



LATVIJAS
UNIVERSITĀTE
ANNO 1919

Current trends and future perspective of glyphosate use, determination and control methods in Latvia

Dr.chem. Ilva Nakurte

University of Latvia, Chemistry Department
Laboratory of Chromatography

The second workshop on pesticide fate in soil and water
Uppsala, September 7 - 8, 2016.



Glyphosate

**Is there reason for concern in
Latvia?**



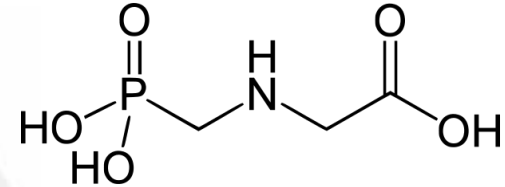
Is there reason for concern in Latvia?

<input checked="" type="checkbox"/>	Yes
<input type="checkbox"/>	No

Is there reason for concern in Latvia?



Why is weed killer in our bodies?



LATVIA
55%

M MALTA 90%	B BELGIUM 55%	H HUNGARY 30%
D GERMANY 70%	LV LATVIA 55%	A AUSTRIA 20%
GB GREAT BRITAIN 70%	CY CYPRUS 50%	GE GEORGIA 20%
PL POLAND 70%	HR CROATIA 40%	CH SWITZERLAND 17%
NL NETHERLANDS 63%	E SPAIN 40%	BG BULGARIA 10%
CZ CZECH REPUBLIC 60%	F FRANCE 30%	MK MACEDONIA 10%

for more info:
foeeurope.org

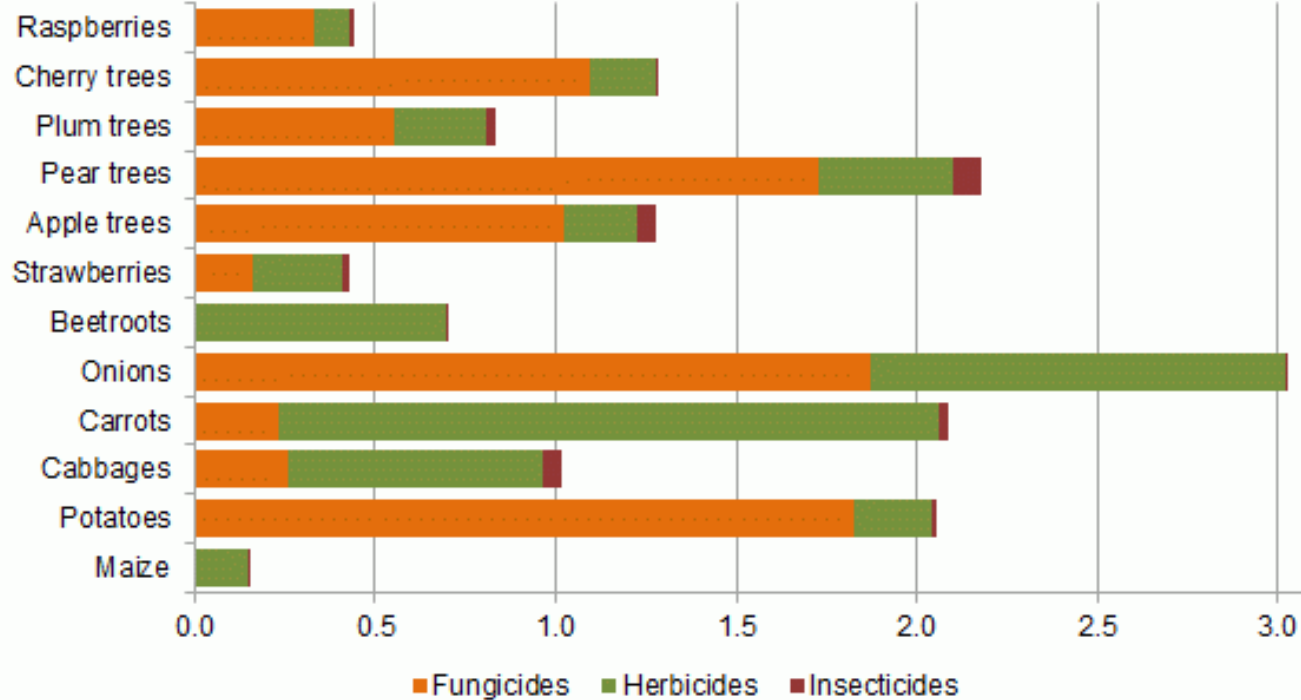


<http://www.foeeurope.org/weed-killer-glyphosate-found-human-urine-across-Europe-130613>

Glyfosate sources in Latvia.

The main source – pesticides!

Use of pesticides on agricultural crops surveyed for harvest of 2014
(kg of active substances of pesticides on average per one hectare)



Data source: Central Statistical Bureau of Latvia

Glyfosate sources in Latvia.

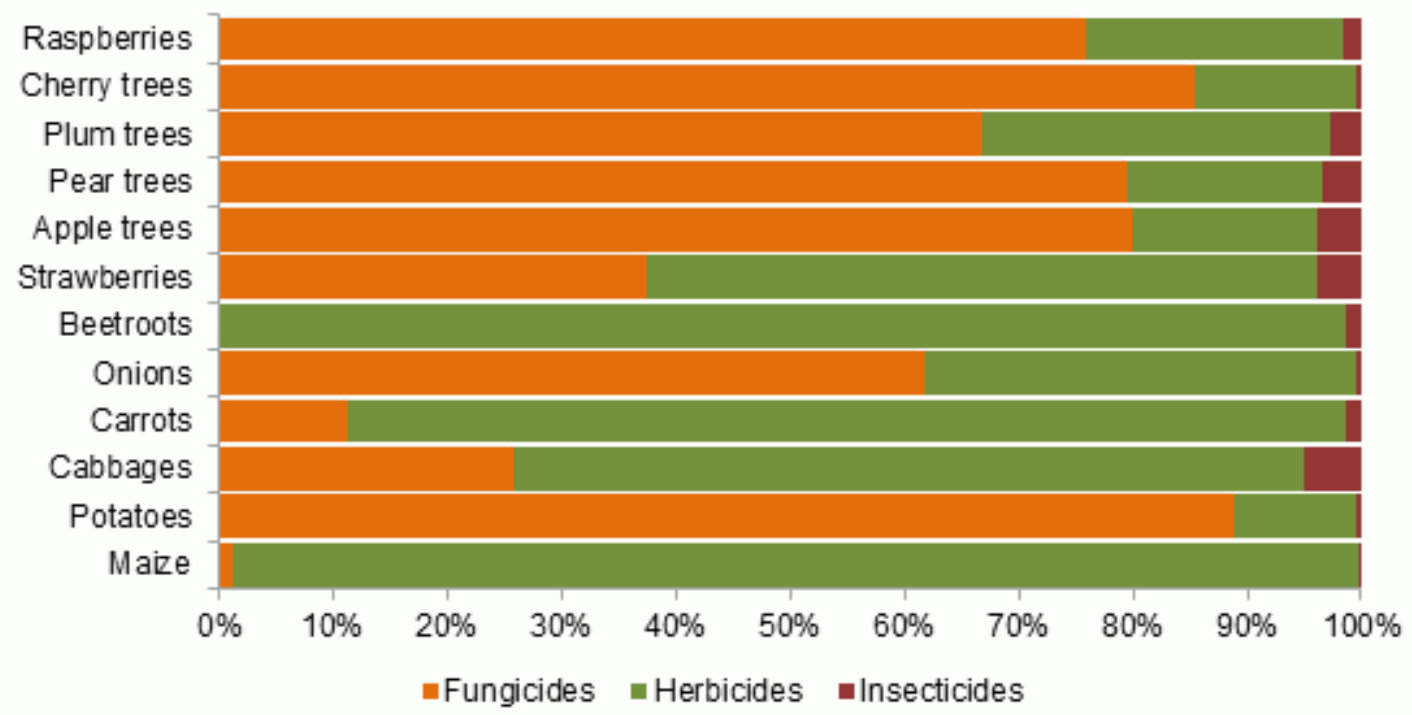


The main source – pesticides!



Valsts augu aizsardzības dienests

Structure of pesticides used on agricultural crops surveyed



Data source: Central Statistical Bureau of Latvia

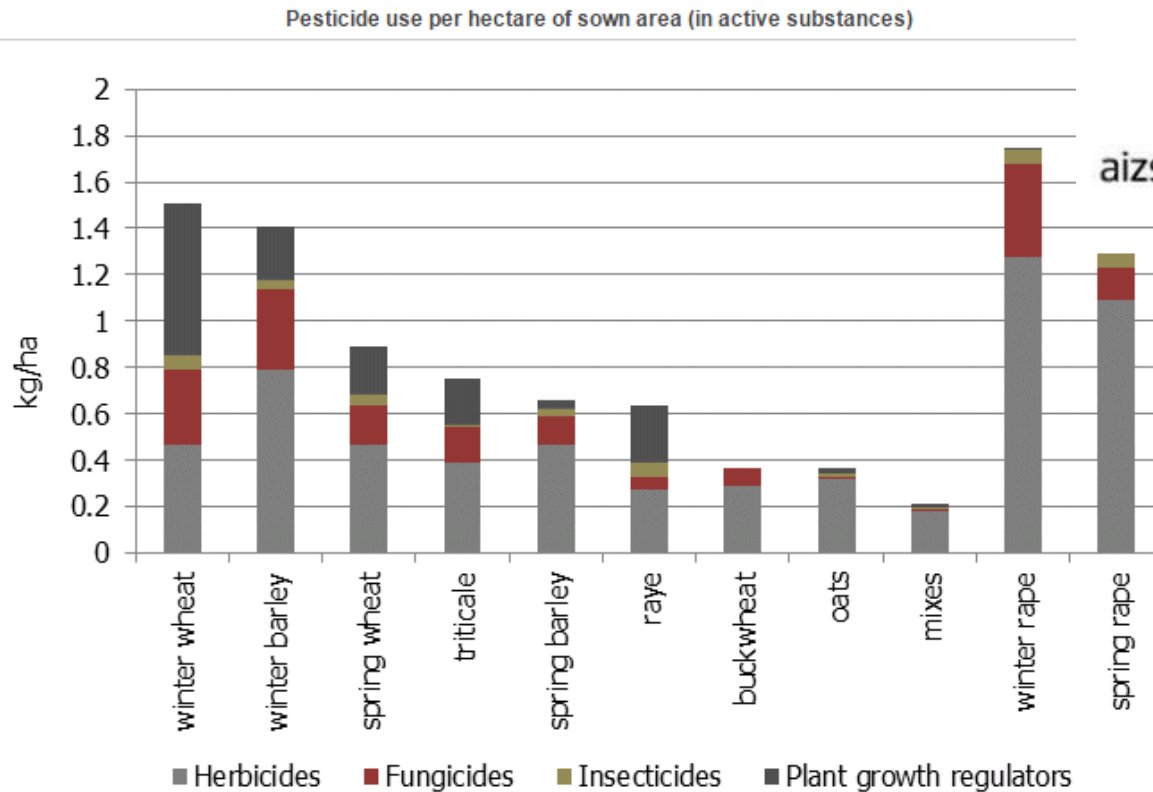
Glyfosate sources in Latvia.



The main source – pesticides!



Valsts augu aizsardzības dienests



Data source: Central Statistical Bureau of Latvia

<http://www.csb.gov.lv/en/notikumi/pesticide-use-1-ha-sown-area-104-kg-cereals-and-154-kg-rape-36641.html>

Glyfosate sources in Latvia.

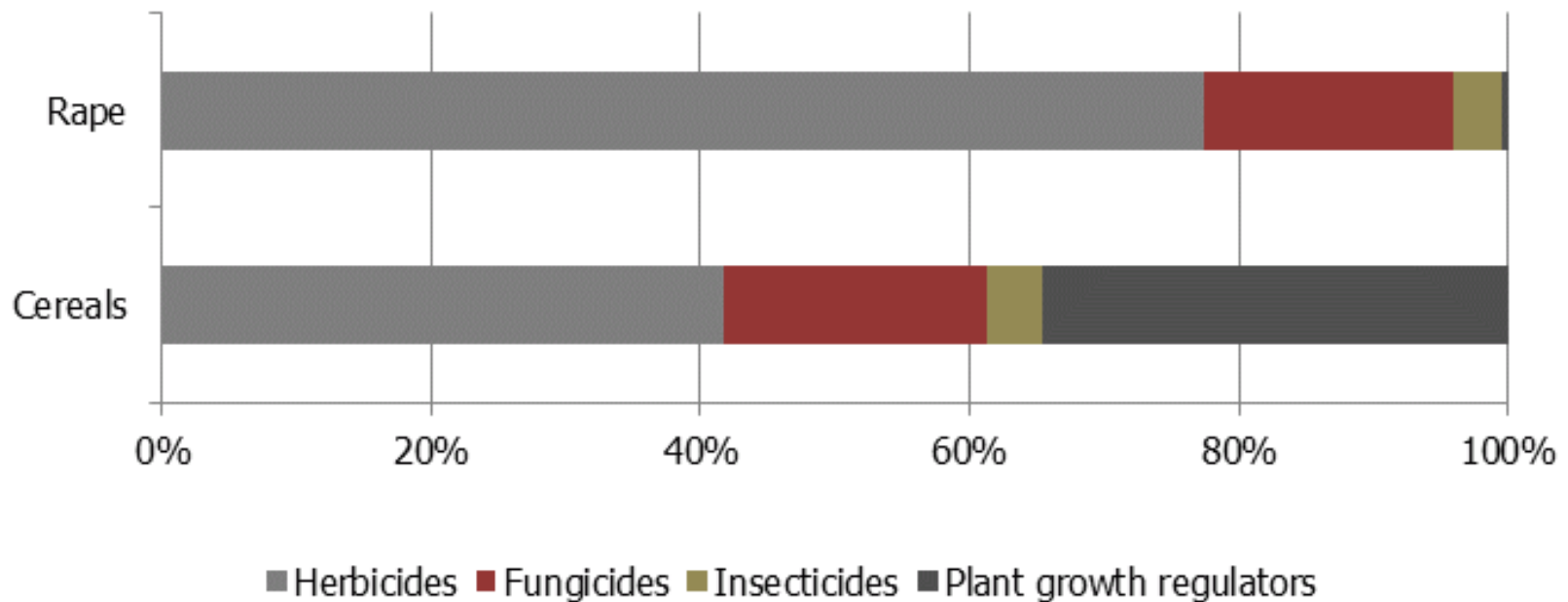


The main source – pesticides!



Valsts augu
aizsardzības dienests

Structure of pesticides used (in active substances)



Data source: Central Statistical Bureau of Latvia

European Parliament and Council
Regulation (EC) No 1185/2009.

Glyfosate sources in Latvia.

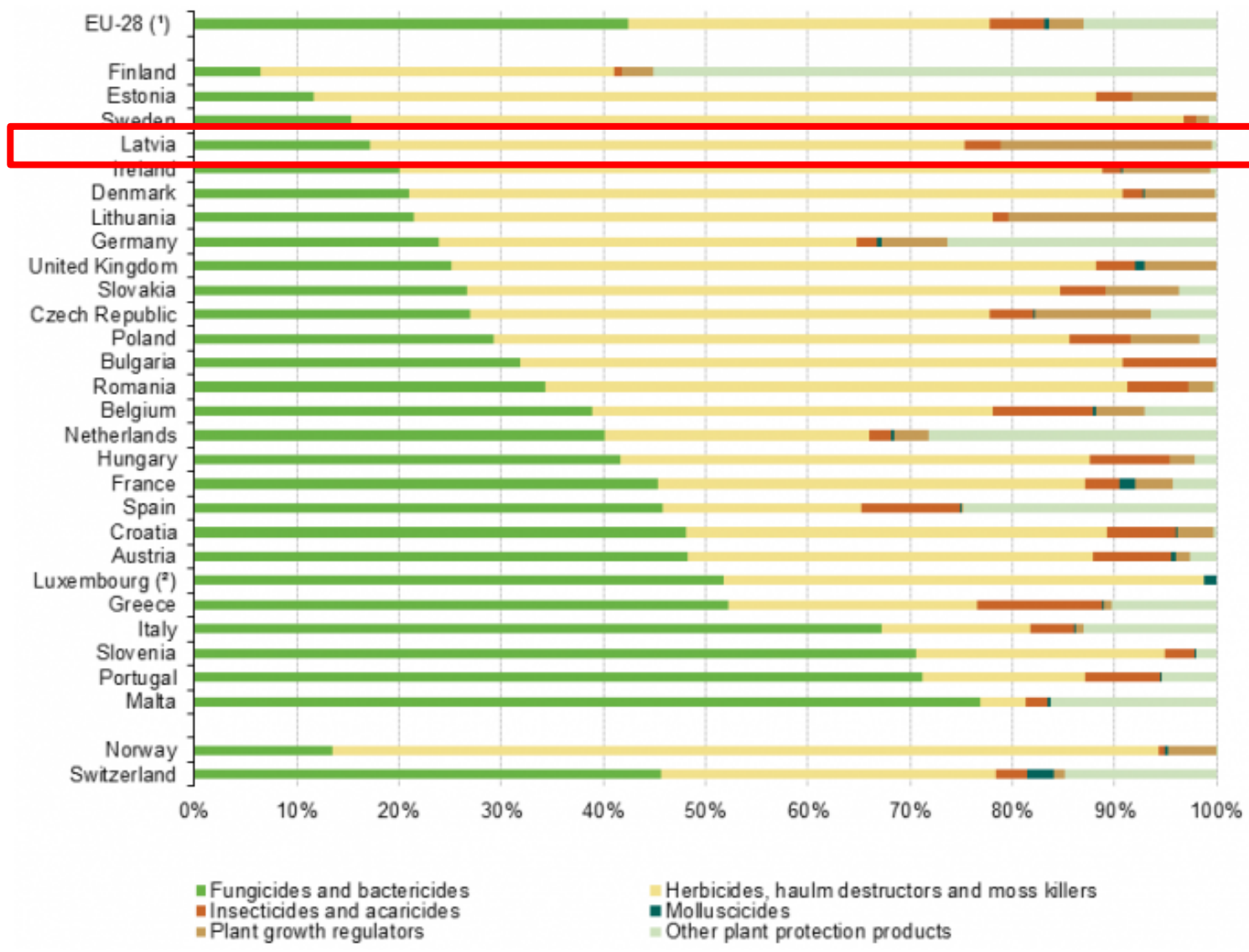


The main source – pesticides!



	2011	2012	2013	2014
Denmark	4,419,737	4,563,829	2,935,899	1,242,544
Germany (until 1990 former territory of the FRG)	17,955,165	19,907,265	17,896,271	17,876,678
Estonia	357,091	436,888	434,251	425,845
Latvia	722,050	789,139	728,065	847,474
Lithuania	1,772,873	1,715,221	1,421,923	1,394,236
Poland	12,408,486	12,654,357	12,518,197	12,073,411
Finland	1,452,126	1,223,838	1,132,945	1,305,390
Sweden	2,136,107	2,087,116	1,772,812	2,103,771
Norway	679,226	627,714	614,662	692,015

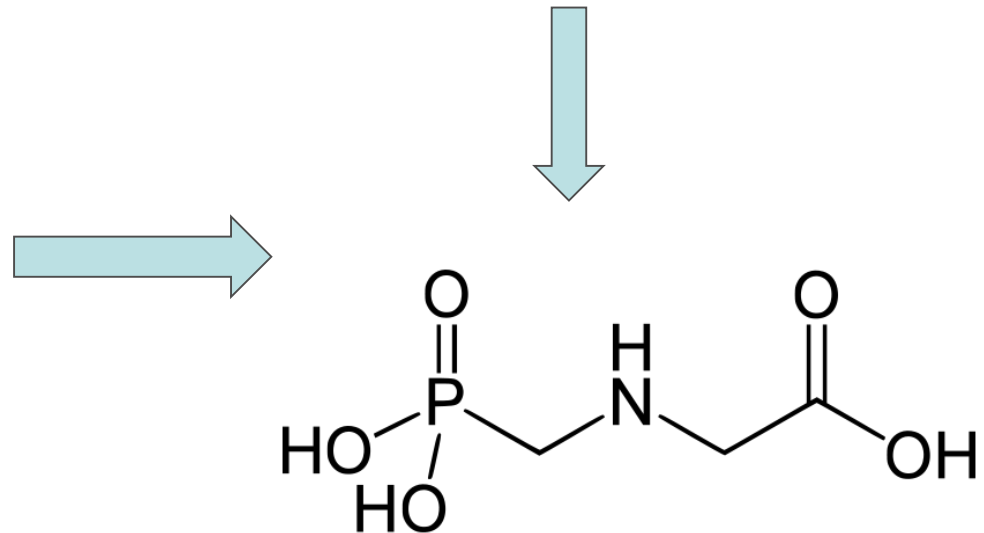
Glyfosate sources in Latvia.



~60%

Glyfosate sources in Latvia.

58% of all TOP 5 herbicides which are used on wheat as a percentage of the total quantity of active substances used in each group and **20 %** of all TOP 5 active substances used on wheat as a percentage of the total area of the crop treated contain **glyphosate**.



Regulation in Latvia.

- Cabinet Regulation No.356 , adopted 30 June 2015 «Control of the pesticides residues in products of plant origins»;
- In accordance with «Plant Protection Law», farmers must keep records on the plant protection products used (following directive 2009/128/EC);

Institutions which are capable for investigation...

Institute of Food Safety, Animal Health and Environment BIOR



- Carry out laboratorial and diagnostic investigations related to state monitoring and food movement control, animal health protection and animal feed and veterinary drugs movement;



The Institute offers determination of the pesticides residues in products of plant origins, including glyphosate.

- The Institute is responsible for the selection of appropriate analytical methods and their compliance with EU legislation.



!!!NO methods and data about soil or water!!!

Institutions which are capable for investigation...

State limited Liability Company "Latvian Environment, Geology and Meteorology Centre"



LATVIJAS VIDES, ĢEOLOĢIJAS
UN METEOROLOĢIJAS CENTRS

- management of environmental data, maintenance of databases on water resources and inland water quality, air emissions, air quality, chemicals, waste management and polluted areas;
- development of environmental monitoring system in line with national and European policy needs, international recommendations and guidelines.



The Centre offers determination of glyphosate in water.



!!!NO data about soil or water!!!

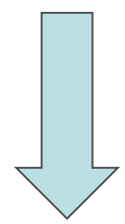
Institutions which are capable for investigation....

State Plant Protection Service



Valsts augu
aizsardzības dienests

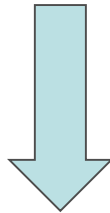
The Service performs official control and surveillance in the field of free movement of plant protection products, fertilizers and growing media, plants and plant products, plant varieties, seed and planting material, explore fertility of land used for agriculture, as well as collaborates with international organizations and provides the exchange of information with other countries on issues of plant protection, plant quarantine, movement of seeds and variety protection rights.



Institutions which are capable for investigation...

State Plant Protection Service

SPPS regularly informs public about accurate use of glyphosate containing products.



ZIŅU LAPA

Nr.8
2016.g.
JŪLIJS

Atgādinājums par glifosātu saturošu AAL pareizu lietošanu

Glifosātu saturoši augu aizsardzības līdzekļi – vispārējas un sistēmas iedarbības **herbicīdi**, kas iznīcina visus zaļos augus.



Lieto īsmūža, daudzgadīgo nezāļu un labību-sārņaugu iznīcināšanai:

- lauksaimniecībā neizmantojamā platībā
- platībās pēc ražas novākšanas
- papuvēs
- augļu dārzos un skuju koku jaunajos stādījumos, aizsargājot koku stubrus
- platību sagatavošanai pirms daudzgadīgo stādījumu ierīkošanas
- pirms kultūraugu sadīgšanas
- pirms kultūraugu plaušanas



Ievēro!

Jā glifosātu saturošu herbicīdu lieto sējumu apsmidzināšanai pēc kultūraugu sējas, pirms kultūraugu sadīgšanas:

- kviešu, cieto kviešu miežu un auzu sējumus apsmidzini **ne vēlāk kā 72 stundas** pirms kultūraugu sadīgšanas
- zirņu, lauka pupu, rapša, sinepju, eļļas līnu, cukurbiešu, kāju, rāceņu, sīpolu un puravu sējumus apsmidzini **48 stundu laikā pēc sējas**
- augsnei jābūt kvalitatīvi sastrādātai - bez cilām un kunkujiem
- iesētajām sēklām jābūt pārklātām ar vismaz 1,5 cm biezu augsnes kārtu

Jā glifosātu saturošu herbicīdu lieto sējumu apsmidzināšanai pirms kultūraugu plaušanas:

- kviešiem, miežiem, auzām, rudziem un tritikalei jābūt pilngatavības stadijā (AS 89), kad sēklu mitrums ir zem 30%. Sējumus apsmidzini **ne mazāk kā 7 dienas** pirms ražas novākšanas
- rapša sējumus apsmidzini, kad sēklu mitrums ir zem 30%. Sējumus apsmidzini **ne mazāk kā 14 dienas** pirms ražas novākšanas, ja marķējumā nav norādīts citādi
- zirņu un lauka pupu sējumus apsmidzini, kad sēklu mitrums ir zem 30%. Sējumus apsmidzini **ne mazāk kā 7 dienas** pirms ražas novākšanas, ja marķējumā nav norādīts citādi - neapstrādāt sēklai paredzētos laukus
- sējumiem ir jābūt izlidzinātiem un vienmērīgi nogatavojušiem

Aizliegts glifosātu saturošus herbicīdus lietot kā desikantu kultūraugu **nokaltēšanai!**

Tas ir normatīvo aktu pārkāpums, par ko paredzēts sods.

Sankcijas:

- Administratīvais sods
- Savstarpējās atbildības pārkāpums ar sekojošiem atlīdzības maksājumu samazinājumiem

Atceries!

- Augu aizsardzības līdzekļi jālieto, **ievērojot norādes tā marķējumā** – precīzi ievērojot norādītās devas, kultūrauga vai kaitīgā organisma attīstības stadiju, apstrāžu skaitu sezonā un nogaidīšanas laiku no pēdējās apstrādes līdz ražas novākšanai.
- **Nepareiza augu aizsardzības līdzekļu lietošana negatīvi ietekmē cilvēku, dzīvnieku veselību un vidi, kā arī rada tiešus zaudējumus pašam lauksaimniekam, jo tas ir pārkāpums, kura sekas var būt pat apsmidzinātās ražas iznīcināšana.**

State Plant Protection Service



Valsts augu
aizsardzības dienests

Starting from September 1 2016, there are cancelled **18 different glyphosate containing products** from Latvian Register of plant protection, based on Commission Implementing Regulation (EU) No 2016/1313. All of them are herbicides – weed killers.

Regulation in Latvia.

State Plant Protection Service

There are more than **23 thousand** gain farms in **Latvia**, but in spite of glyphosate is very widely used **only 150 analyses of plant origins** are taken at the harvest time.

The amount of glyphosate found did not exceed permitted requirements.

!!!Samples are NOT analysed in laboratories in Latvia!!!

Ideally would be if data are available on the land area and crops treated; the timing and method of applications; rates and number of application; the formulation applied and the total volume applied per hectare.

Unfortunately, all these data are rarely available.



Valsts augu
aizsardzības dienests

Current situation.



- ✓ The frequency and levels of glyphosate and residues in a variety of foods are increasing all over the world;
- ✓ There are no methods for determination of glyphosate in soil and water samples from Latvian laboratories;
- ✓ There no any public data or statistics about real situation of pesticide monitoring in soil and water in Latvia.

In Latvia, no research is currently being conducted to address leaching of glyphosate from agricultural areas into water ways and soil.

Current situation.



- ✓ We have regulations and institutions;
- ✓ We have Bureau who can gather all data and statistics;
- ✓ We have certified and very well equipped laboratories in both - state and scientific institutions;
- ✓ There are developed and validated determination methods of glyphosate and its degradation products in different sources.

Future perspectives.

**Set up cooperation to the right direction towards
a common goal of all parts of society.**



Establish workgroups with equal members from science and regulatory fields.

Researchers should be involved to help rather than to excite the public.



LATVIJAS
UNIVERSITĀTE
ANNO 1919

Thank you!



ilva.nakurte@gmail.com