 g/L Arylex	68,5 g/L Arylex
<b>Dose rate</b>	1,0 l/ha	45 mL/ha
<b>Countries</b>	HU, RO, IT, FR, CR, BU, SL, GR	UA, RU, KZ, TU





Viballa™

Viballa™  
GYOMIRTÓ SZER

- Excellent effect on any developed
  - *Ambrosia artemisiifolia*
  - *Chenopodium* ssp.
  - *Abutilon theophrasti*
  - *Xanthium* spp.
  - *Canabis sativa*
- Wide application window (B14-50)
- In any type of SF
- Without any crop rotation restrictions
- New MoA in sunflower

## EUP in Hungary in 2019

- EUP 1. May -31. July 2019
- Technology
  - 1,0 l/ha
  - From 4 fully developed leaves till heading (B50)
  - In any hybrids
  - Only straight application (without any tankmix)
  - Against overdeveloped Ambrosia



## EUP in Hungary in 2019

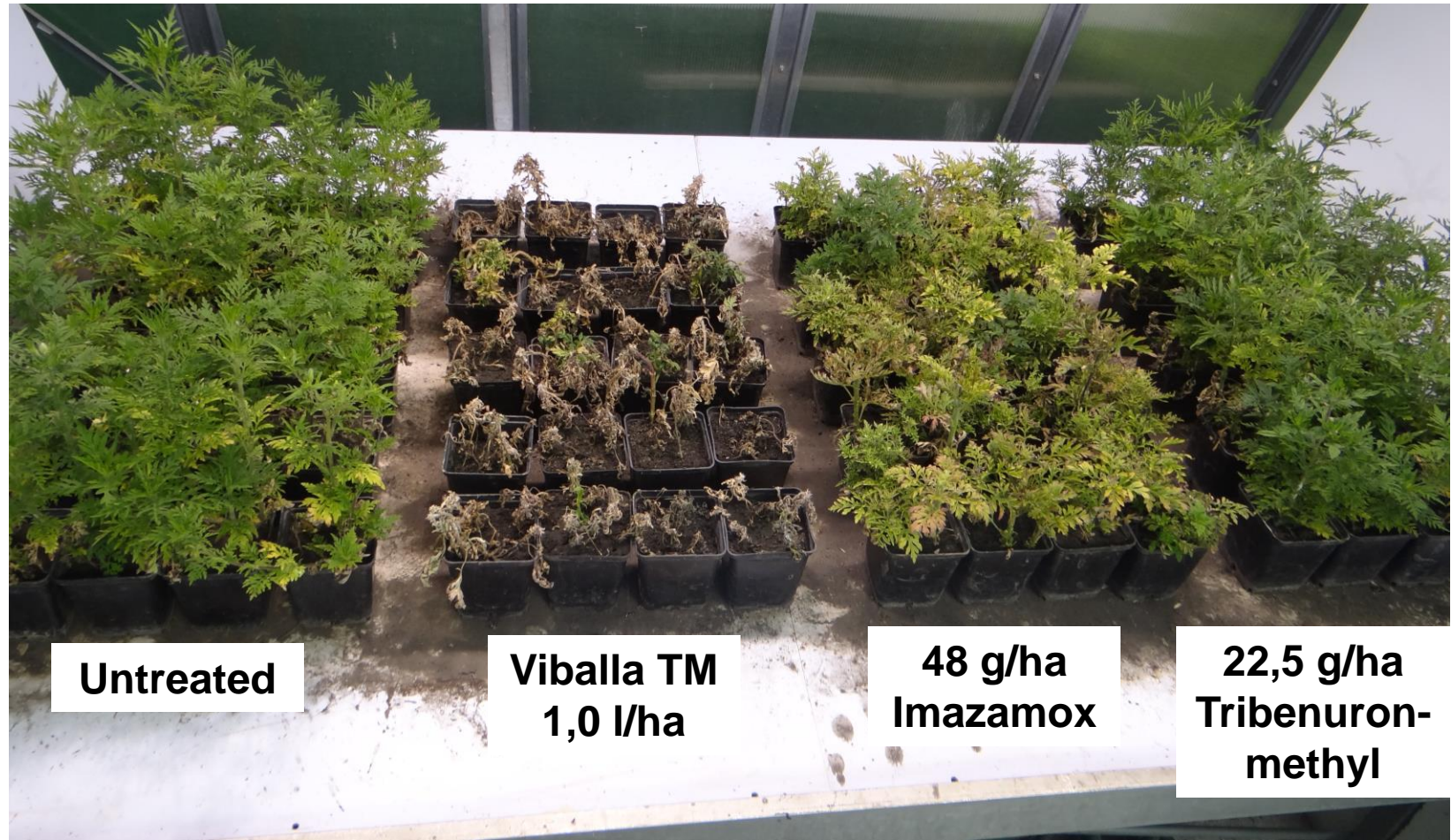
- Process
  - Registration in [www.mycorteva.com/Viballa](http://www.mycorteva.com/Viballa)
  - Buying
  - Inform to authority
  - Application



A close-up photograph of several bright yellow sunflowers with dark brown centers, set against a clear blue sky. The sunflowers are the primary focus, with their petals and seed heads clearly visible. A diagonal white line separates the sunflower image from a solid green background on the right side of the slide.

# Efficacy

**Excellent  
effect on  
Ambrosia**



**Untreated**

**Viballa TM  
1,0 l/ha**

**48 g/ha  
Imazamox**

**22,5 g/ha  
Tribenuron-  
methyl**



*Viballa™  
on  
Ambrosia  
3. days  
after  
application*



*Viballa™  
on  
Ambrosia  
5. days  
after  
application*



*Viballa™  
on  
Ambrosia  
12. days  
after  
application*

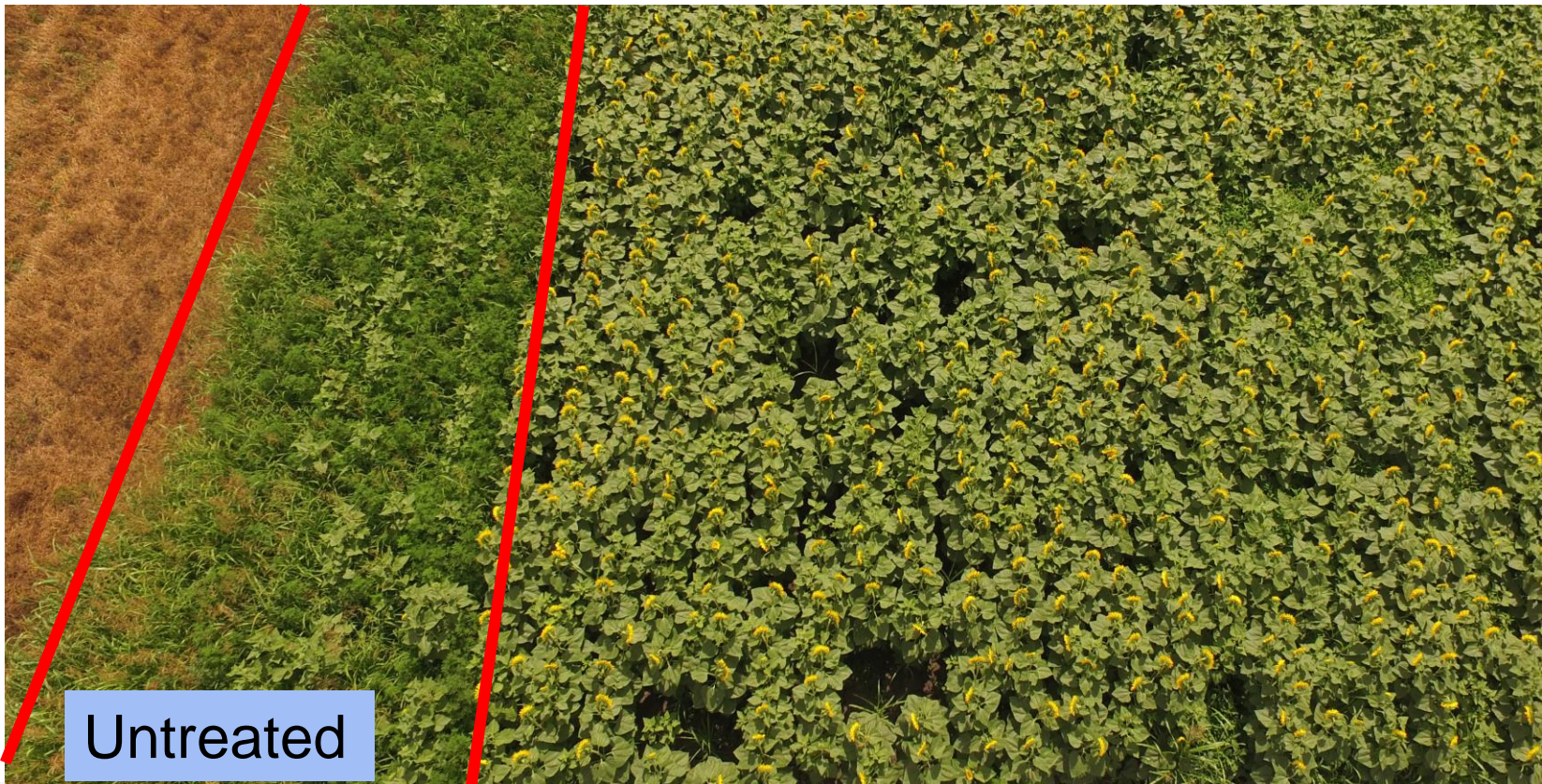


# Effect of Viballa™ on the right side on strongly infected field by Ambrosia 12. June 2019. Szolnok



Untreated

# Effect of Viballa™ on the right side on strongly infected field by Ambrosia 5. July 2019. Szolnok



Untreated

*Viballa™  
on  
Ambrosia  
36. days  
after  
application*



# Effect of late Viballa™ on Ambrosia 22. July 2019. Egyházashetye



# Effect of late Viballa™ on Ambrosia

## 1. July 2019. Sárvár



# Effect of late Viballa™ on Ambrosia

## 19. July 2019. Nagykálló



*Effect of late  
Viballa™ on  
Ambrosia  
19. July  
2019.  
Nagykálló*



*Effect of  
Viballa™  
Dömsöd*







*Effect of  
Viballa™  
Herceg  
szántó*



# Check of Viballa™ using at a farmer by authority expert 17. July 2019. Tápiószentmárton



**Viballa™**

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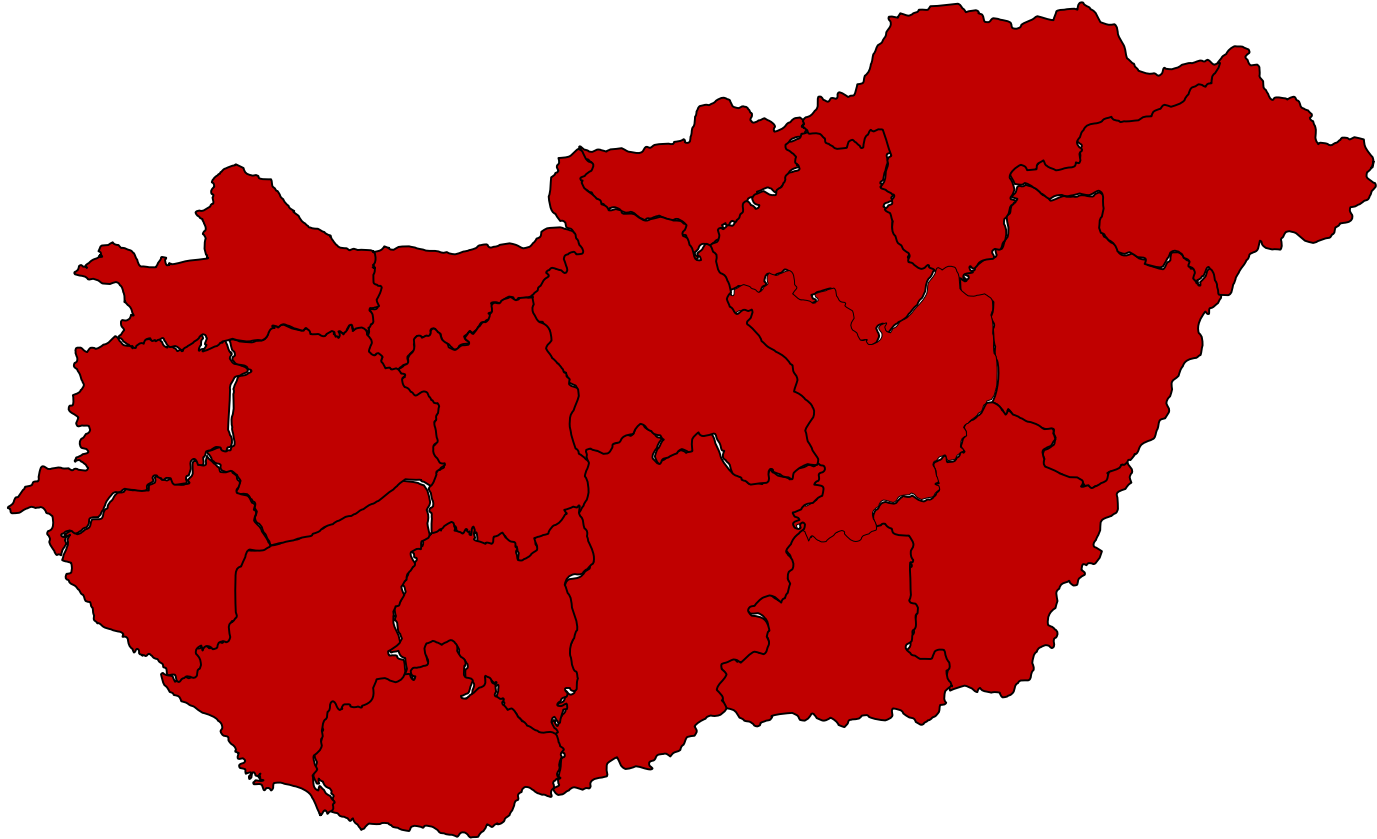
*Effect of  
late  
Viballa™ on  
Ambrosia  
17. July  
2019.  
Tápiószent  
márton*



*Effect of  
Viballa on  
Ambrosia  
Markota-  
bödöge  
2018*



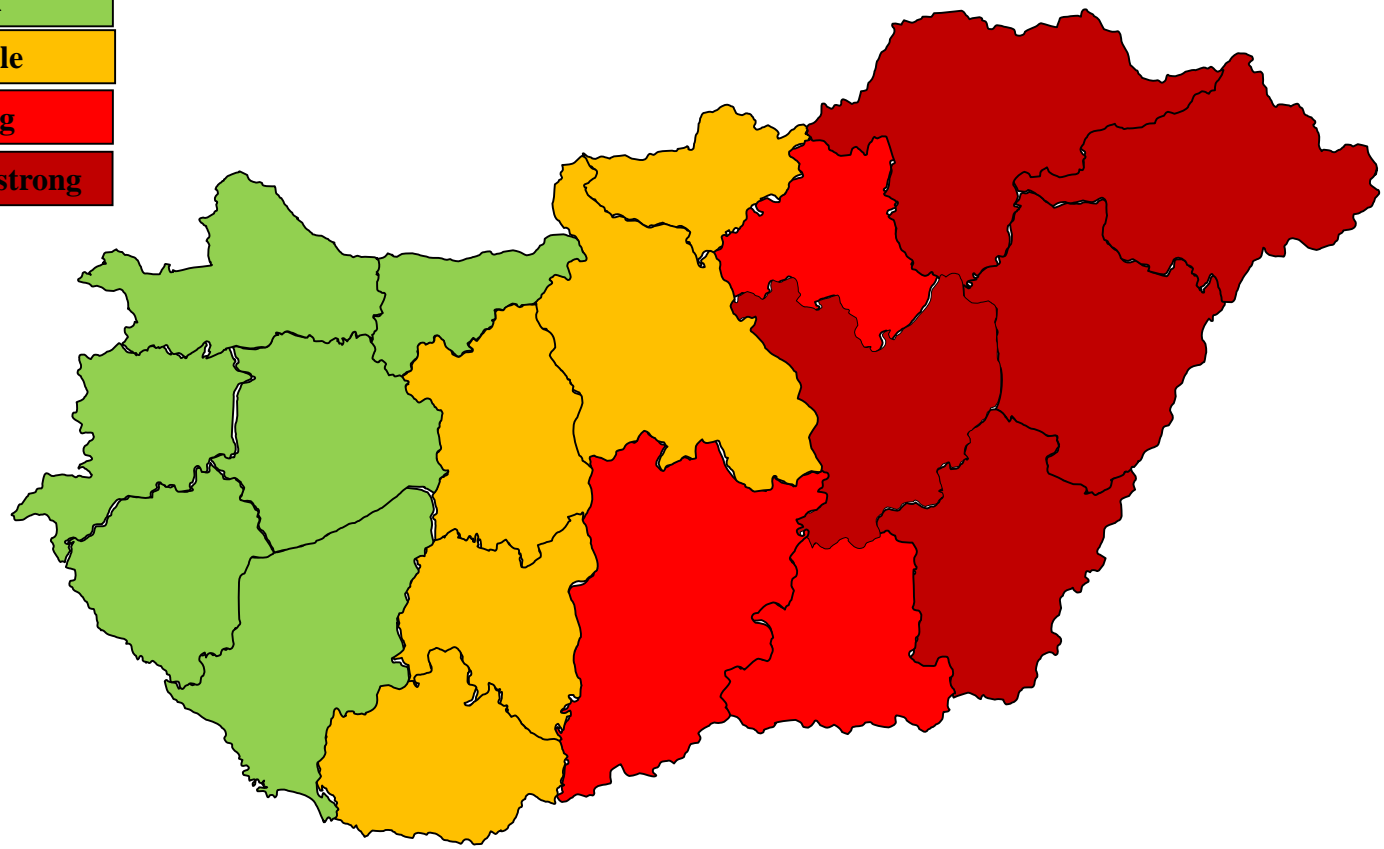
# Chenopodium album infection in Hungary





*Effect of  
Viballa™  
on CHEAL  
7. days  
after  
application*

# Xanthium strumarium infection in Hungary



*Effect of  
Viballa™  
on XANIT  
14. days  
after  
application*







*Effect of  
Viballa™  
on ABUTH  
14. days  
after  
application*





*Effect of  
Viballa™  
on CNISA  
4. days  
after  
application*

*Effect of  
Viballa™  
on CNISA  
14. days  
after  
application*



# Effect of Viballa™ on CNISA 21. August 2019. Pilis



***Effect of  
Viballa 3.  
days on  
Amaranthus  
retroflexus***





***Effect of  
Viballa 4.  
days on  
Cirsium  
arvense***

***Effect of  
Viballa™  
at the  
end of  
August  
Debrecen***





# Controls important BLWeeds based on Hungary trials

Broadleaf Weeds Controlled by Viballa™ Herbicide at 1 L pr/ha Applied at BBCH 16-18 Crop Stage	
Highly Susceptible (>95% control)	<i>Abutilon theophrasti</i> <i>Ambrosia artemisiifolia</i> <i>Xanthium spp</i>
Susceptible (85-94.9% control)	<i>Chenopodium spp</i> <i>Cannabis sativa</i> <i>Mercurialis annua</i>
Moderately Susceptible (70-84.9% control)	<i>Hibiscus trionum</i> <i>Amaranthus spp.</i> <i>Solanum nigrum</i> <i>Datura stramonium</i>
Moderately Tolerant (50-70 %)	<i>Cirsium arvense</i>



A close-up photograph of several bright yellow sunflowers with dark brown centers, set against a clear blue sky. The sunflowers are the main focus of the image. A diagonal white line separates the sunflower image from a green background on the right side of the slide.

# Selectivity

*Effect of  
Viballa™  
1. day  
after  
application*



*Effect of  
Viballa™  
2. days  
after  
application*





*Effect of  
Viballa™ 4.  
days after  
application*



*Effect of  
Viballa™  
9. days  
after  
application*

*Effect of  
Viballa™  
34. days  
after  
application*





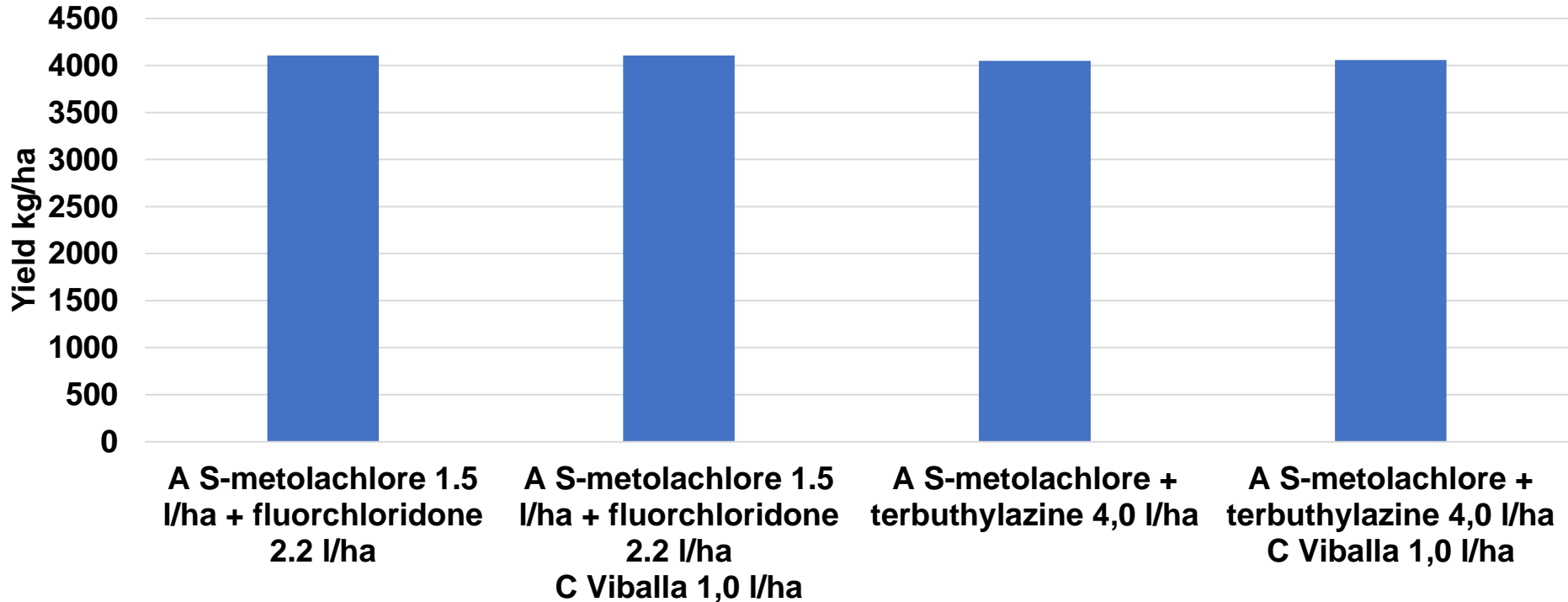
*Effect of  
Viballa™  
in middle  
of July*



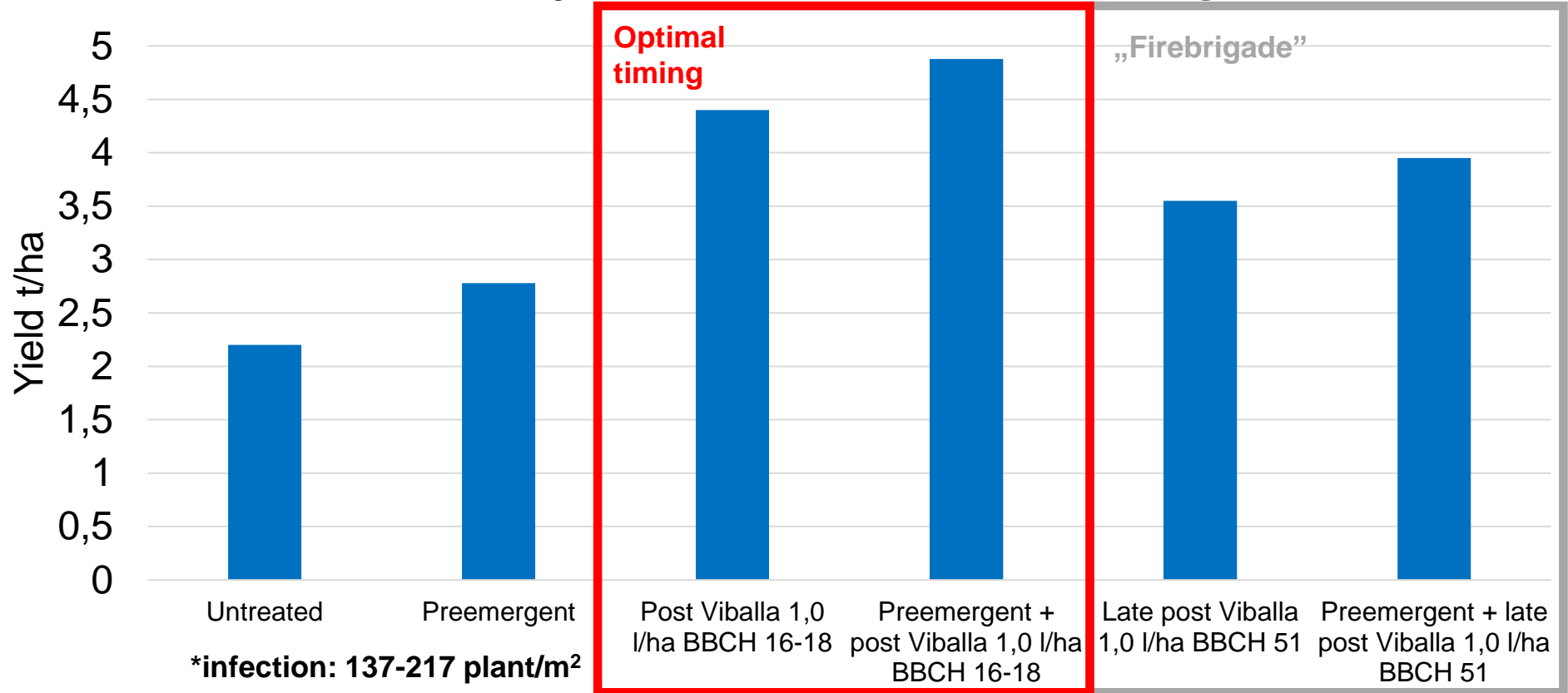
A close-up photograph of several bright yellow sunflowers with dark brown centers, set against a clear blue sky. The sunflowers are the main focus of the image. A semi-transparent white box is overlaid on the left side of the sunflowers, containing the title text. A large green diagonal shape is on the right side of the image.

# Effect of Viballa™ on yield

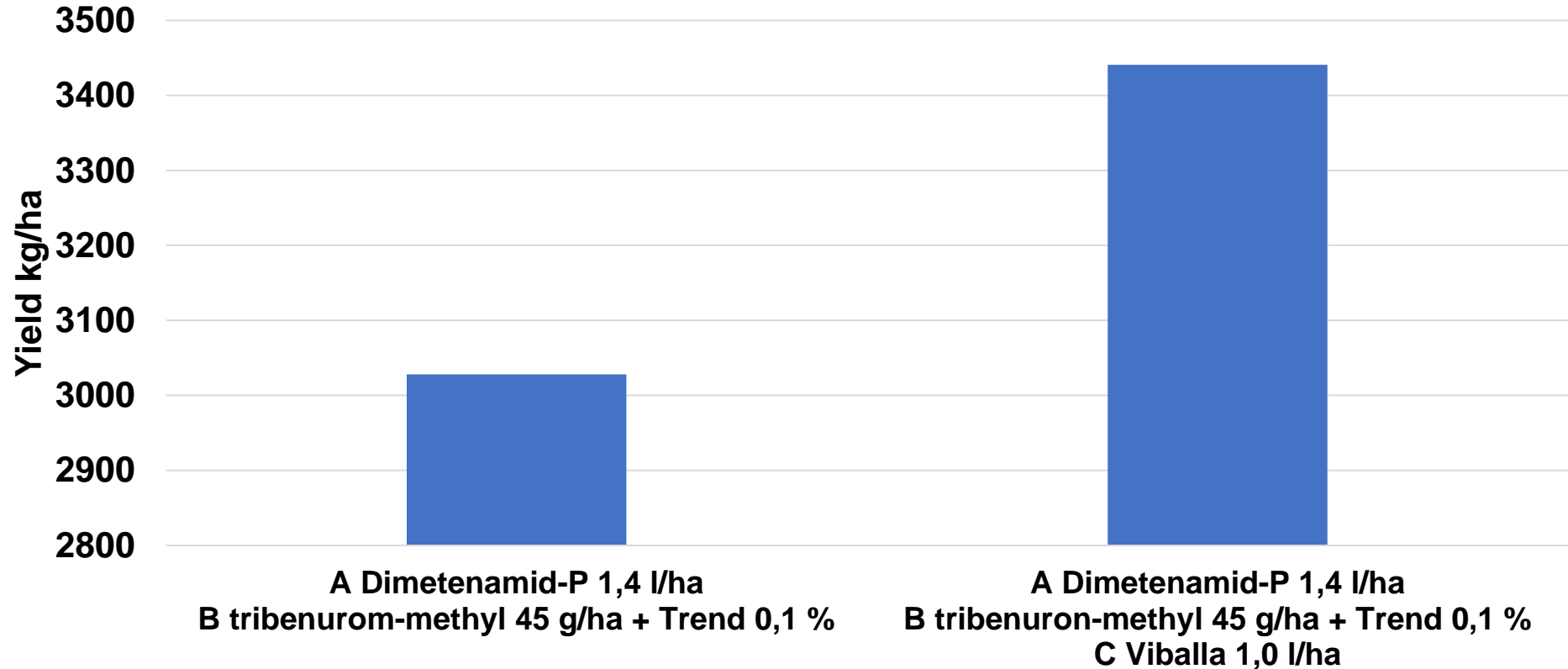
# Effect of Viballa™ on yield in conventional sunflower with low weed pressure (selectivity) 2 trials in Hungary



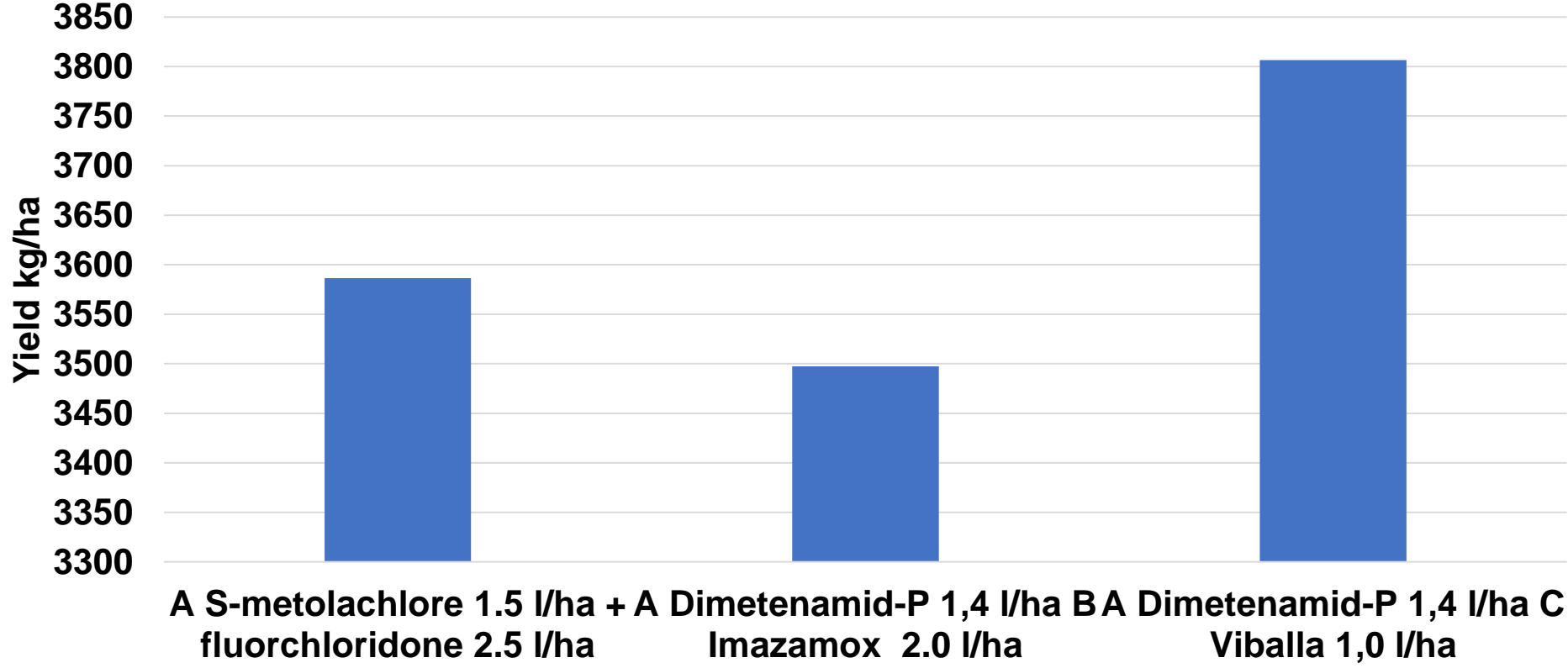
# Effect of Viballa™ on yield in extremely strong infected by Ambrosia Markotabödöge 2018



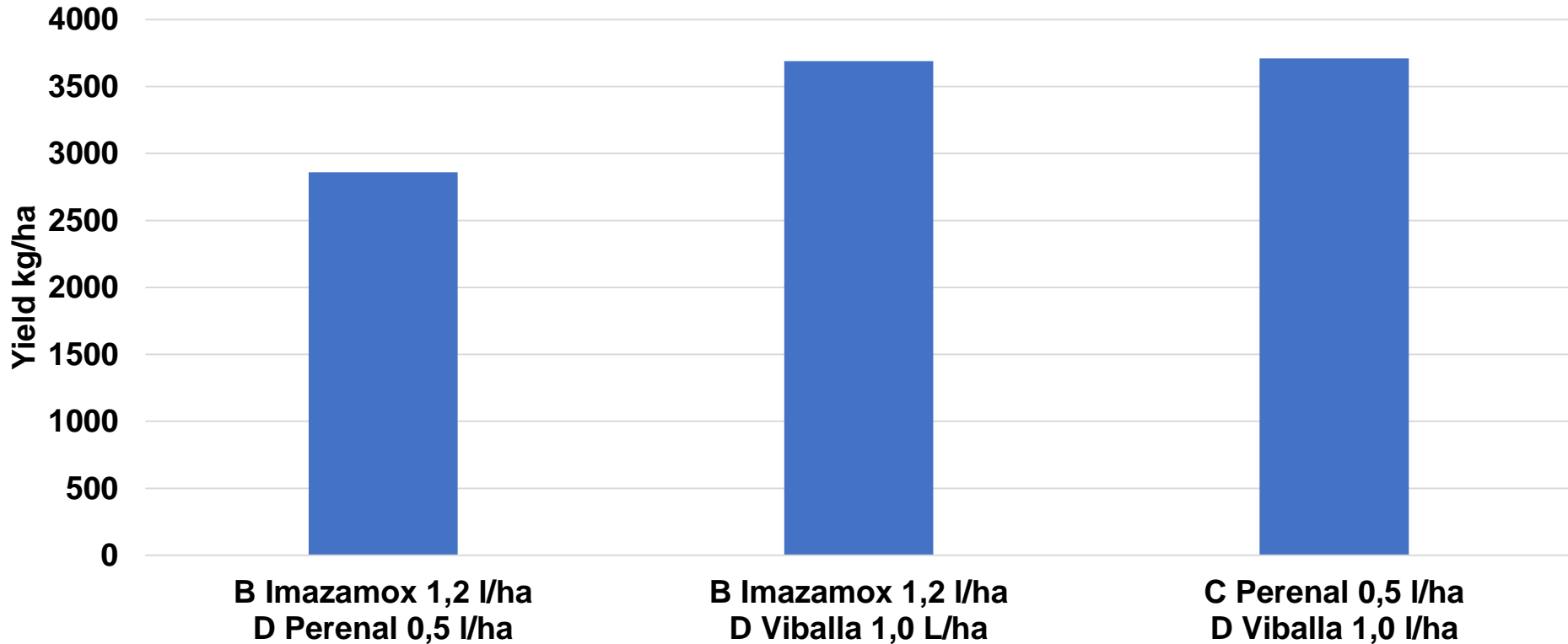
# Effect of Viballa™ on yield in SU sunflower with strong AMBEL pressure 5 trials in Hungary 2019



# Effect of Viballa™ on yield in CLP sunflower with strong AMBEL pressure 4 trials Hungary



# Effect of Viballa™ on yield with strong AMBEL pressure in no-till technology (only postemergent application) in CL sunflower in Hungary 2019



A close-up photograph of several bright yellow sunflowers with dark brown centers, set against a clear blue sky. The sunflowers are the main focus of the image, with some in sharp focus and others slightly blurred in the background. A semi-transparent white box is overlaid on the top left of the sunflowers, containing the main title text.

# Feedbacks from farmers about Viballa™ using



**Viballa™**

GYOMIRTÓ SZER

## Viballa feedbacks from farmers September-October 2019

- Feedbacks who used Viballa: 181 farmers
  - Conventional: 19.8 %
  - SU: 26.2 %
  - CL: 44.3 %
  - CLP: 9,6 %
- How many ha will be used by Viballa in 2020?
  - Little bit more than 40 % (who noticed area)



# Why did they use Viballa™ (weeds)?

	Case of number
Ambrosia	164
Abutilon	44
Xanthium spp.	21
Chenopodium spp.	42
Canabis	8

## What is the main feature of Viballa™ to recommend this product to other farmers?

	Case of number		Case of number
Ambrosia	72	Xanthium spp.	3
Overdeveloped Ambrosia	26	Right communication	2
Flexibility	10	Price	2
Fast	9	Late application	2
“Firebrigade”	7	Without any punishments	2
In any type of SF	4	In any crop stage	2
Canabis	4	To fit in technology	1
Chenopodium spp.	4	Safe production	1
Low phytotoxicity	3	Abutilon	1
Edge application of field	3		

# Is there any feature of Viballa, which is not acceptable for farmers?

	Case of number	Will recommend (no)	Will use in 2020 (no)
No	119	109 (1 no)	106 (3)
Phytotoxicity at the beginning	29	29 (0)	27 (2)
Weak effect	15	15 (0)	12 (3)
Mixability	2	2 (0)	2 (0)
EUP	9	9 (0)	9 (3 depend on registration)
All	174	164	156

Number of feedback: 181

# Evaluation of sunflower herbicides in 2019

	1-10
Express (71)	6.72
Express-Evorelle (7)	7.14
Pulsar/Listego (73)	6.62
Pulsar Plus/Listego Plus (24)	7.17
Duracer (8)	7.5
Gardoprim Plus Gold (5)	7.4
<b>Viballa™ (171)</b>	<b>9.26</b>

1 – the worst  
10 – the best

# Some interesting feedbacks about Viballa™ from farmers

## Why do you recommend Viballa™?

- Perfect weed control after Express application – *Bak János, Kölcse*
- Safe sunflower production – *Bánki Zsigmond, Túristvándi*
- Very strong effect against Ambrosia – *Bohner Zoltán, Csávoly*
- Postemergent product!!!! - *Csanádi Lajos, Kiskunhalas*
- Perfect solution overdeveloped Ambrosia – *Császár Zsolt, Becsehely*
- The crop stage of Ambrosia did not influence the quality of weed control – *Cselik Tamás, Kalocsa*
- Perfect solution against overdeveloped Ambrosia and good effect on Cannabis – *Cserjési Tibor, Abaújkér*
- Single solution against Ambrosia – *Dobos Árpád, Mezőnyárád*
- Fast and spectacular effect on promised weed. I will fit to the technology – *Dr. Nagy László, Kiskunlacháza*

# Some interesting feedbacks about Viballa™ from farmers

## Why do you recommend Viballa™?

- Good effect against Ambrosia. The Viballa is solution! – *Erdész Ferenc, Budapest*
- Brutal effect on Ambrosia – *Farkas István Kömörő*
- Good effect, low phytotoxicity – *Fekecs Balázs, Kisdobsza*
- Good effect on problem weeds, positive picture, good effect on XANIT – *Gál Tamás Gacsály*
- Because this is good!!! – *Galambos Gábor, Dusnok*
- Flexible, the Ambrosia killer! – *Gergely János, Kartal*
- Flexibility, high effect, 1 m Ambrosia was dried – *Gerzsenyi Gergő Tiszafüred*
- Great effect on Ambrosia and Chenopodium, without any yield damage – *Hirkó Zsuzsa, Girincs*
- Effect on any stage Ambrosia – *Horváth Andárs, Pápa*
- Postemergent product in any type of sunflower – *Katona István, Makó*
- Ambrosia and Cannabis. The best solution on Cannabis in the market – *Kökény Gábor, Nagykőrös*

# Some interesting feedbacks about Viballa™ from farmers

## Why do you recommend Viballa™?

- Dried the big Ambrosia – *Major Tamás, Mezőtúr*
- I applied all 5 ha with Viballa and we were very satisfied. Thanks! – *Patkós Ferenc*
- Perfect, 100 % effect on Ambrosia, no penalty (fine) – *Perlaki Ferenc, Jászszentandrás*
- Perfect on Ambrosia. Could not have been able to harvested 2 fields – *Szendrei Ferenc, Tápióbicske*
- The best postemergent product. Effect on Canabis and Cirsium. Yield is 4,2 t/ha, in last year was 3,6 t/ha – *Szivárvány Péter, Albertirsa*
- Could be help after Pulsar or Express against Ambrosia – *Szűcs László, Kunhegyes*
- This is the best solution against big Ambrosia – *Tajner Gábor, Aporka*
- Application was in the morning, effect was already in afternoon. Very selective in sunflower – *Tallár Mikós, Tiszakeszi*

## Effect of Viballa™ on yield feedbacks from farmers

- Average yield applied by Viballa (78): 3.3 t/ha
  - Average yield in Hungary: 3.0 t/ha
- Comparable yield in same field
  - With Viballa (4): 3.17 t/ha
  - Without Viballa (any other technology): 2.69 t/ha
- Difference: 480 kg/ha (+17,8 %) + 160-200 \$/ha







**Дякую за увагу та бажаю  
успішного 2020 року**

**Питання?**



**CORTEVA**<sup>™</sup>  
agriscience

**Геліантекс**<sup>™</sup>

Arylex<sup>™</sup> active

**ГЕРБИЦИД**

**ЗАХИСНИКИ  
СОНЦЯ**