

EUROPEAN UNION REPORT ON PESTICIDES IN FOOD

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EUROPA: Marco Legal para Seguridad Alimentaria

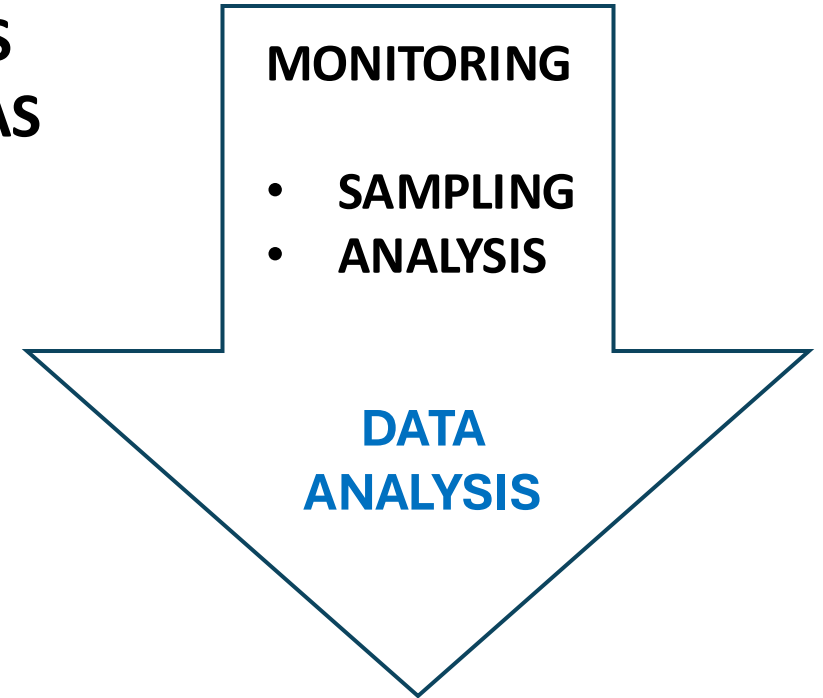
Relativo a un programa plurianual coordinado de control de la Unión destinado a garantizar el cumplimiento de los límites máximos de residuos de plaguicidas y evaluar la exposición de los consumidores a los residuos de plaguicidas en los alimentos de origen vegetal y animal

PESTICIDAS PLAGUICIDAS

MONITORING

- SAMPLING
- ANALYSIS

DATA
ANALYSIS



EUROPEAN UNION REPORT

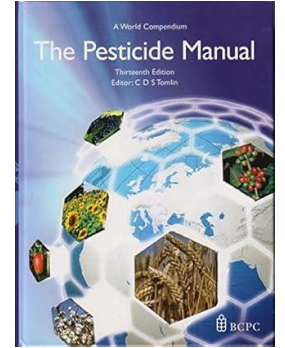


Productos Fitosanitarios? Plaguicidas?
Materias Activas? Plaguicidas?

Se define como **Producto Fitosanitario** a una mezcla específica de ingredientes activos e inertes. El **ingrediente o materia activa** es la molécula (o grupo de moléculas en algunos casos) con **acción directa sobre la plaga o enfermedad a atacar: PLAGUICIDA**. Por otro lado, los ingredientes inertes, aditivos y ayudantes, son generalmente disolventes orgánicos y sustancias olorosas y colorantes que no tienen actividad plaguicida.

Los aditivos y ayudantes presentes en una mezcla comercial Plaguicida pueden ser en ocasiones sustancias tóxicas.

Ejemplo: Xileno, utilizado frecuentemente como disolvente
Butoxido de piperonilo



[ChemSpider](#)

[Pesticide
Properties
Database](#)



PESTICIDES / EUROPE



Official Journal
of the European Union

EN
L series

2024/989

3.4.2024

COMMISSION IMPLEMENTING REGULATION (EU) 2024/989

of 2 April 2024

concerning a coordinated multiannual control programme of the Union for 2025, 2026 and 2027 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin and repealing Implementing Regulation (EU) 2023/731



Products (*) of plant origin (†) to be sampled in 2025, 2026 and 2027

2025	2026	2027
(c)	(a)	(b)
(0130010) Apples (*)	(0110020) Oranges (*)	(0151000) Table grapes (*)
(0152000) Strawberries (*)	(0130020) Pears (*)	(0163020) Bananas (*)
(0140030) Peaches, including nectarines and similar hybrids (*)	(0162010) Kiwi fruits (*)	(0110010) Grapefruits (*)
Wine (red or white) made from (0151020) Wine grapes (where no specific processing factors for wine are available, Member States shall report the wine processing factors used).	(0241020) Cauliflowers (*)	(0231030) Aubergines (*)
(0251020) Lettuces (*)	(0220020) Onions (*)	(0241010) Broccoli (*)
(0242020) Head cabbages (*)	(0213020) Carrots (*)	(0233010) Melons (*)
(0231010) Tomatoes (*)	(0211000) Potatoes (*)	(0280010) Cultivated fungi (*)
(0252010) Spinaches (*)	(0300010) Beans (dried) (*)	(0231020) Sweet peppers/bell peppers (*)
(0500050) Oat grain (*) (‡)	(0500070) Rye grain (*)	(0500090) Wheat grain (*)
(0500010) Barley grain (*) (‡)	(0500060) Brown rice (husked rice), defined as rice after the removal of the hull from paddy rice (*)	Virgin olive oil from (0402010) Olives for oil production (where no specific oil processing factor is available, Member States shall report the processing factors used).

Products (*) of animal origin (†) to be sampled in 2025, 2026 and 2027

2025	2026	2027
(e)	(f)	(d)
(1020010) Cow's milk (*)	(1016020) Poultry fat (*) (‡)	(1012020) Bovine fat (*) (‡)
(1011020) Swine fat (*) (‡)	(1012030) Bovine Liver (*)	(1030010) Chicken eggs (*) (‡)

- (†) Fresh (unprocessed) milk shall be analysed, as well as frozen, pasteurized, heated, sterilized or filtrated milk.
- (‡) Unprocessed products shall be analysed. In case of products sampled in frozen state, a processing factor shall be reported, if applicable.
- (§) Meat may also be sampled in accordance with Table 3 of the Annex to Directive 2002/63/EC.
- (¶) Whole eggs without the shell shall be analysed.



2025	2026	2027
MANZANAS	NARANJAS	UVAS DE MESA
FRESAS	PERAS	PLÁTANOS
MELOCOTONES	KIWIS	POMELO
VINO	COLIFLOR	BERENJENA
LECHUGAS	CEBOLLAS	BROCOLI / BRECOL
COLES / REPOLLOS	ZANAHORIAS	HONGOS (cultivo)
ESPINACAS	PAPAS	MELÓN
TOMATES	JUDIAS /ALUBIAS	PIMIENTOS
AVENA (grano)	CENTENO (grano)	TRIGO (grano)
CEBADA (grano)	ARROZ	ACEITE de OLIVA



2025	2026	2027
GRASA DE CERDO	GRASA DE AVE	GRASA DE BOVINO
LECHE de VACA	HÍGADO BOVINO	HUEVOS

MIEL



PESCADO



**Reg. 915/2023
Contaminantes**



Frutas Hortalizas Cereales

2,4-D

2-Phenylphenol
Abamectin
Acephate
Acetamiprid
Aclonifen
Acrinathrin
Aldicarb
Aldrin and dieldrin
Ametoctradin
Azinphos-methyl
Azoxystrobin
Bifenthrin
Biphenyl
Bitertanol
Boscalid

Bromide ion
Bromopropylate
Bupirimate
Buprofezin
Captan
Carbaryl
Carbendazim and benomyl
Carbofuran
Chlorantraniliprole
Chlorfenapyr
Chlormequat
Chlorothalonil
Chlorpropham
Chlorpyrifos
Chlorpyrifos-methyl
Clofentezine
Clopyralid
Clothianidin
Copper compounds
Cyantraniliprole
Cyazofamid
Cyflufenamid
Cyflumetofen
Cyfluthrin
Cymoxanil
Cypermethrin
Cyproconazole
Cyprodinil
Cymazine

Deltamethrin
Diazinon
Dichlorvos
Dicloran
Dicofol
Diethofencarb
Difenoconazole
Diflubenzuron
Dimethoate
Dimethomorph
Diniconazole
Diphenylamine
Dithianon
Dithiocarbamates
Dodine
Emamectin benzoate B1a, expressed as emamectin
Endosulfan
Epoconazole
Ethephon
Ethion
Ethirimol
Etofenprox
Etoxazole
Ethylene oxide
Famoxadone
Fenamidone
Fenamiphos
Fenarimol
Fenazaquin

Fenbuconazole
Fenbutatin oxide
Fenhexamid
Fenitrothion
Fenoxycarb
Fenpropathrin
Fenpropidin
Fenpropimorph
Fenpyrazamine
Fenpyroximate
Fenthion
Fenvalerate
Fipronil
Flonicamid
Fluazifop-P
Flubendiamide
Fludioxonil
Flufenoxuron
Fluopicolide
Fluopyram
Flupyradifurone
Fluquinconazole
Flusilazole
Flutriafol
Fluxapyroxad
Folpet
Formetanate
Fosetyl-Al
Fosthiazate
Glufoisinate ammonium
Glyphosate

Haloxypol including haloxypol-P
Hexaconazole
Hexythiazox
Imazalil
Imidacloprid
Indoxacarb
Iprodione
Iprovalicarb
Isocarbophos
Isoprothiolane
Kresoxim-methyl
Lambda-cyhalothrin
Linuron
Lufenuron
Malathion
Maleic hydrazide
Mandipropamid
Mepanipyrim
Mepiquat
Metaflumizone
Metalaxyl and metalaxyl-M
Methamidophos
Methidathion
Methiocarb
Methoanil
Methoxyfenozide
Metrafenone
Monocrotophos
Myclobutanil

Nicotine
Omethoate
Oxadixyl
Oxamyl
Oxydemeton-methyl
Paclobutrazole
Parathion methyl
Penconazole
Pencycuron
Pendimethalin
Permethrin
Phosmet
Pirimicarb
Pirimiphos-methyl
Prochloraz
Procymidone
Profenofos
Propamocarb
Propargite
Propiconazole
Propyzamide
Proquinsazid
Prosulfocarb
Prothioconazole
Pymetrozine

Pyraclostrobin
Pyridaben
Pyridalyl
Pyrimethanil
Pyriproxyfen
Quinoxifen
Spinetoram
Spinosad
Spirodiclofen
Spiromesifen
Spiroxamine
Spirotetramat
Sulfosafloor
Tau-Fluvalinate
Tebuconazole
Tebufenozide
Tebufenpyrad
Teflubenzuron
Tefluthrin
Terbutylazine
Tetraconazole
Tetradifon

Thiabendazole
Thiacloprid
Thiamethoxam
Thiodicarb
Thiophanate-methyl
Tolclofos-methyl
Triadimefon
Triadimenol
Triazophos
Tricyclazole
Trifloxystrobin
Triflumizole
Triflumuron
Vinclozolin
Zoxamide

Aldrin and dieldrin
Bifenthrin
Chlordane
Chlormequat
Chlorpyrifos
Chlorpyrifos-methyl
Copper compounds
Cypermethrin
DDT
Deltamethrin
Diazinon
Endosulfan
Famoxadone
Fenvalerate
Fipronil
Glufoisinate ammonium
Glyphosate
Heptachlor
Hexachlorobenzene
Hexachlorocyclohexane (HCH, Alpha-Isomer)
Hexachlorocyclohexane (HCH, Beta-Isomer)
Indoxacarb
Lindane
Mepiquat
Methoxychlor
Parathion

Pendimethalin
Permethrin
Pirimiphos-methyl

Origen Animal

217 analitos MRM
Polar pesticides: QuPPE

Codex Alimentarius
International Food Standards





EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

Food and Feed Safety, Innovation
Pesticides and biocides

SANCO/12745/2013
17 – 18 February 2025 rev. 16(8)



Working document on pesticides to be considered for inclusion in the national control programmes and the coordinated multiannual control programme of the Union to ensure compliance with maximum residue levels of pesticides residues in and on food of plant and animal origin



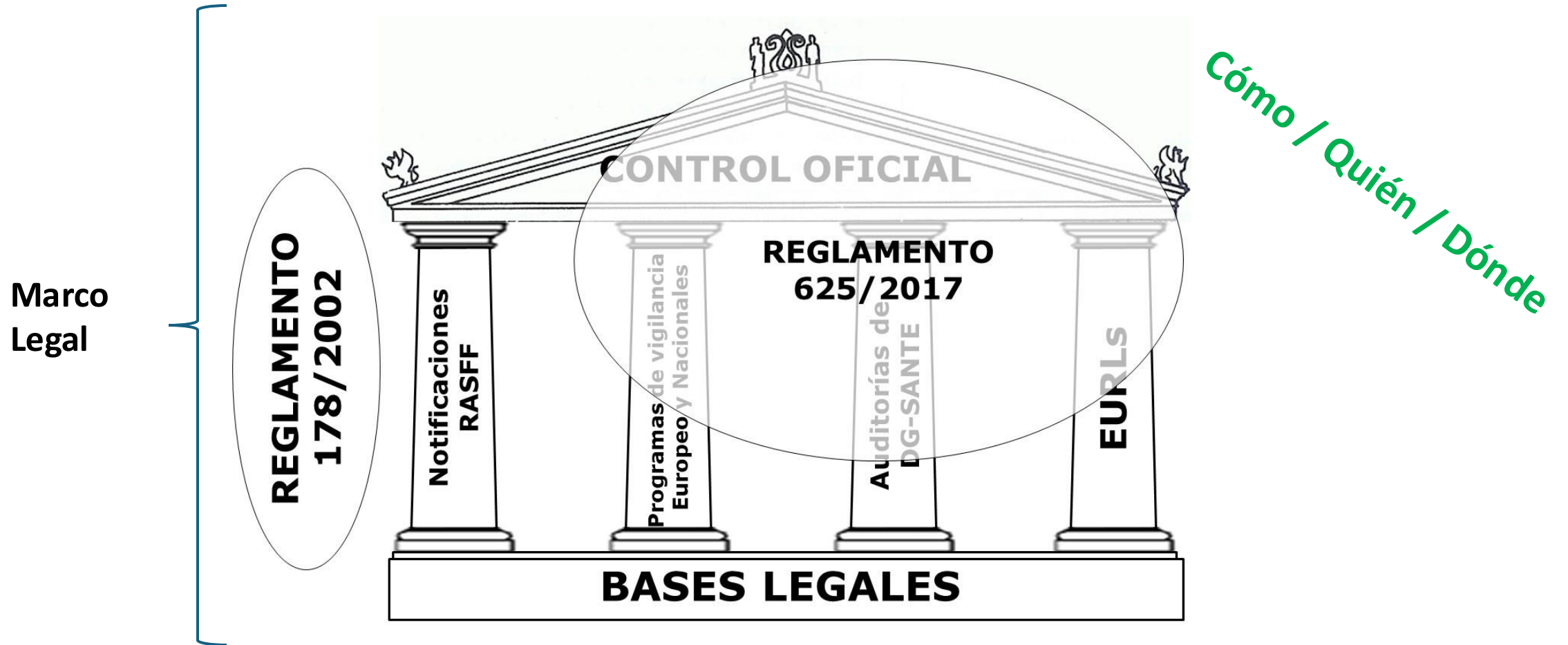
Number of samples and analytical quality control guidelines referred to in Article 1

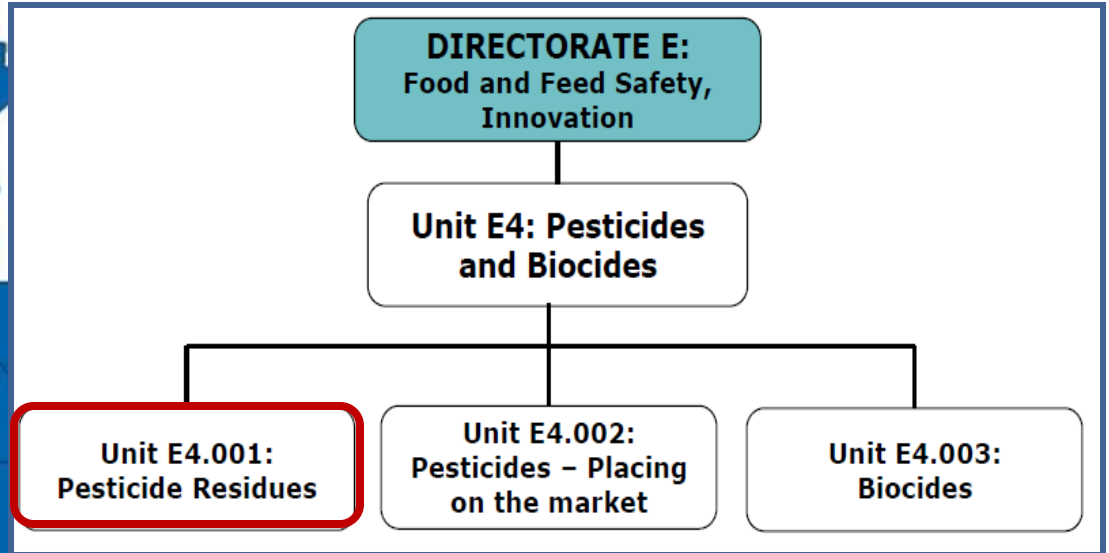
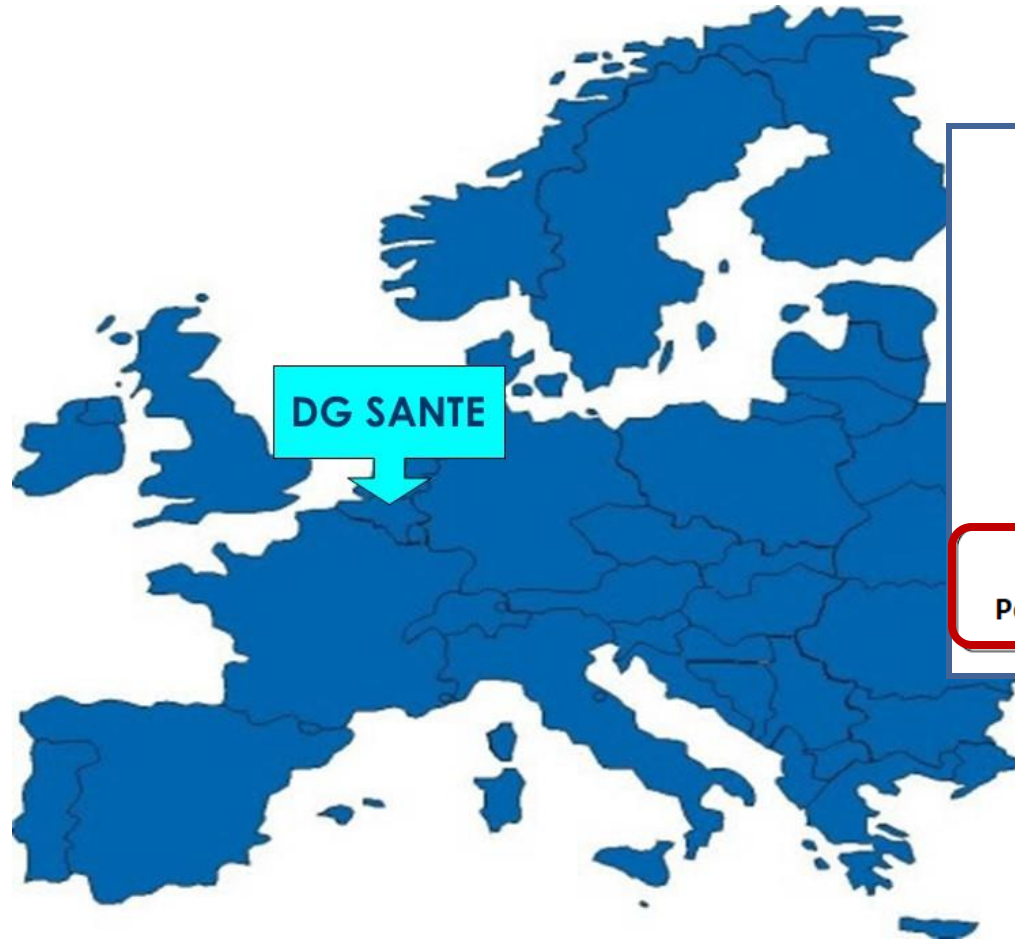
A. NUMBER OF SAMPLES

The minimum number of samples to be taken for each product and analysed for the pesticides listed in Annex I (per year per commodity) shall be the following:

BE	15	LT	12
BG	15	LU	12
CZ	15	HU	15
DK	12	MT	12
DE	106	NL	20
EE	12	AT	15
IE	12	PL	51
EL	15	PT	15
→ ES	55	RO	22
FR	78	SI	12
HR	12	SK	12
IT	75	FI	12
CY	12	SE	15
LV	12	UK(NI) (1)	12

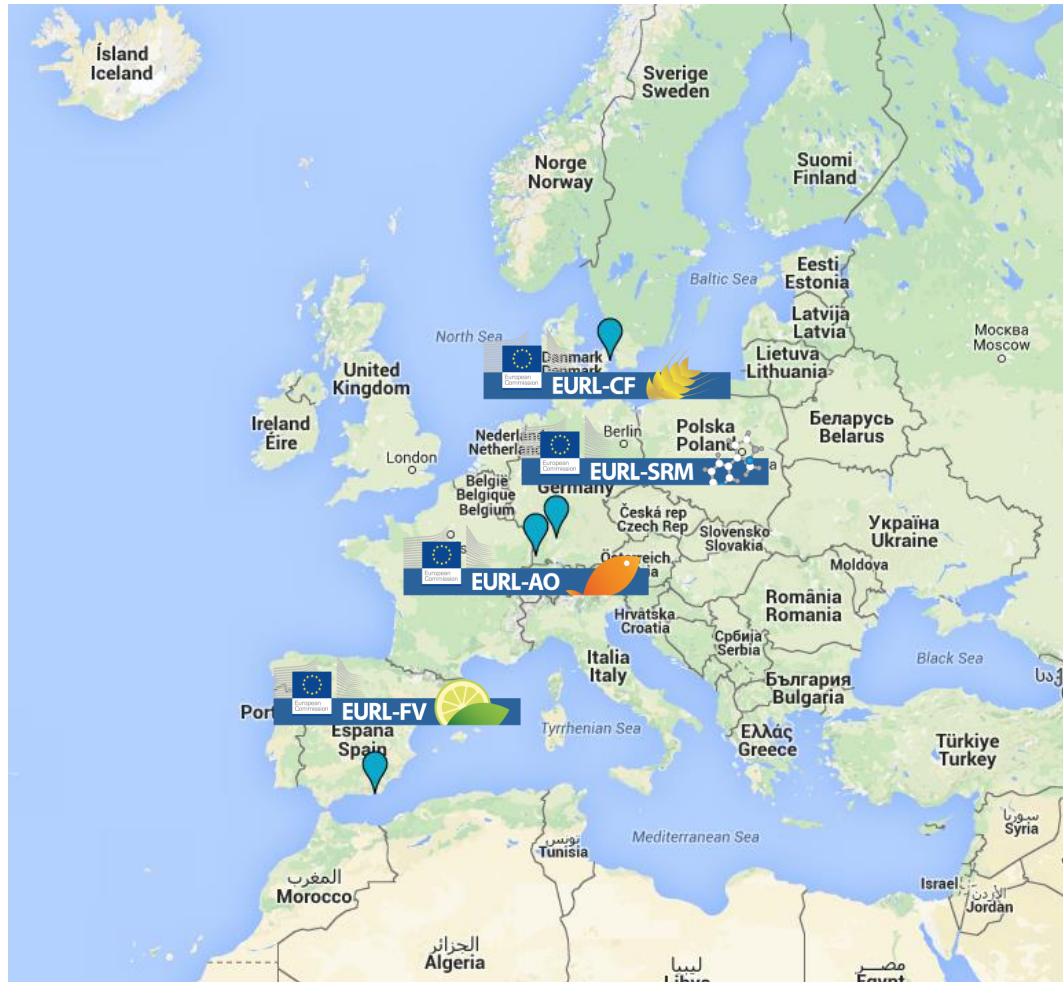
TOTAL NUMBER OF SAMPLES: 683





Laboratorios Europeos de Referencia EURLs





 **EURLs = 4**
Pesticide residues



Cereals & Feed
Copenhagen



Single residue
Stuttgart



High Fat / Animal
Freiburg



Fruits & Veggies
Almería





 EURLs = 4
 NRLs = 31





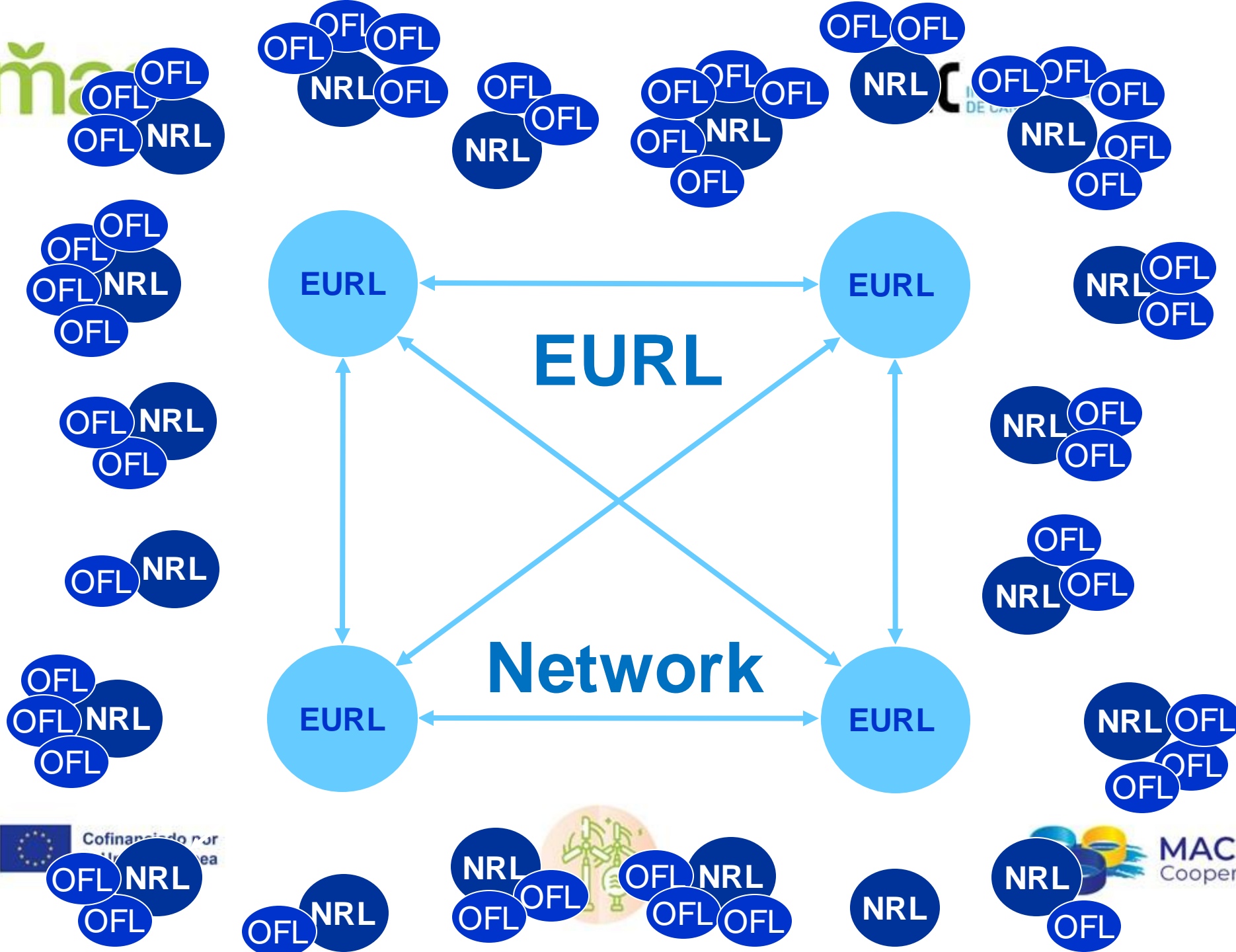
 EURLs = 4

 NRLs = 31

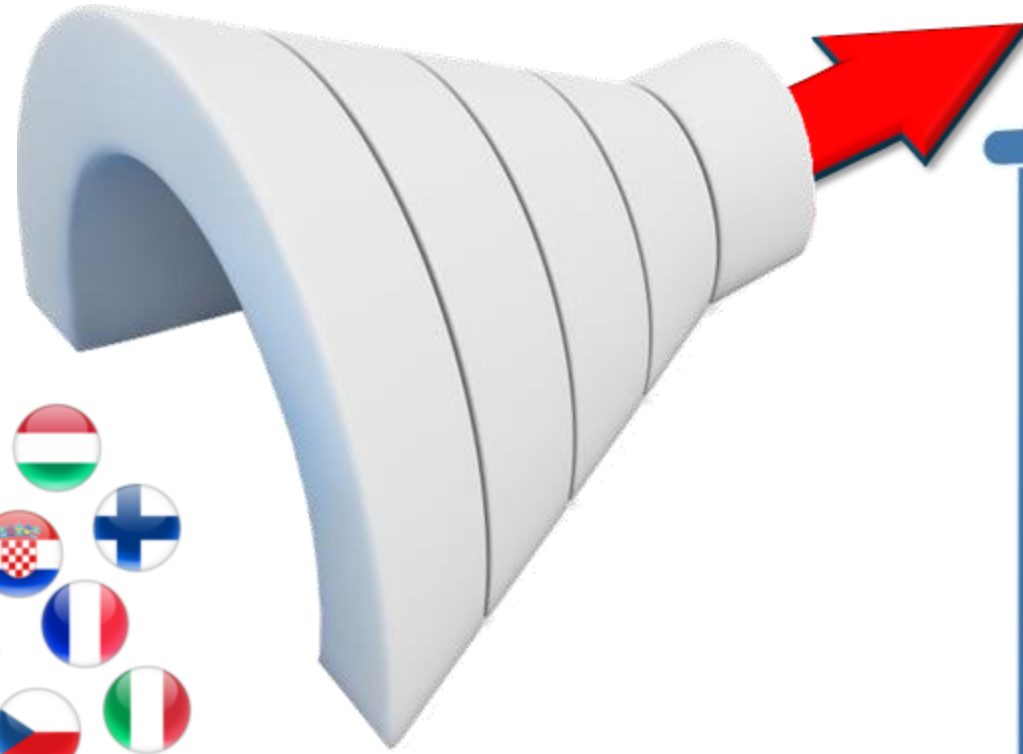
 OfLs = 170

approx **FV**





Lab. Oficiales



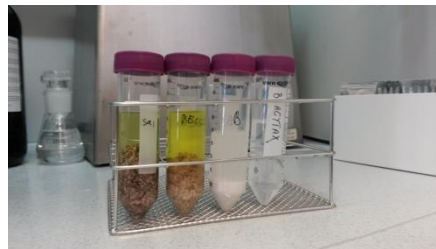
Mejorar la calidad, exactitud y comparabilidad de los resultados producidos por los lab. Oficiales de la UE



Laboratório Regional de Veterinária e Segurança Alimentar



Laboratorio de Residuos Instituto Tecnológico de Canarias



MONITORING

- SAMPLING
- ANALYSIS

DATA ANALYSIS

EUROPEAN UNION REPORT

Approved: 22 March 2024

DOI: 10.2903/j.efsa.2024.8753

SCIENTIFIC REPORT

efsa JOURNAL

The 2022 European Union report on pesticide residues in food

European Food Safety Authority (EFSA) | Luis Carrasco Cabrera | Giulio Di Piazza | Bruno Dujardin | Emanuela Marchese | Paula Medina Pastor

Correspondence: idata@efsa.europa.eu



Abstract

Under European Union legislation (Article 32, Regulation (EC) No 396/2005), the European Food Safety Authority provides an annual report assessing the pesticide residue levels in foods on the European market. In 2022, 96.3% of the overall 110,829 samples analysed fell below the maximum residue level (MRL), 3.7% exceeded this level, of which 2.2% were non-compliant, i.e. results in a given sample exceeded the MRL after taking into account the measurement uncertainty. For the EU-coordinated multiannual control programme subset, 11,727 samples were analysed of which 0.9% were non-compliant. To assess acute and chronic risk to consumer health, dietary exposure to pesticide residues was estimated and compared with available health-based guidance values (HBGV). Continuation of the probabilistic assessment methodology was consolidated to all pesticides listed in the 2022 EU Regulation providing the probability of a consumer being exposed to an exceedance of the HBGV. Overall, the assessed risk to EU consumer's health is low. Recommendations to risk managers are given to increase the effectiveness of European control systems and to ensure a high level of consumer protection throughout the EU.

KEYWORDS

acute, chronic, dietary exposure, European Union, food safety, maximum residue levels, national monitoring programme, pesticide residues, probability, risk assessment



The 2022 European Union report on pesticide residues in food

European Food Safety Authority (EFSA) | Luis Carrasco Cabrera | Giulio Di Piazza | Bruno Dujardin | Emanuela Marchese | Paula Medina Pastor

2022 EU Pesticides report

Total samples: **110.829 analysed**

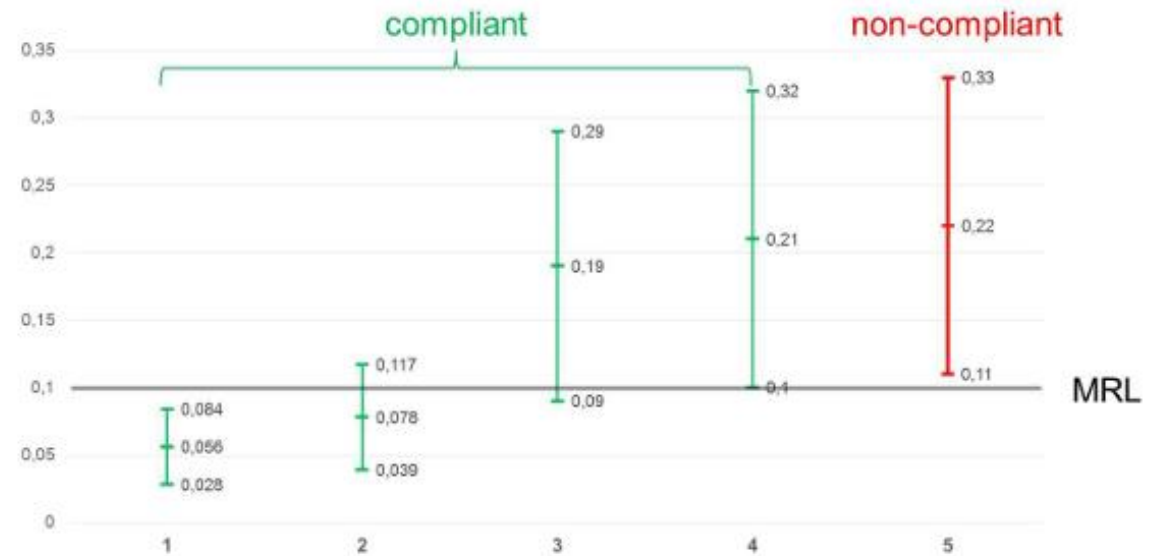
96,3% no residues or residues < MRL

3,7% residues > MRL

2,2% non compliant



Reported results with respect to their uncertainties:



The 2022 European Union report on pesticide residues in food

European Food Safety Authority (EFSA) | Luis Carrasco Cabrera | Giulio Di Piazza | Bruno Dujardin | Emanuela Marchese | Paula Medina Pastor

2022 EU Pesticides report: Coordinate Program

Total samples: **11.727 analysed**

0,9% non compliant

110.829 / 11.727

EU pesticides report: MRLs

Y mucho más ...

- Evaluación del riesgo agudo y crónico para la salud del consumidor
- Estimación de la exposición a residuos de plaguicidas
- Comparación con valores de referencia disponibles

Pesticide residues results

Food consumption data



Evaluación del riesgo de los consumidores:

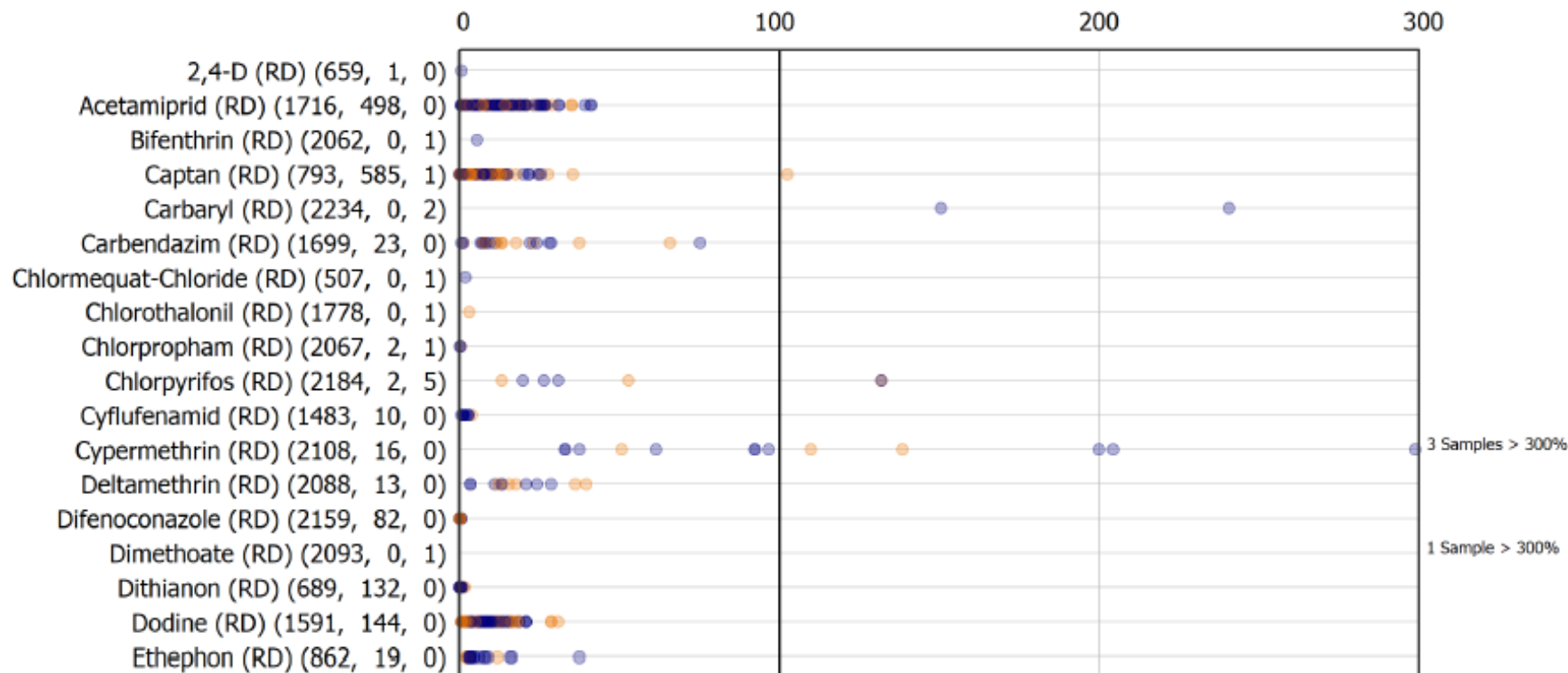
A corto plazo: Agudo → *acute reference dose (ARfD, in mg of residue/kg bw)*

A largo plazo: Crónico → *acceptable daily intake (ADI, in mg of residue/kg bw per day)*

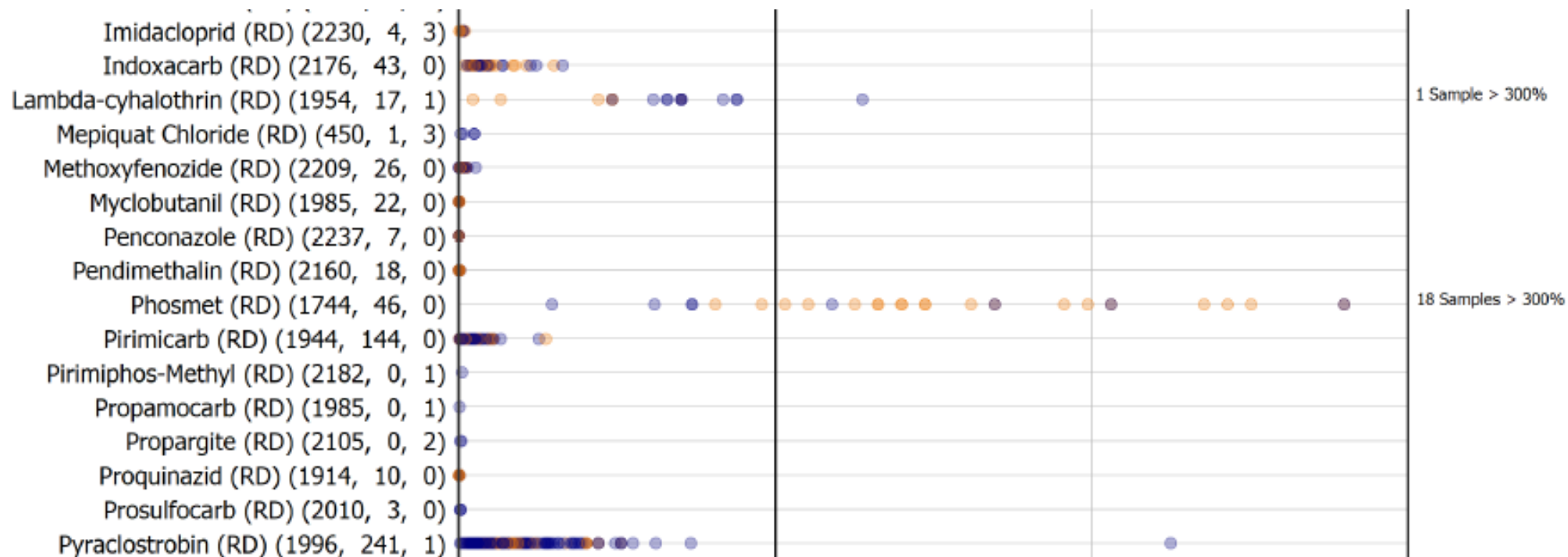
Con los datos resultantes del estudio de los resultados analíticos estudiados en el informe de residuos de plaguicidas, se formulan recomendaciones a los gestores de riesgos para aumentar la eficacia de los sistemas de control europeos y garantizar un alto nivel de protección del consumidor en toda la UE.

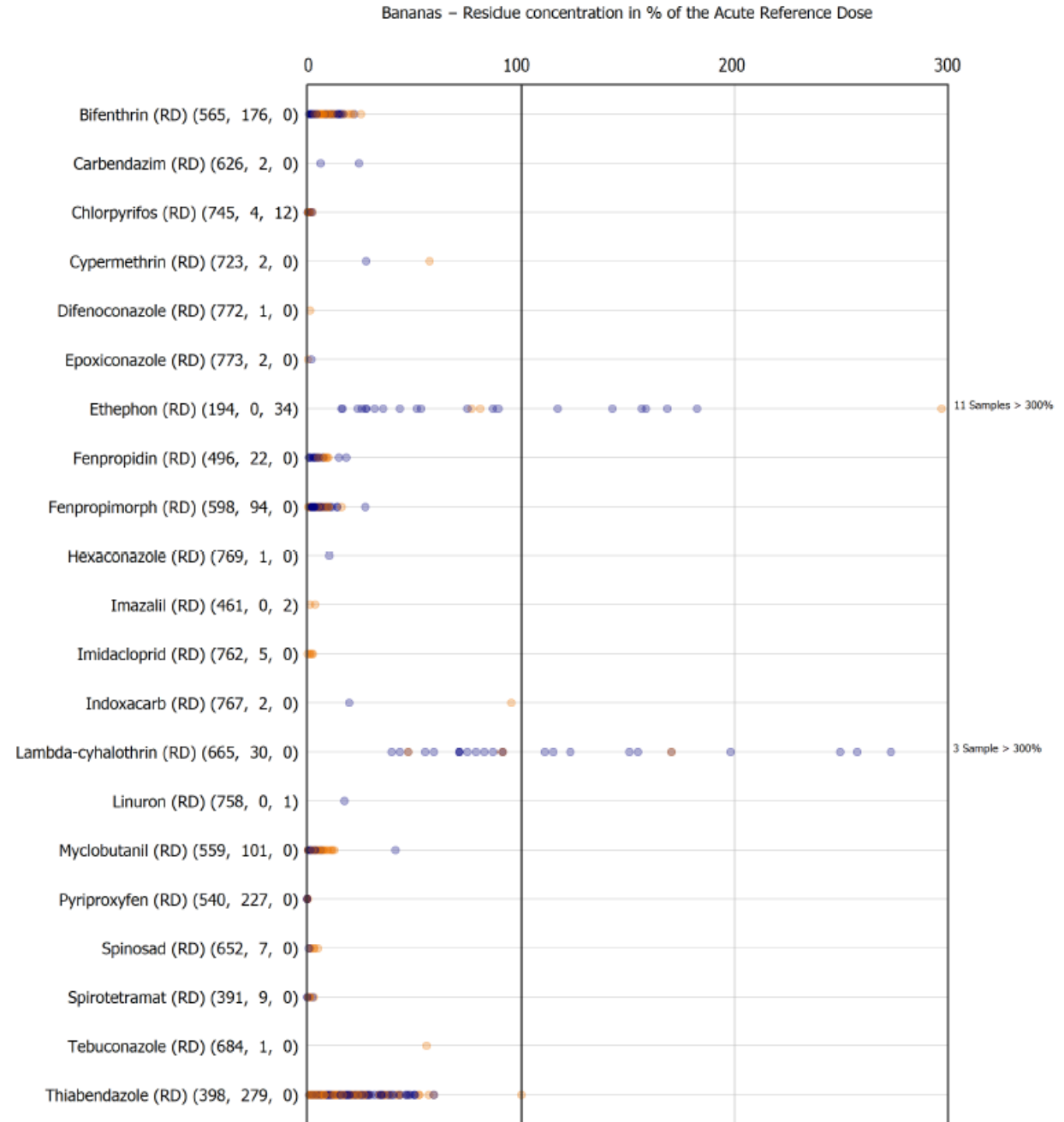
ARFD

Apples – Residue concentration in % of the Acute Reference Dose



ARFD





CANARIAS:

12 muestras / matriz

Local / Importación

ANNEX II

Number of samples and analytical quality control guidelines referred to in Article 1

A. NUMBER OF SAMPLES

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LV	12	UK(NI) (1)	12

TOTAL NUMBER OF SAMPLES: 683

Aplicación Programa Coordinado en Canarias

2024: Muestras vegetales + Aceite

180 muestras

367 residuos > 0,002 mg/kg)

2,04 residuos / muestra

134 muestras con residuos (74%)

185 residuos > 0,01 mg/kg

1,03 residuos / muestra

87 muestras con residuos (48%)

Tipo Matriz	nº Muestras
Aceite	22
Berenjena	18
Brécol	24
Melón	24
Pimiento	28
Plátano	14
Pomelo	19
Setas	16
Uva	15

Residuos > LMR: 8
Muestras > LMR: 5 (2,8%)

Plaguicida	Matriz	Cod. muestra	Origen
Azoxistrobin	Aceite	0167/24	Importación
Metalaxilo	Aceite	0167/24	Importación
Azoxistrobin	Setas	0192/24	Importación
Dieldrin	Melón	0339/24	Local
Boscalida	Aceite	0684/24	Local
Cipermetrina	Aceite	0684/24	Local
Clorpirifos	Aceite	0684/24	Local
Fenazaquin	ACeite	0685/24	Local



Residuos de Plaguicidas en Canarias

Menor incidencia (residuos/muestra) en muestra local

367 residuos en 180 muestras:

57 residuos NO Autorizados Plaguicida / Cultivo

