Counterfeit Pesticides on the Hungarian Market

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Introduction

- Increasing growth of counterfeit products in all business sectors
- The estimated amount of worldwide illegal trade is around 10%.

International situation

- Counterfeiting happens in all economies
- About 70% of seizures of imported products come from Asia

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In the OECD countries the highest rate of fake products can be observed in the garment trade (30%) and in the electrical engineering industry (27%).

The pesticide counterfeiters do not want to lag behind they are taking measures to increase from year to year their output. Due to this effort the presence of counterfeit pesticide products is growing in most countries around the world.

International Situation on the Plant Protection Products Market

It is hard to estimate the amount of these products, because the known cases are only the tip of the iceberg. The European Crop Protection Association estimates that in Europe 5-7 percent of the annual trade is affected by counterfeiting and illegal trade (360-510 million €/year). Based on market evaluations, custom seizures and statistics in some regions 25 percent and even more of the pesticide products market is estimated to be counterfeit.

In China and India, illegal pesticides are estimated to make up about 30%, respectively 20% of these markets.

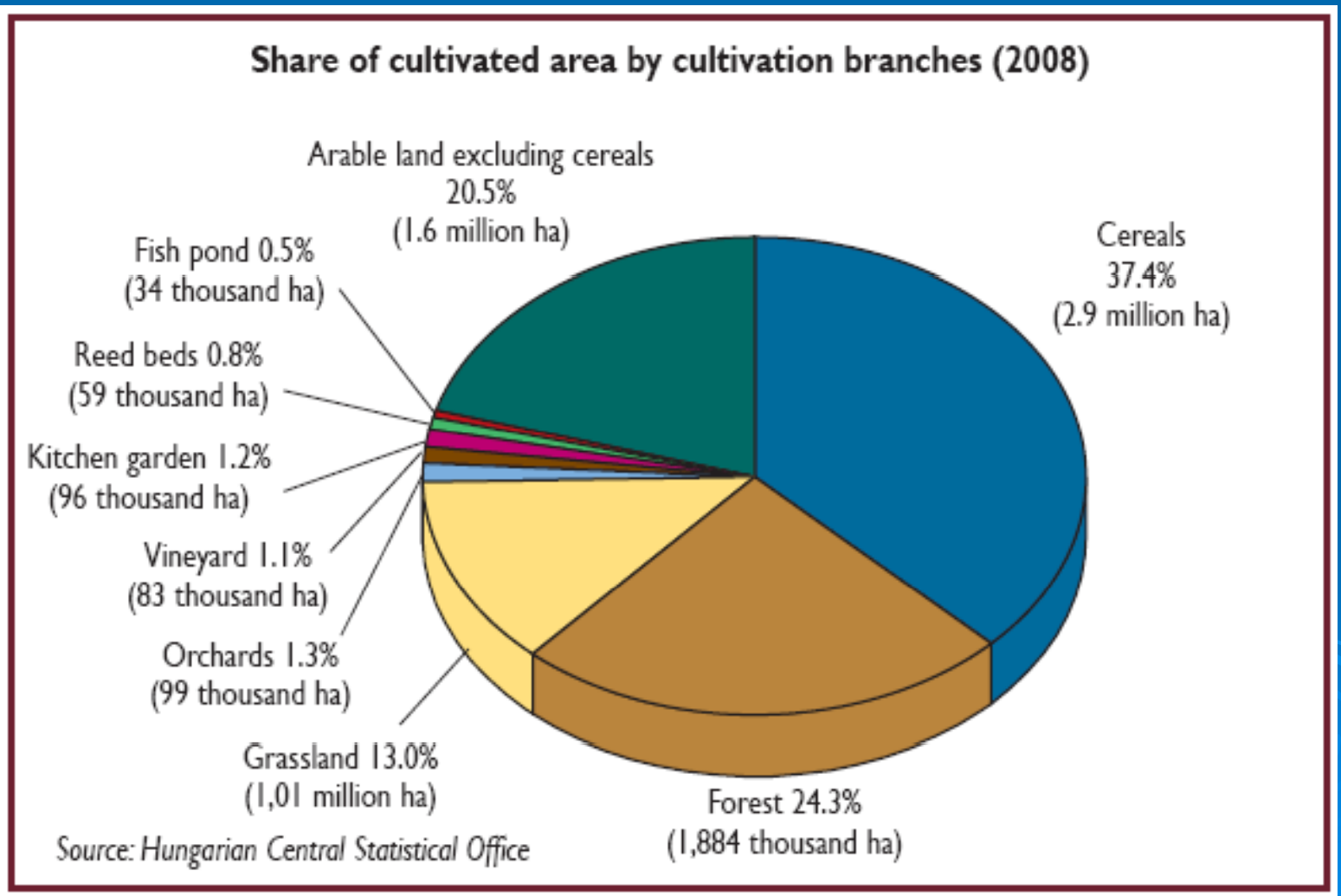
Chart 2: Imports into the EU of pesticide products (in 1000kg)

	2000	2007	%change
US	**27658300**	**46233600**	**67.20%**
China	**3460300**	**16590000**	**379.40%**
Israel	**18949700**	**46468100**	**145.20%**
India	**3570100**	**6241600**	**74.80%**
South Africa	**5793900**	**681500**	**-88.20%**
Switzerland	**28010300**	**25613800**	**-8.60%**

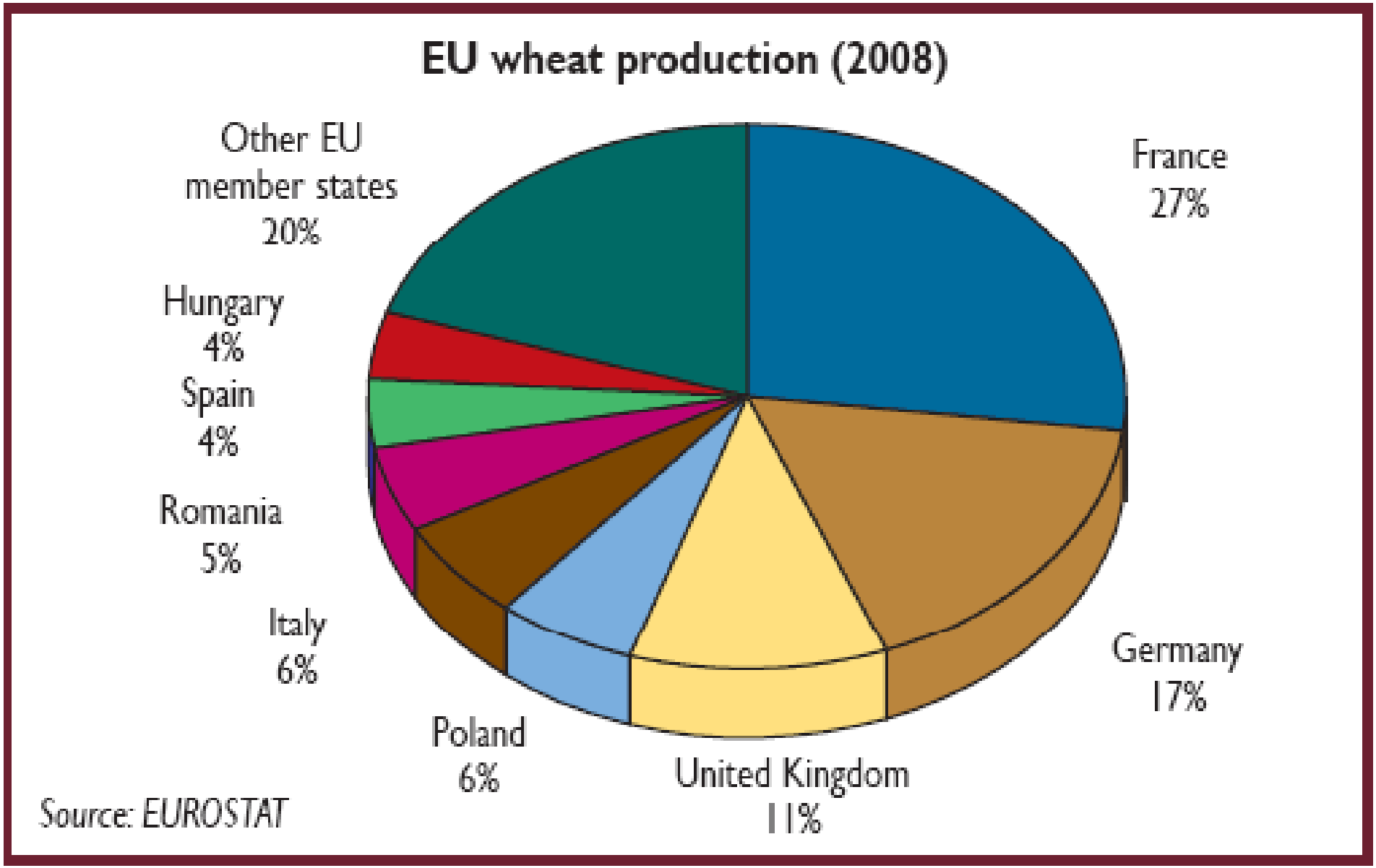
*data from the European Commission DG Trade database

Hungarian agriculture data

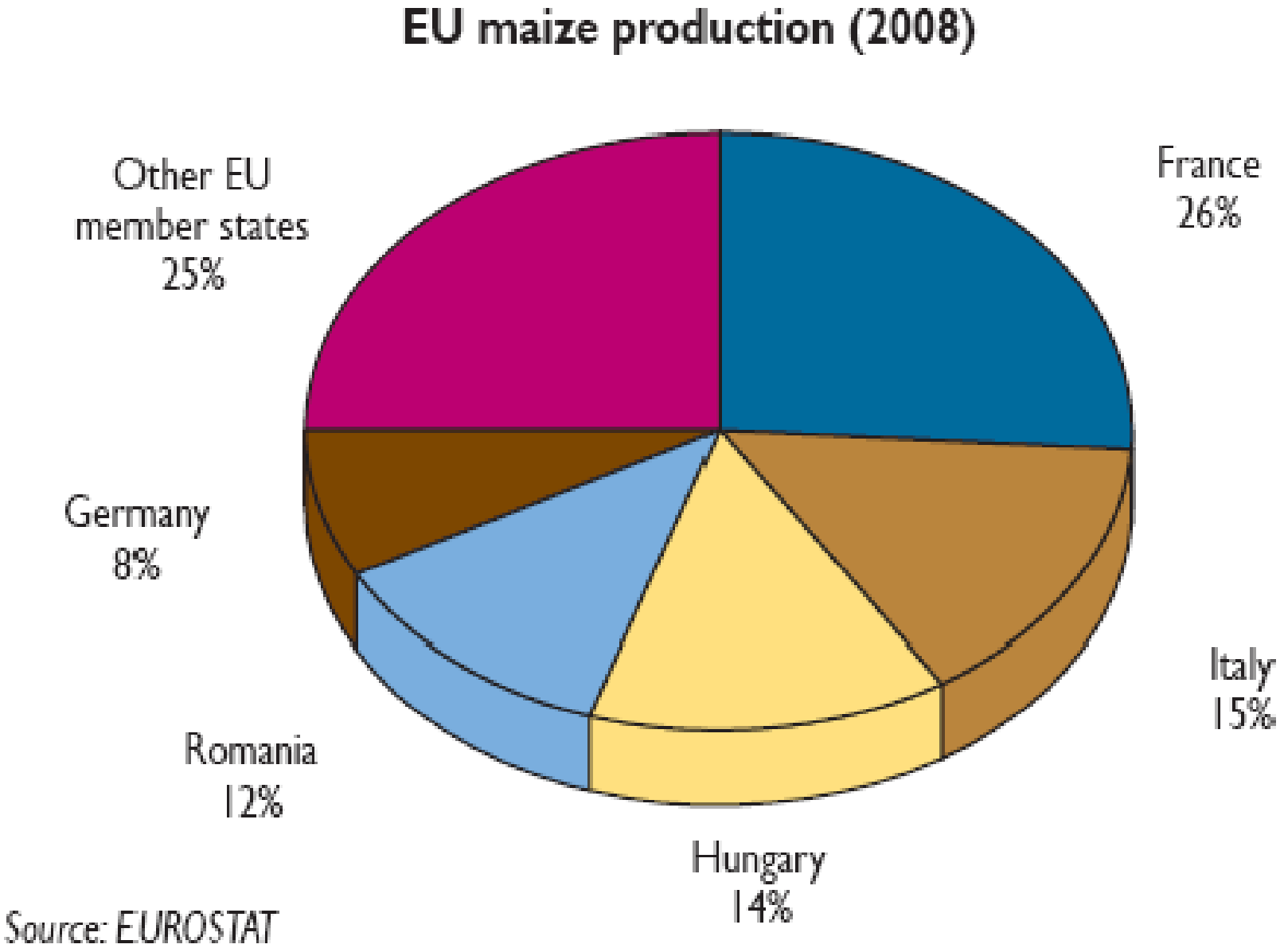
Hungary is well-endowed for the agricultural production. Almost two thirds of the country total area is suitable for agricultural cultivation (around 6 million hectares).



EU wheat production (150 million t)



EU maize production (65 million t)



To protect the crops, agriculture uses wide range of plant protection products. In 2008 around 600 formulated pesticides were in use in Hungary, the total amount of sold pesticides was 24168 tonnes.

Pesticide sales

(tonnes)

Item	2007	2008	2008/2007 %
Volume of pesticides sold *	22,356	24,168	108.1
of which: fungicides	5,203	6,016	115.6
insecticides	5,009	5,080	101.4
herbicides	9,183	9,592	104.5
other chemicals	2,961	3,480	117.5

* Sold by agricultural production equipment trading organizations directly to agricultural producers.

Source: Agricultural Economics Research Institute

Types of illegal and counterfeit pesticides on the market :

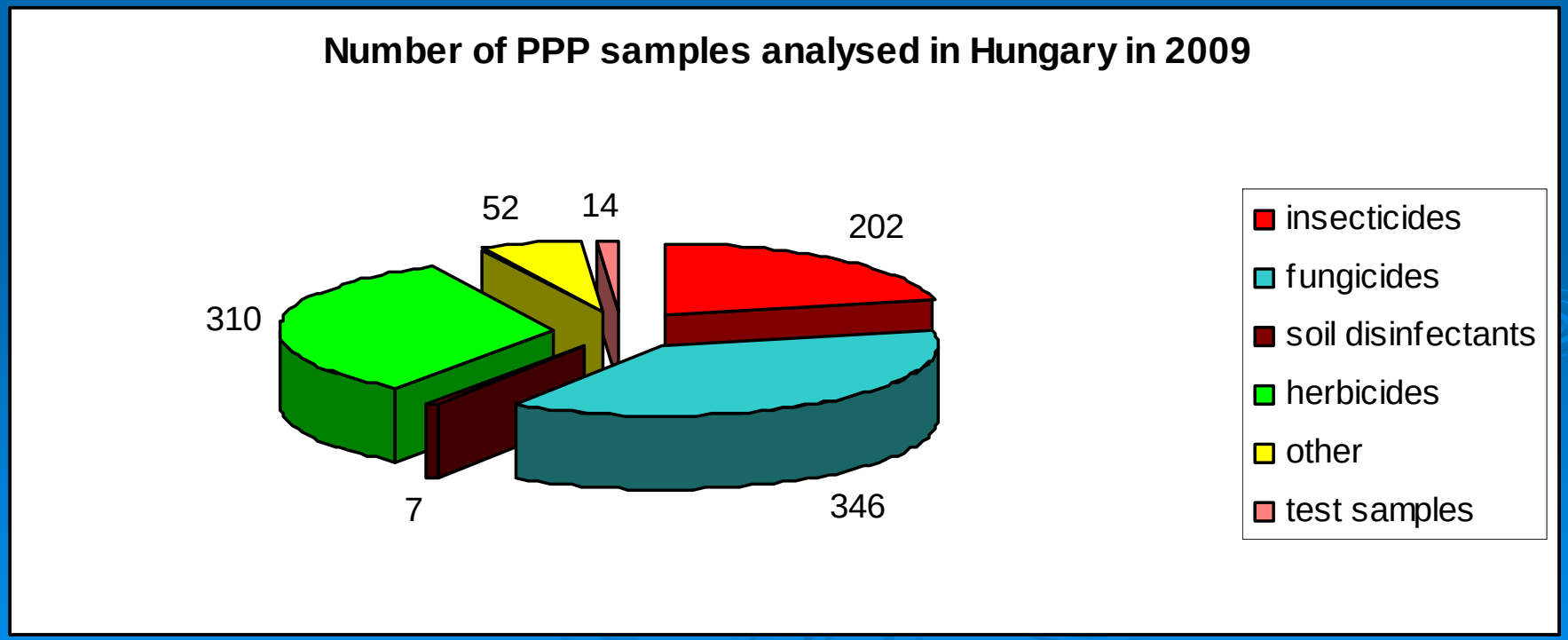
• good quality counterfeit products which can be distinguished from the original just in specialized laboratories. In such cases the labels, the active substance content and other characteristics are similar and even during usual laboratory checking they can not be distinguished from each other.

• there are also some low quality level fake products, where they do not have proper packaging, no labels and may contain any other materials.

• abuse with the parallel import. In some cases the approved parallel import products are changed with counterfeit ones, undermining the reliability of the system.

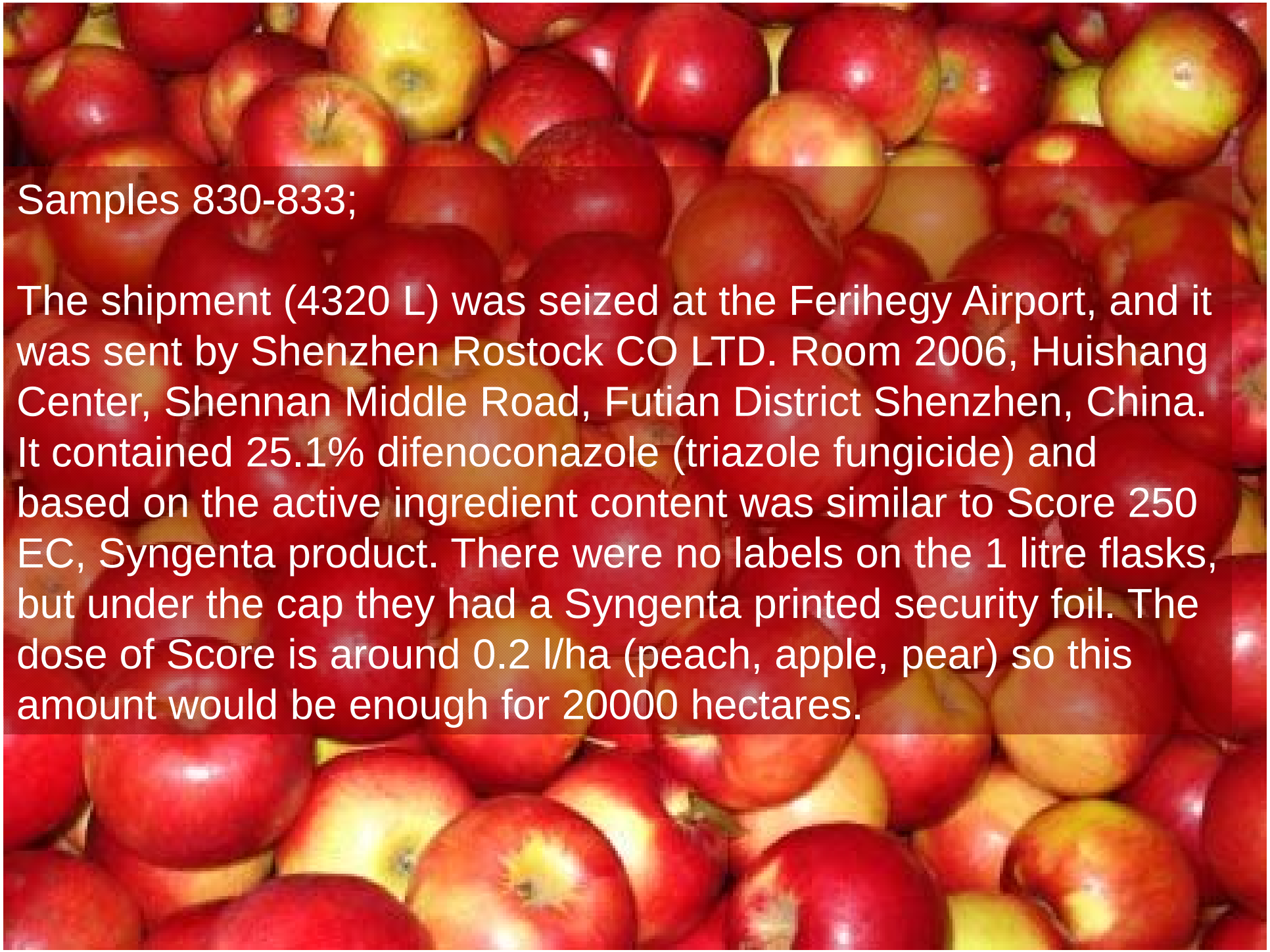
The quality of pesticides is controlled based on a yearly control plan. The sampling is carried out at traders and farmer shops. The authority has a close cooperation with the special investigation authorities in case of doubtful matter.

In 2009 we analyzed 931 samples and 18 batches were found as non compliant.



Lab ID.	Name	Found A.I.	Pack.	Origin	Sample taken at	Amount, tonnes
830	Emulsifier	difenoconazole	1 L	Shenzhen, Rostock, China	Bud.Airport	1.080
831	Emulsifier	difenoconazole	1 L	Shenzhen, Rostock, China	Bud.Airport	1.080
832	Emulsifier	difenoconazole	1 L	Shenzhen, Rostock, China	Bud.Airport	1.080
833	Emulsifier	difenoconazole	1 L	Shenzhen, Rostock,China	Bud.Airport	1.080
928	Unknown granules	thifensulfuron methyl	25 kg	China via Hamburg	Momentán Custom Ag. Záhony	0.400
929	Unknown liquid	chlorpyrifos	5 L	China via Hamburg	same	1.100
930	Unknown liquid	acetochlor	20 L	China via Hamburg	same	18.000
931	Unknown suspension	prometryn	5 L	China via Hamburg	same	13.800

Lab ID.	Name	Found A.I.	Pack.	Origin	Sample taken at	Amount, tonnes
932	Unknown suspension	imidacloprid pencycuron	1 L	China via Hamburg	same	10.000
933	Unknown powder	imidacloprid	1 kg	China via Hamburg	same	2.000
934	Unknown liquid	glyphosate	20 L	Panama via Rostock	Momentán Custom Ag. Nyíregyháza	10.000
946	Unknown liquid	cypermethrin e chlorpyrifos	5 L		Dél Pest Reg. Custom	14.280
947	Unknown liquid	clethodim	1 L		Dél Pest Reg. Custom	5.004
996	Unknown liquid	prometryn	5 L		Dél Pest Reg. Custom	16.000

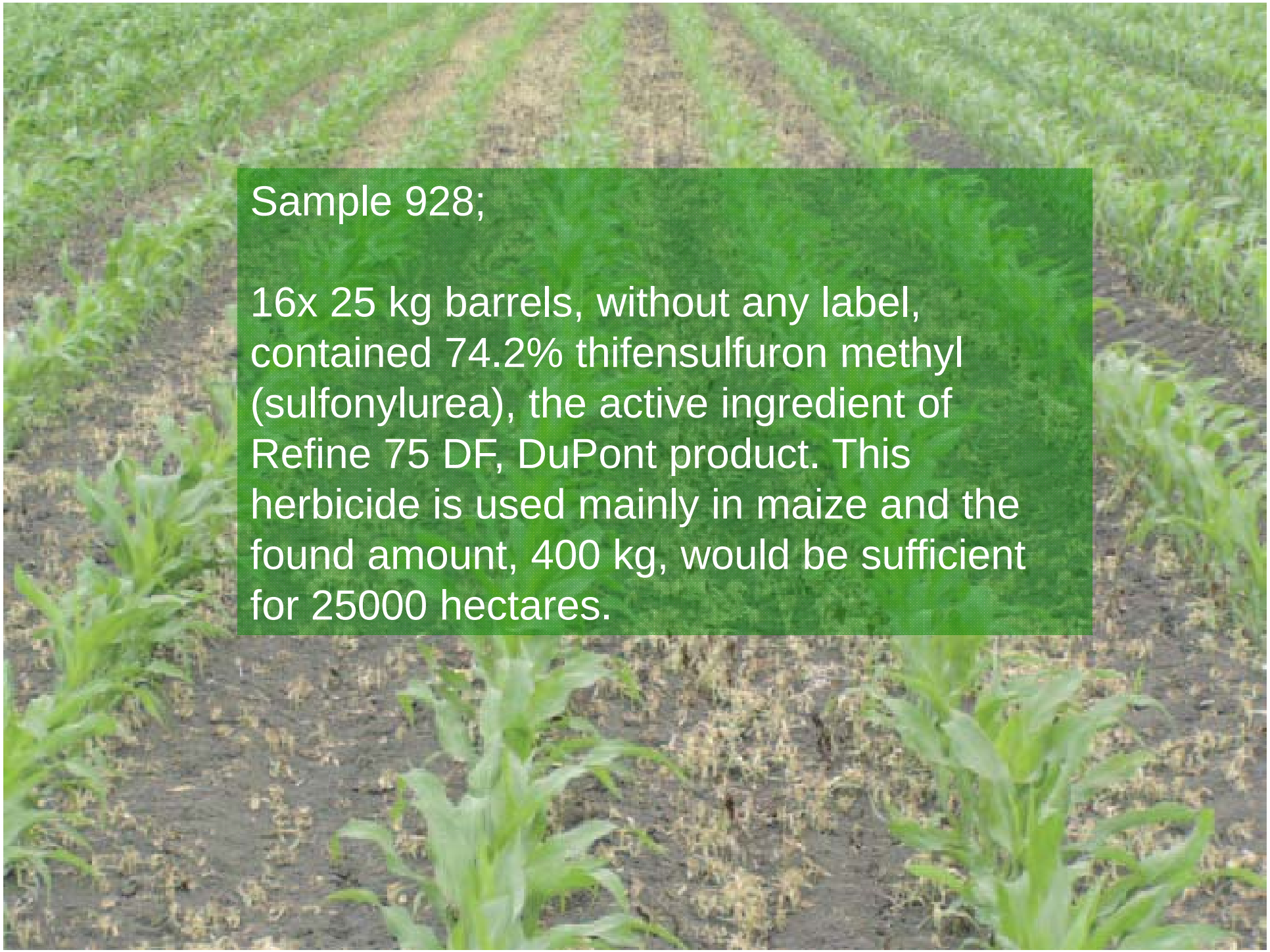


Samples 830-833;

The shipment (4320 L) was seized at the Ferihegy Airport, and it was sent by Shenzhen Rostock CO LTD. Room 2006, Huishang Center, Shennan Middle Road, Futian District Shenzhen, China. It contained 25.1% difenoconazole (triazole fungicide) and based on the active ingredient content was similar to Score 250 EC, Syngenta product. There were no labels on the 1 litre flasks, but under the cap they had a Syngenta printed security foil. The dose of Score is around 0.2 l/ha (peach, apple, pear) so this amount would be enough for 20000 hectares.

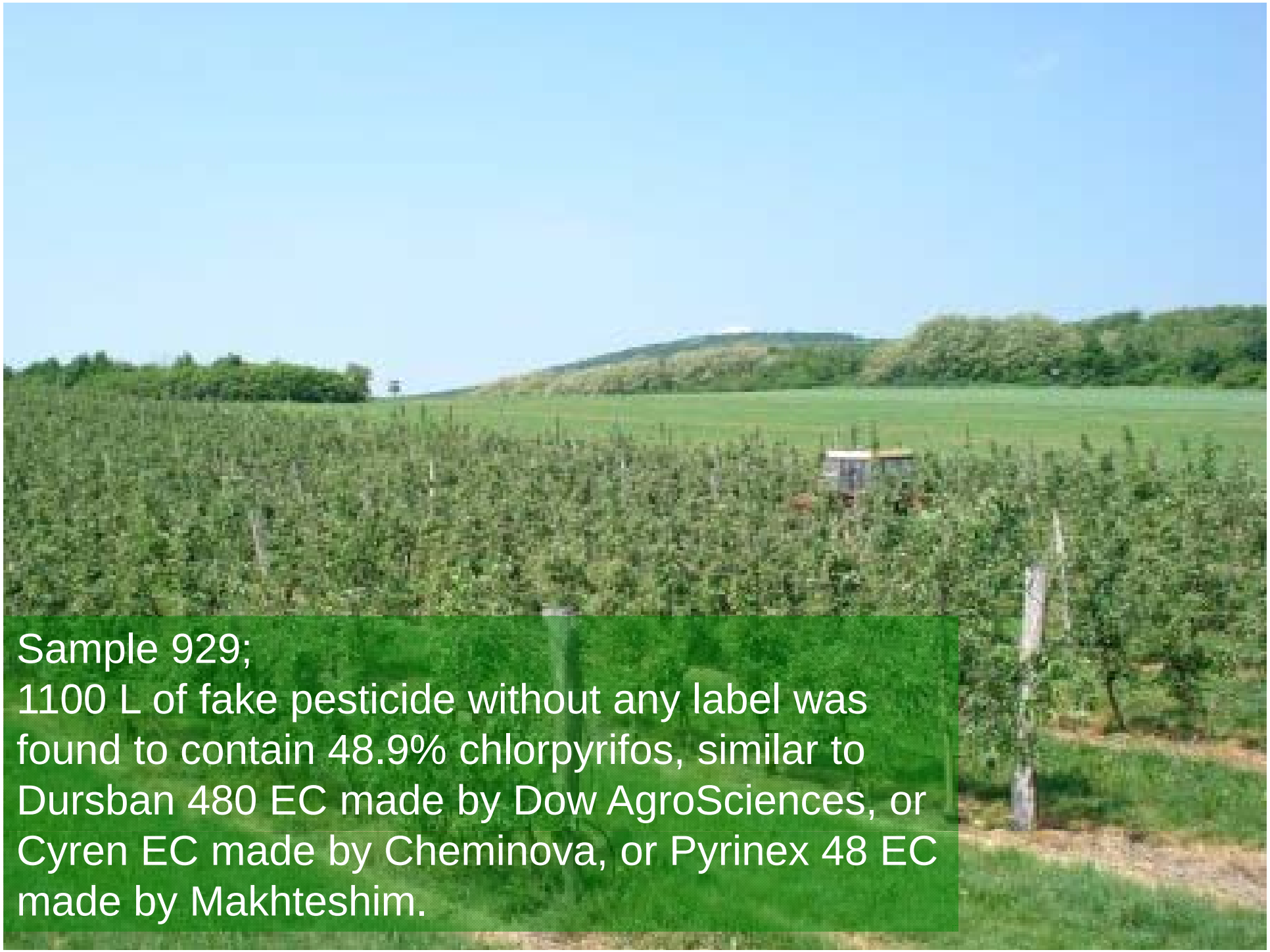

VÁM - ÉS
PÉNZÜGYŐRSÉG

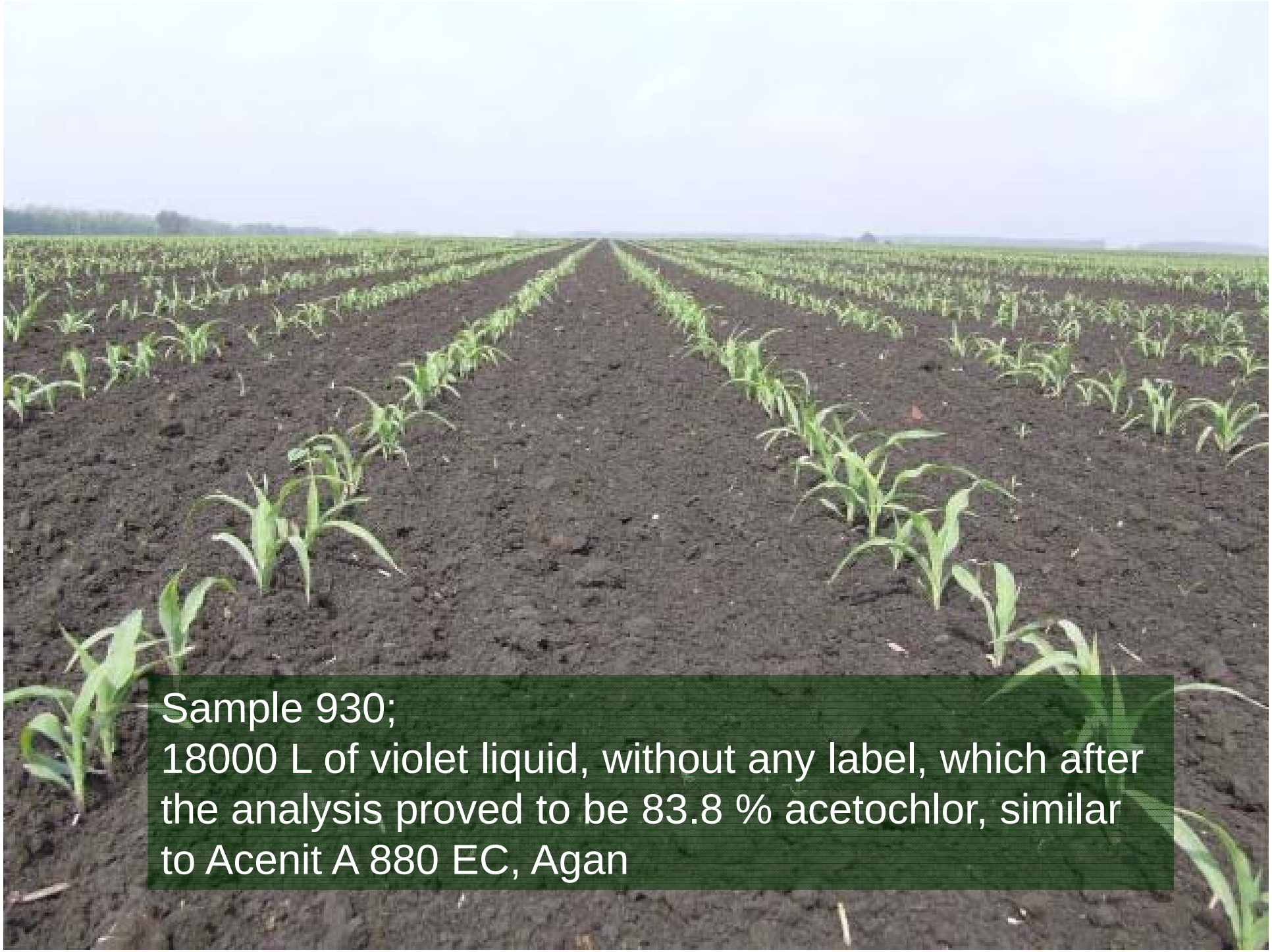
Samples 928-933;
This freight was seized at Momentan Custom Agency in Záhony a border crossing point to Ukraine. The shipment was sent from China to Hamburg and transported to Hungary on road. According to the waybill it contained emulsifier for the building industry.
It contained:
- 16 barrels, 25 kg each, were containing granules in polyethylene bags. (928)
- 55 cardboard boxes with 4x5L unknown liquid in brown plastic flasks. (929)
- 900 cans of 20L with unknown violet liquid (930)
- 690 cardboard boxes with 4x5L white coloured flasks (931)
- 1000 cardboard boxes containing 10x1L plastic flasks with no label, on some of the boxes “Imidacloprid 20%” was printed.(932)
- 200 cardboard boxes containing 10x1 kg silver coloured bags (933)
- 10000 pieces of 200 mL plastic flasks in 56 bags
- 15400 plastic caps
- 9800 small plastic caps
- 4896 measuring cups with DuPont Harmony 75DF inscription
- 10000 sealing foil
- 15000 1L plastic flasks



Sample 928;

16x 25 kg barrels, without any label, contained 74.2% thifensulfuron methyl (sulfonylurea), the active ingredient of Refine 75 DF, DuPont product. This herbicide is used mainly in maize and the found amount, 400 kg, would be sufficient for 25000 hectares.


Sample 929;
1100 L of fake pesticide without any label was found to contain 48.9% chlorpyrifos, similar to Dursban 480 EC made by Dow AgroSciences, or Cyren EC made by Cheminova, or Pyrinex 48 EC made by Makhteshim.

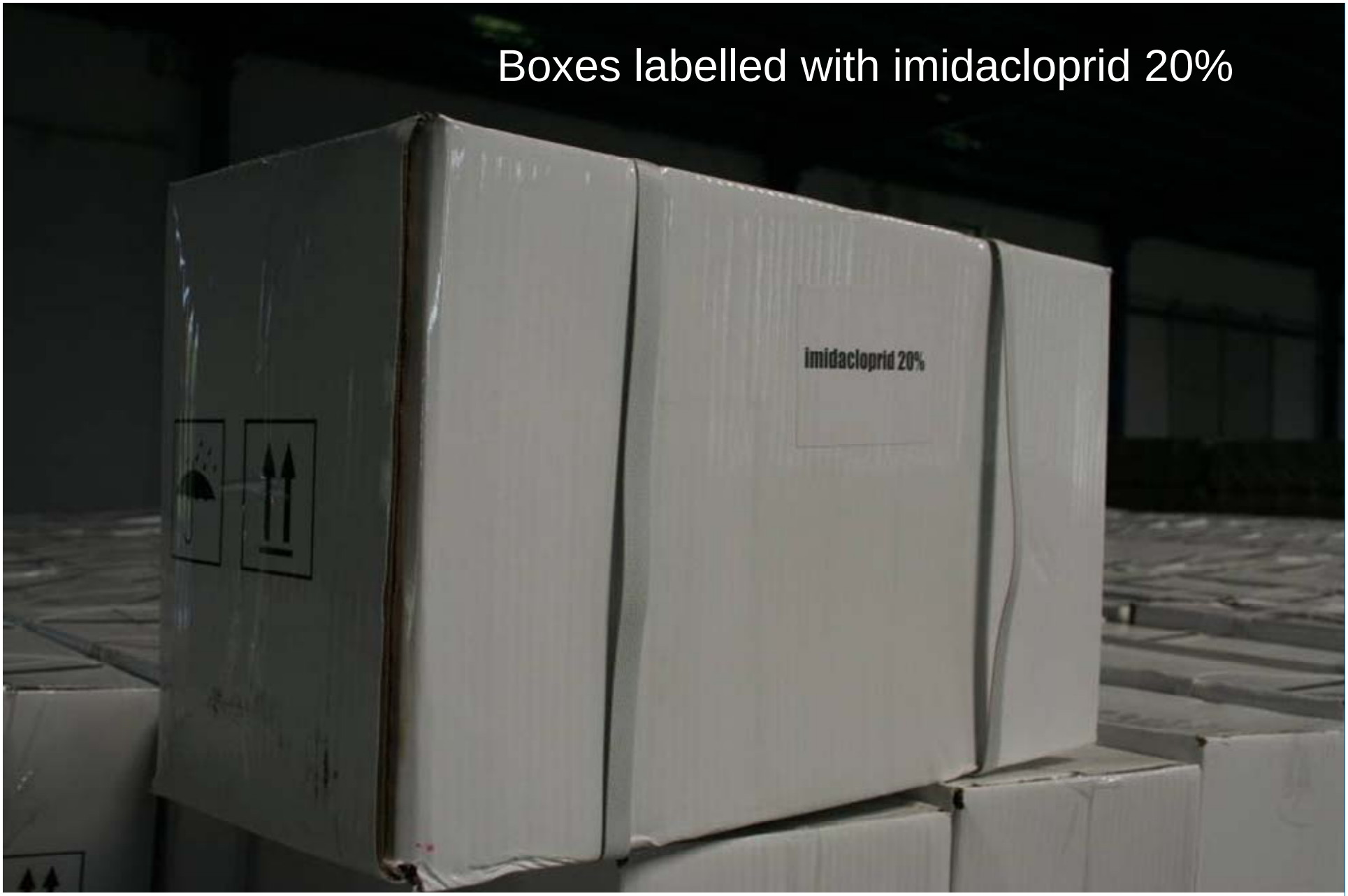

Sample 930;
18000 L of violet liquid, without any label, which after the analysis proved to be 83.8 % acetochlor, similar to Acenit A 880 EC, Agan

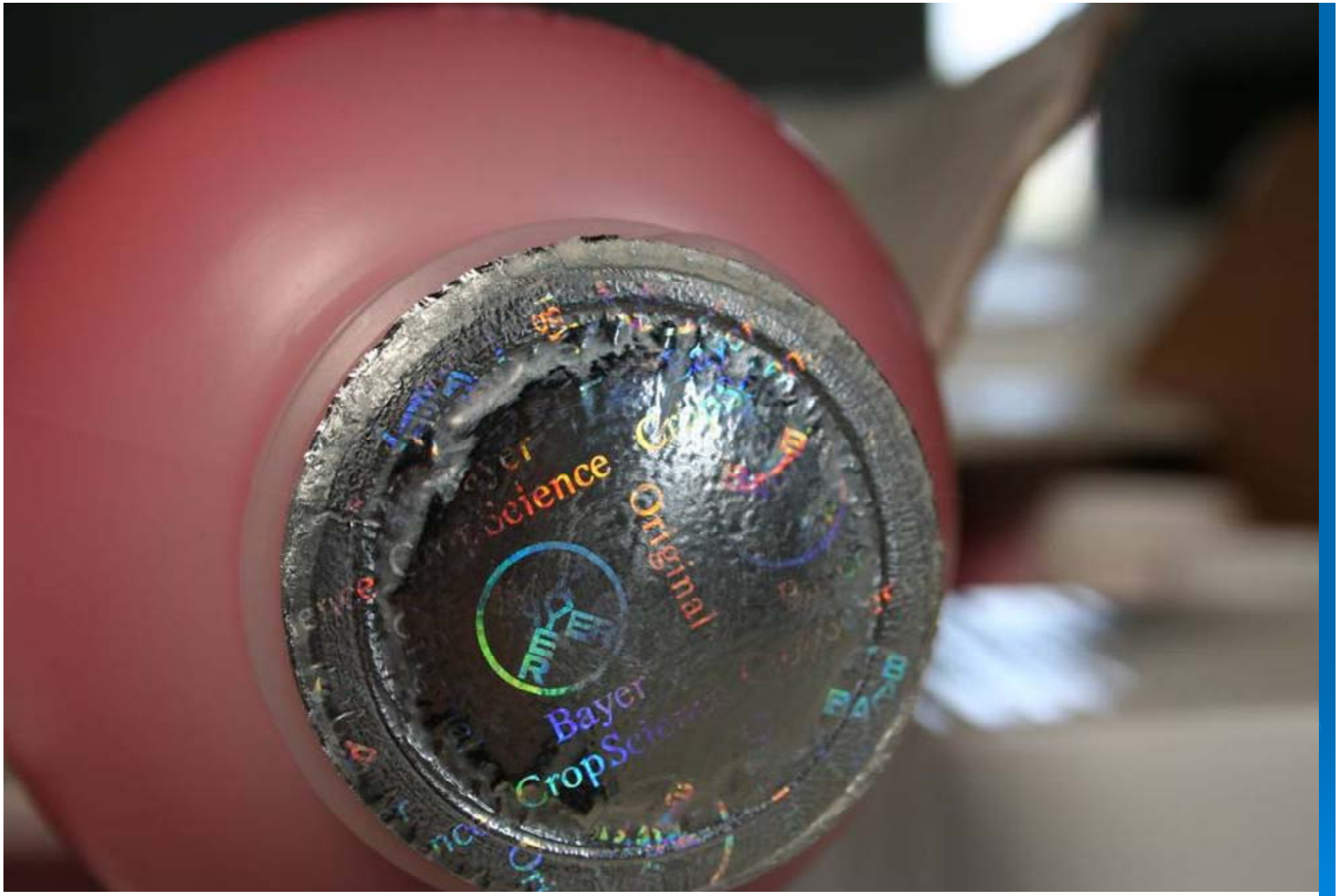
Sample 931;
13800L of unknown liquid, without label, and “Syngenta“ text on the sealing foil. The active ingredient content of the formulation was 51.5 % promethrine(herbicide against dicotyledons), similar to the Gesagard 500 FW herbicide, produced by Syngenta.

Sample 932;

10000 L of red suspension, without label. On the cardboard boxes “Imidacloprid 20%) was printed. The 1L bottles were sealed by a foil with microtext “BAYER AUTENTIC PRODUCT”
We analysed the sample and we found 13.1% imidacloprid and 13.7% pencycuron content, similar to Prestige 290 FS, made by Bayer.

10000 L in the storehouse


Boxes labelled with imidacloprid 20%
imidacloprid 20%

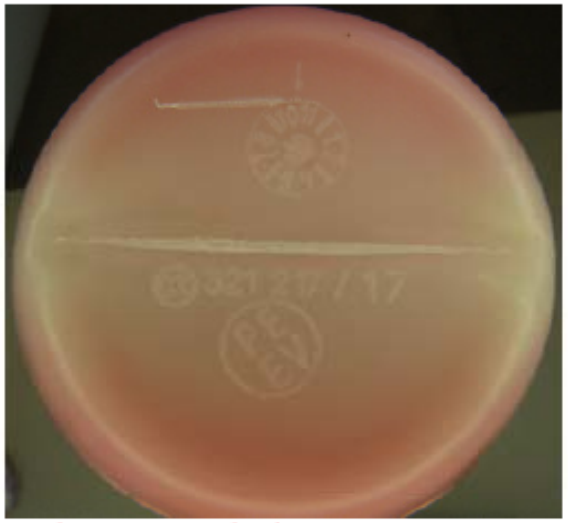

Original
Bayer
CropScience

Tested in Monheim laboratory (source: Bayer CropScience)

Test method/ Prüfmethode	036	Dimensions / Abmessungen					Points
Bottle			**FAKE**			**Original**	
External neck diameter (mm) / Außen-Bolzendurchmesser	:		49,1	:		49,8	*
Neck diameter excluding thread (mm) / Kern-Bolzendurchmesser	:		45,1	:		45,6	*
Neck height (mm) / Halshöhe	:		19,6	:		21,4	*
Total height (mm) / Gesamthöhe	:		234,1	:		235,0	
External diameter max (mm) / Außendurchmesser max.	:		88,8	:		90,0	
Bottom depth of curvature(mm) / Bodentiefe	:		3,4	:		5,4	*
Start of the thread (mm) / Gewindeanfang	:		3,8	:		4,2	*
Neck hole inside diameter (mm) / Einfüllöffnung-Innendurchmesser	:		35,3	:		41,8	*
Neck opening outside diameter (mm)/ Außendurchmesser Mündung	:		43,9	:		44,5	*
Height of neck opening edge (mm)/ Höhe Mündungsrand	:		1,7	:		3,6	*
Remarks Bemerkungen	With * characterized characteristics are substantially different to the original! Die mit * gekennzeichneten Merkmale sind erheblich unterschiedlich zum Original!						

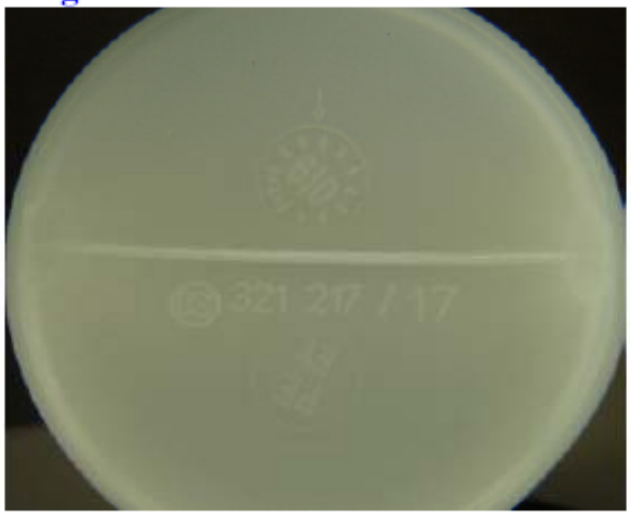
Test method/ Prüfmethode	036	Dimensions / Abmessungen					Points
CAP			**FAKE**			**Original**	
Outside diameter over bars (mm) / Außendurchmesser über Stege	:		55,2	:		55,4	
Outside diameter without bars (mm) / Außendurchmesser ohne Stege	:		52,8	:		53,5	*
Gate width (mm) / Stegbreite	:		3,4	:		3,4	
Web thickness (mm) / Stegdicke	:		1,2	:		1,0	
Outside diameter collar (mm) / Außendurchmesser Kragen	:		49,0	:		49,1	
Inside diameter of collar (mm) / Innendurchmesser Kragen	:		46,5	:		47,1	*
Outside diameter max. (mm) / Außendurchmesser max.	:		55,6	:		55,8	
External height (mm) / Außenhöhe	:		24,3	:		25,7	*
External height without collar (mm) / Außenhöhe ohne Kragen	:		20,9	:		20,9	
Height of collar (mm) / Höhe Kragen	:		3,1	:		5,2	*
Cutting thorn height (mm) / Schneiddornhöhe	:		3,0	:		4,8	*
Cutting thorn width (mm) / Schneiddornbreite	:		5,7	:		10,0	*
Cutting thorn thickness (mm) / Schneiddorndicke	:		2,0	:		3,8	*
Distanse cutting thorn up to the collar (mm) / Abstand Schneiddorn bis zum Kragen	:		3,4	:		3,0	*
Minor diameter inside (mm) / Kerndurchmesser innen	:		50,3	:		50,4	
Inside diameter over threads (mm) / Innendurchmesser über Gewinde	:		47,8	:		46,8	*
Thread beginning (mm) / Gewindeanfang	:		5,3	:		2,9	*
Remarks Bemerkungen	With * characterized characteristics are substantially different to the original! Siegelscheibe: Karton + Hologramm Siegelfolie! Die mit * gekennzeichneten Merkmale sind erheblich unterschiedlich zum Original!						

FAKE



Embossing on the bottom
Bottom depth of curvature(mm) / Bodentiefe = 3,4 mm
Diameter of material clock = 12,6 mm
Type size / Schriftgröße = 4,6 mm

Original



Bottom depth of curvature(mm) /
Bodentiefe = 5,4 mm /
Diameter of material clock = 13,5 mm
Type size / Schriftgröße = 4,8 mm

CAP

FAKE

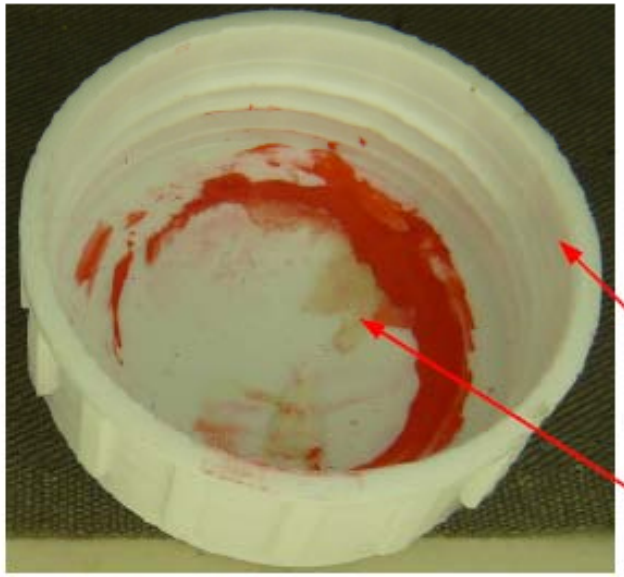
Bayer cross and cutter are not identity with original, Producer short emblem / Herst.- Logo and material are missing

Original

Original mit Bayerkreuz, Hersteller Logo und Material – Angabe

Source: Bayer CropScience

FAKE



Cap inside = Cavity = 6
Carton disk with Hot-Melt glued inside

Original

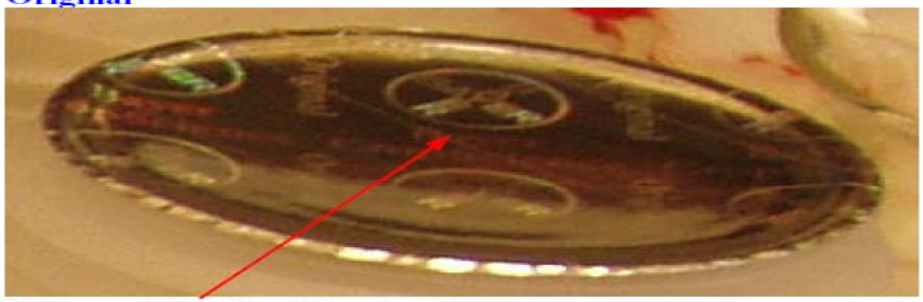
Original with foam disk and hologram sealing foil, clipped in
Edge of cap with grooves

FAKE

Microtext nur im mittleren Bereich erkennbar, da die Siegelfolie mit zu hoher Energie gesiegelt wurde und im Randbereich sich Bläschen gebildet haben!
Microtext line Micro text lines not clearly recognizably!

Microtext = Bayer Authentic Product

Original



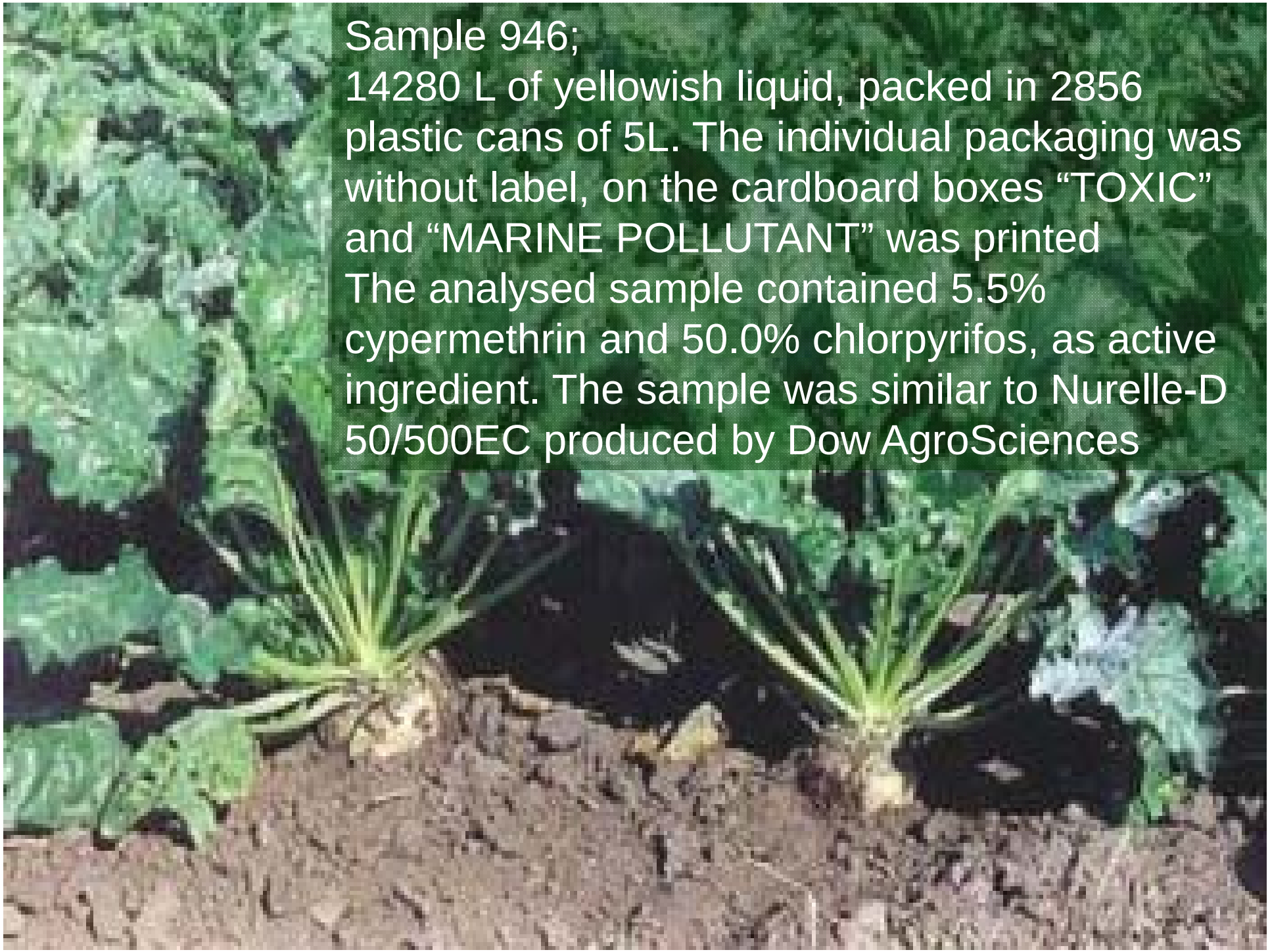
Mikrotextlinien deutlich erkennbar!

Mikrotext = Bayer Authentic Product

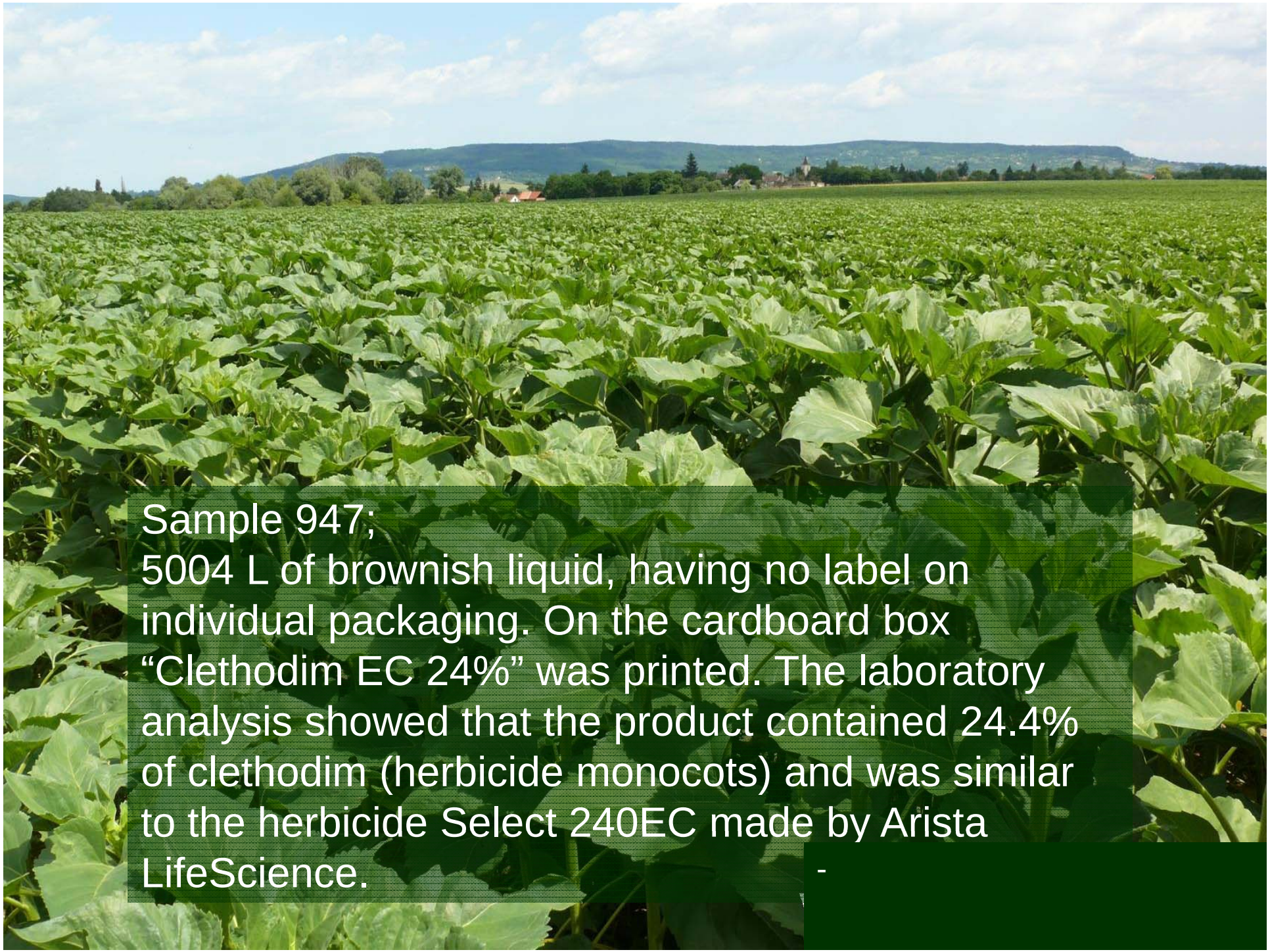
Source: Bayer CropScience

Sample 933;
2000 kg of unknown powder, without label. The analysed sample contained 67.85 % imidacloprid. Such formulation is not registered in Hungary.

Sample 934;
10000 L (500x20L) of unknown yellowish-brownish liquid, without any label or instructions, miscible with water.
It contained 34% glyphosate.
This shipment was sent by TradeCraft Corporation Panama to Rostock and from Rostock to Hungary on railway.



Sample 946;
14280 L of yellowish liquid, packed in 2856 plastic cans of 5L. The individual packaging was without label, on the cardboard boxes “TOXIC” and “MARINE POLLUTANT” was printed
The analysed sample contained 5.5% cypermethrin and 50.0% chlorpyrifos, as active ingredient. The sample was similar to Nurelle-D 50/500EC produced by Dow AgroSciences



Sample 947;
5004 L of brownish liquid, having no label on individual packaging. On the cardboard box “Clethodim EC 24%” was printed. The laboratory analysis showed that the product contained 24.4% of clethodim (herbicide monocots) and was similar to the herbicide Select 240EC made by Arista LifeScience.

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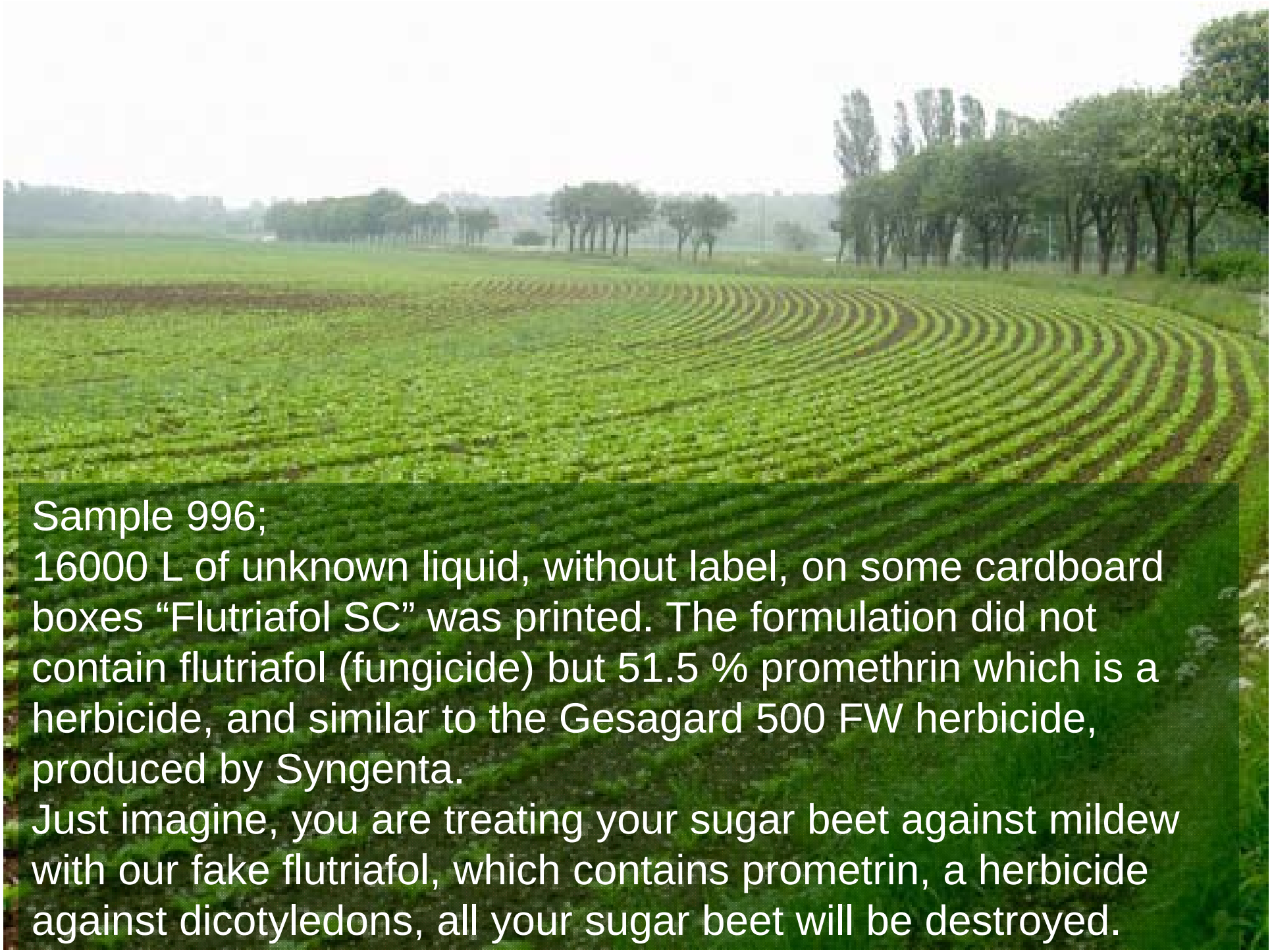

Sample 996;
16000 L of unknown liquid, without label, on some cardboard boxes “Flutriafol SC” was printed. The formulation did not contain flutriafol (fungicide) but 51.5 % promethrin which is a herbicide, and similar to the Gesagard 500 FW herbicide, produced by Syngenta.
Just imagine, you are treating your sugar beet against mildew with our fake flutriafol, which contains prometrin, a herbicide against dicotyledons, all your sugar beet will be destroyed.

Consequences of the use of illegal pesticides:

•Negative effects on the farmers: Some illegal products may contain similar active substances like the original ones but their health and environmental risk was not checked they may contain some dangerous and toxic impurities and side products that represent a risk to the user of pesticide and indirectly to the consumer of products treated with these pesticides.

• Damage of the crop: The use of illegal products often is followed by crop damage and even total crop failure. Due to the instable quality and auxiliary materials they may show miscibility and spraying problems. The use of such products may influence the sale of these treated crops.

•Expenses caused by the cost of the destruction of the fake products, and the fines to be paid for the illegal use of them.

•Food safety risks: Due to the uncertain composition of the pesticide the harvested crop may contain several pesticide residues and metabolites which are not permitted in that particular crop.

•Economic and reputation damage to farmers, governments and the food production and delivery chain, diminish public confidence in the regulatory process and endangers investment for the future.

•Illegal products cause commercial and economic losses for the legal producers. The producers are proud on their products quality but a fake product under the same trade name undermines the confidence of the users.

What can we do to reduce the trade of illegal pesticides?

- Convince the user to buy the pesticides from well known, safe sources, to avoid the cheap uncontrolled products.

- Increase the efficiency of the official control.

- Improve the cooperation with other authorities, police, and Customs and Finance Guard

- To draw the attention of the politicians and decision makers on the extent of the problem, because in many cases the weak national enforcement and inadequate judicial frameworks may hinder the efficient fight against the counterfeit products.

•In March of 2008 was founded the **National Corporation against Counterfeiting**. The aim of corporation is to evaluate the Hungarian situation and coordinate the cooperation among the authorities, suggest the government different changes of legislative rules. The use of illegal pesticide is one sector of the cooperation.

•This is a corporation among several authorities. The aim of the corporation is the fighting against „black economy”.

•The main issues are:
•decrease the number of violation of intellectual property rights in Hungary
•to improve the efficiency of the actions against criminal gangs involved in counterfeiting
•to improve the social awareness of the importance of protecting the intellectual property rights.

Beauties which can not be counterfeited


1895
ALJAZEV STOLP


Agricultural Office of County Fejér
Plant Protection and Soil Conservation Directorate
Thank You For Your Attention!