



Plan Nacional Resistencia Antibióticos



Workshop

Control of Antibiotics Use and Surveillance of Clinical Pathogens in Veterinary in Europe

Spanish Agency of Medicines and Medical Devices, Madrid, Spain

29-30 October 2018

Plans to voluntarily reduce the consumption of antibiotics in Animal Health

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Why was an action plan necessary in Spain?

3,000 annual deaths, overcoming traffic accidents

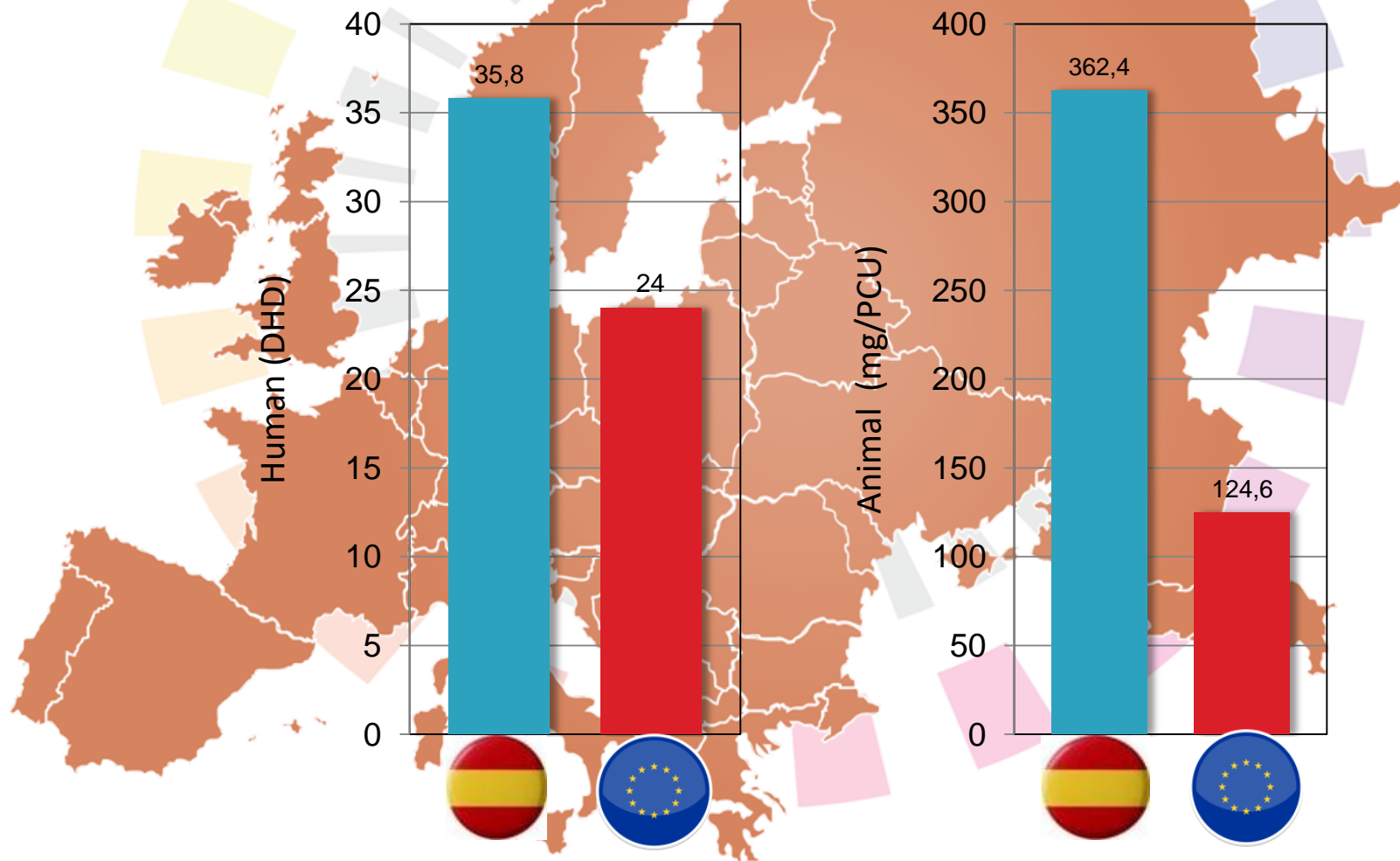
one of the **EU** countries with the **highest consumption** of antibiotics in people and animals

1 out of 2 in Spain believe that **antibiotics cure flu** and 6% self-medicate with them

the use of **antibiotics considered critical for human health** in animals is still common



Antibiotic consumption: Spain vs. UE 2016





Plan Nacional Resistencia Antibióticos

Objective of the Plan:

Reduce the contribution of the use of antibiotics in human and veterinary medicine to bacterial resistance and its consequences on health

Preserve in a sustainable way the existing therapeutic arsenal

ONE HEALTH approach

We are all part of the PRAN



8 Ministries: Health, Agriculture, Economy, Education, Local Government, Defense, Science, Ecological Transition

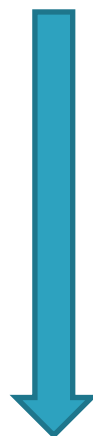
All the Autonomous Communities

+70 scientific societies, collegiate organizations, universities and professional associations

+ 300 experts



**1ª EDITION
2014-2018**



**2ª EDITION
2019-2021**



SURVEILLANCE OF VETERINARY ANTIBIOTICS CONSUMPTION



ESVAC-ES Project: Harmonized data collection of SALES of veterinary antibiotics in 30 Member States of the U. E.

Collect sales of:

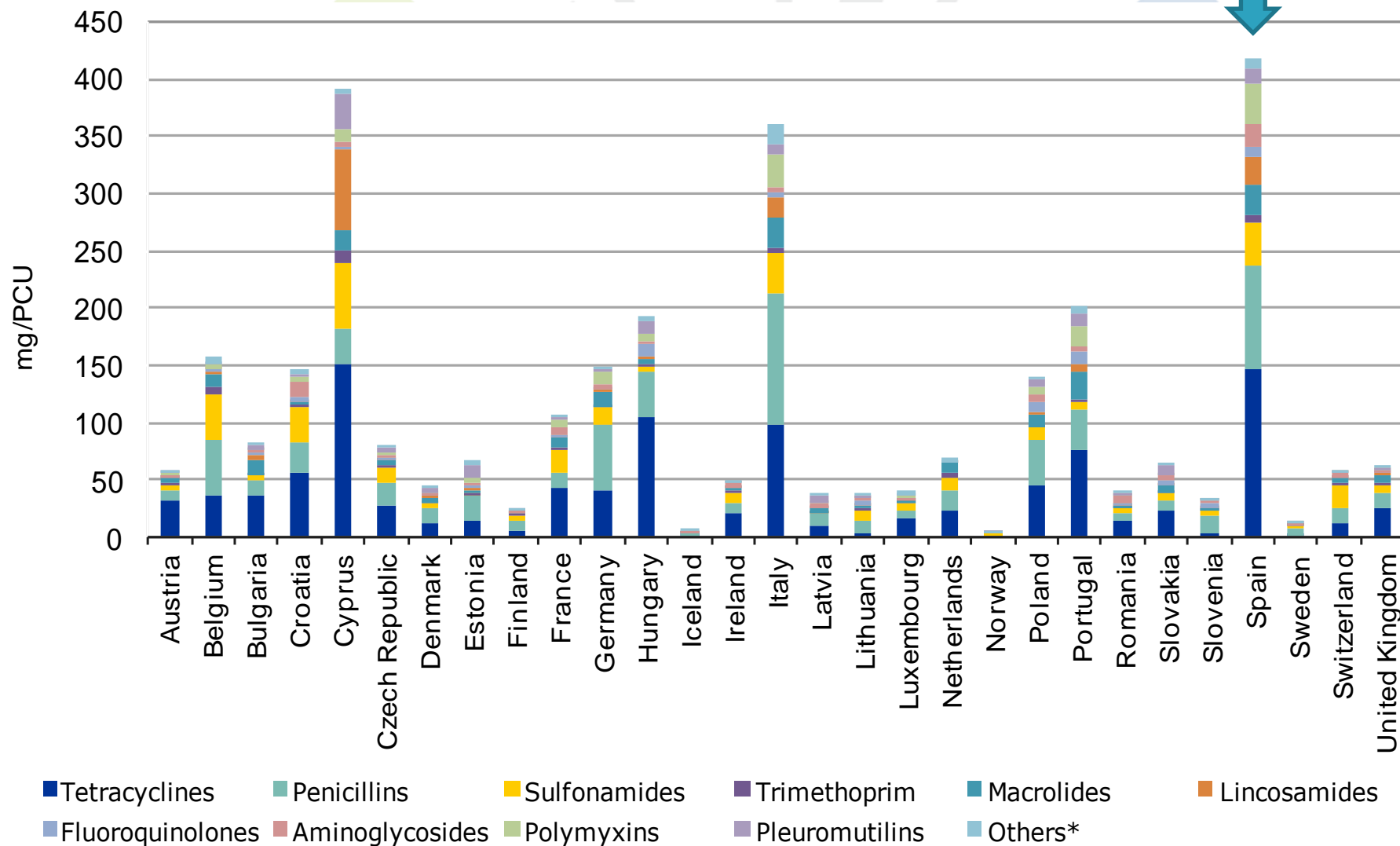
Marketing authorization holders, wholesalers, retailers, pharmacies and livestock associations.

The report is published annually (October) referring to consumption of two years before.

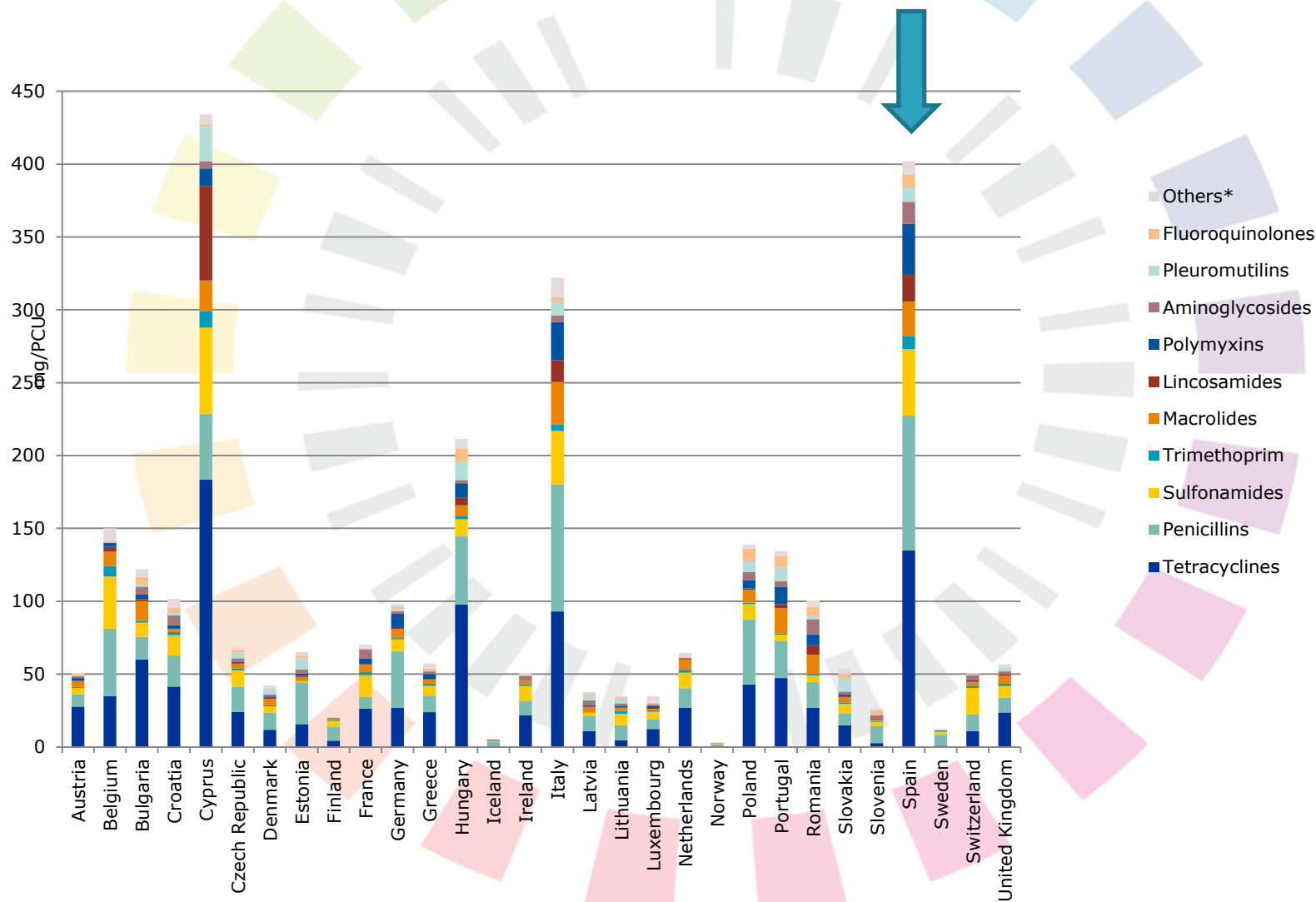
It is currently the only consumption surveillance system established in Spain (until January 2019)

ESVAC SALES DATA 2014

PUBLICATION ESVAC 2016



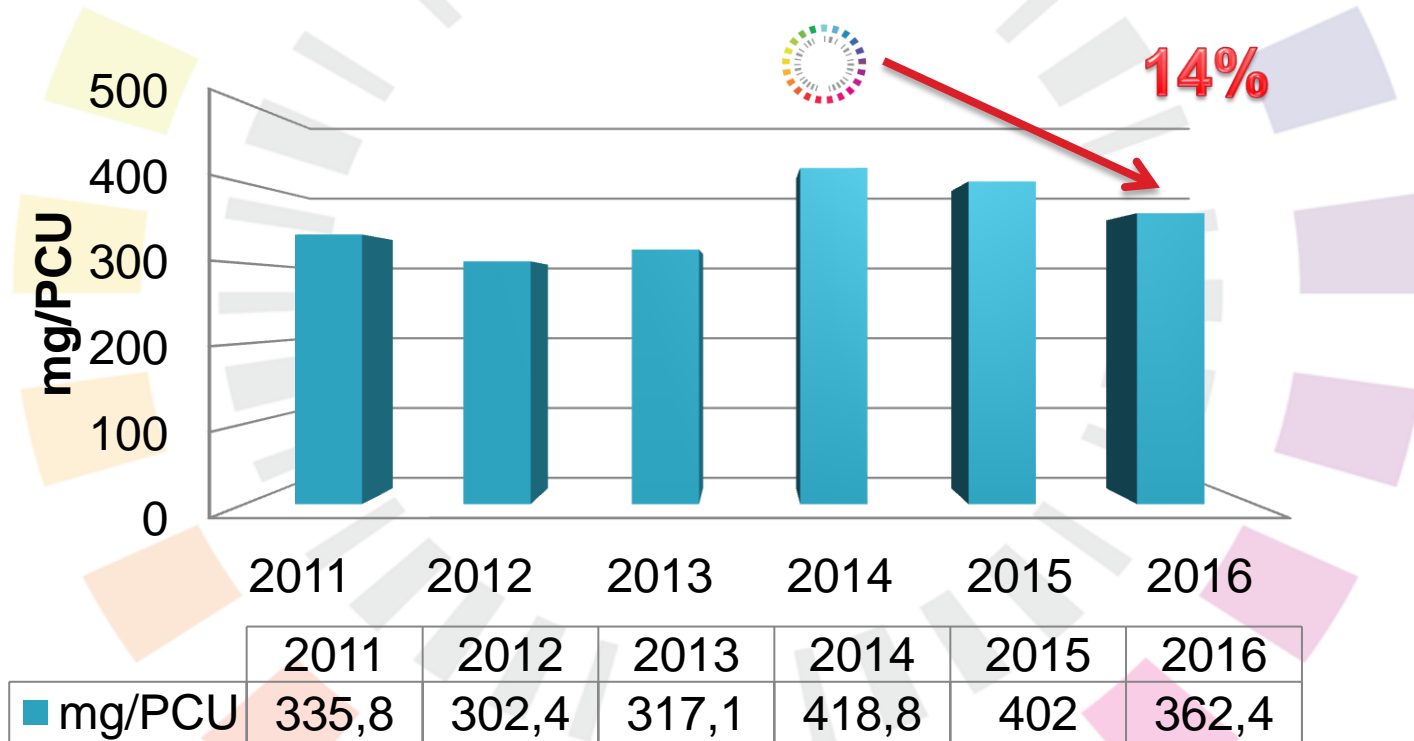
PUBLICATION ESVAC 2017



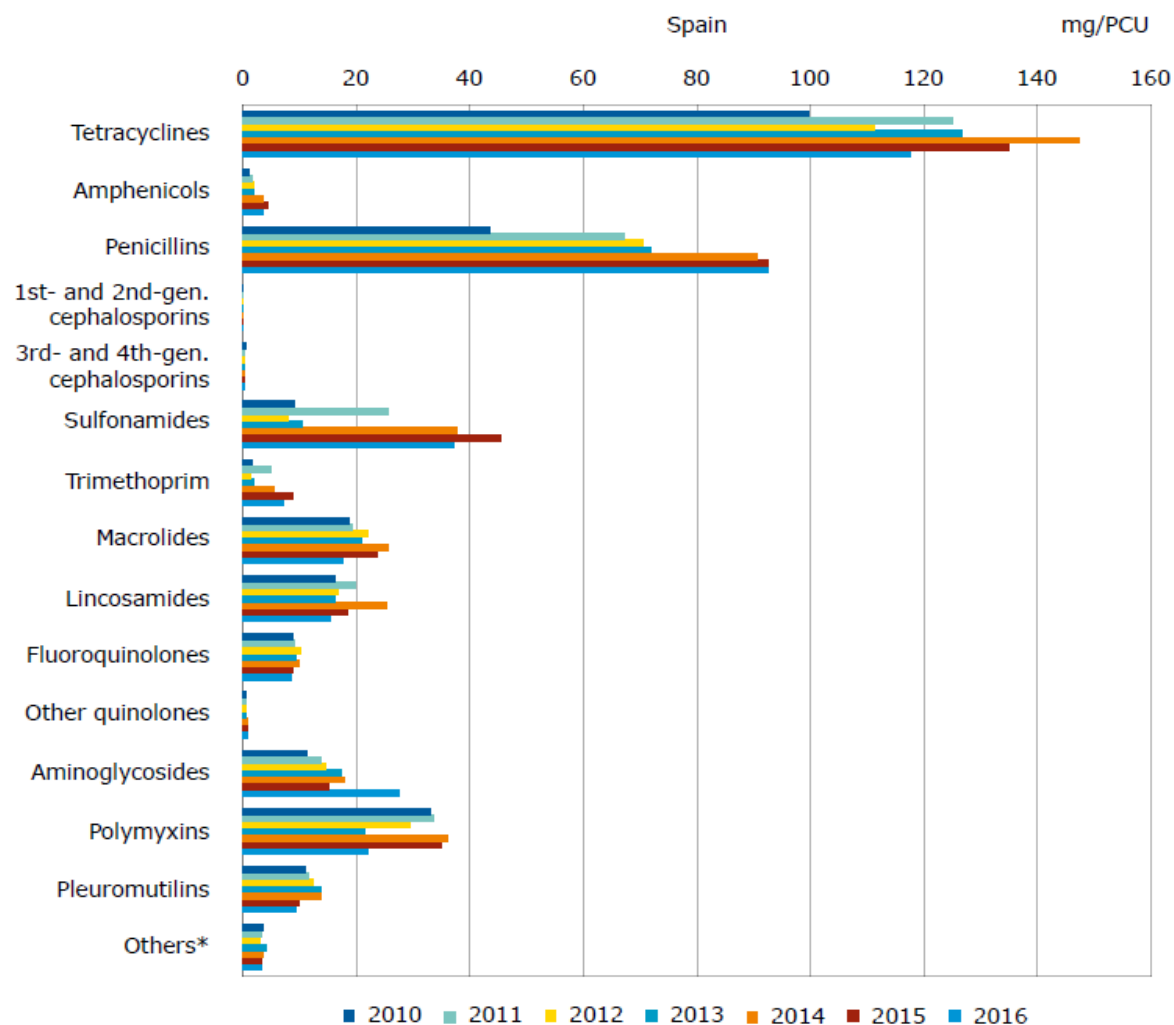
ESVAC SALES DATA 2016

15 octobre 2016

EVOLUTION OF VETERINARY ANTIBIOTIC CONSUMPTION (mg/PCU)

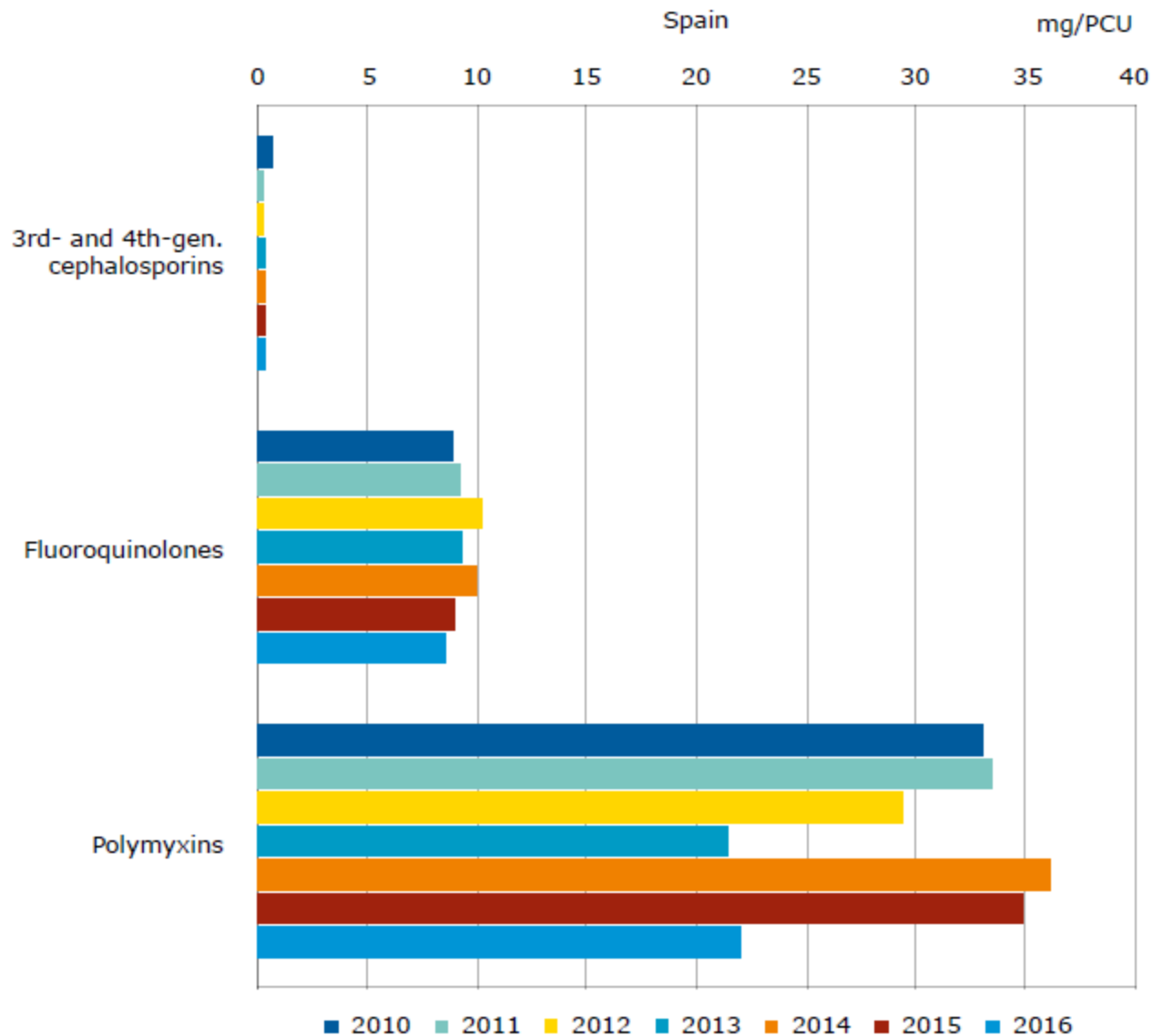


SITUATION OF THE CONSUMPTION OF VETERINARY ANTIBIOTICS



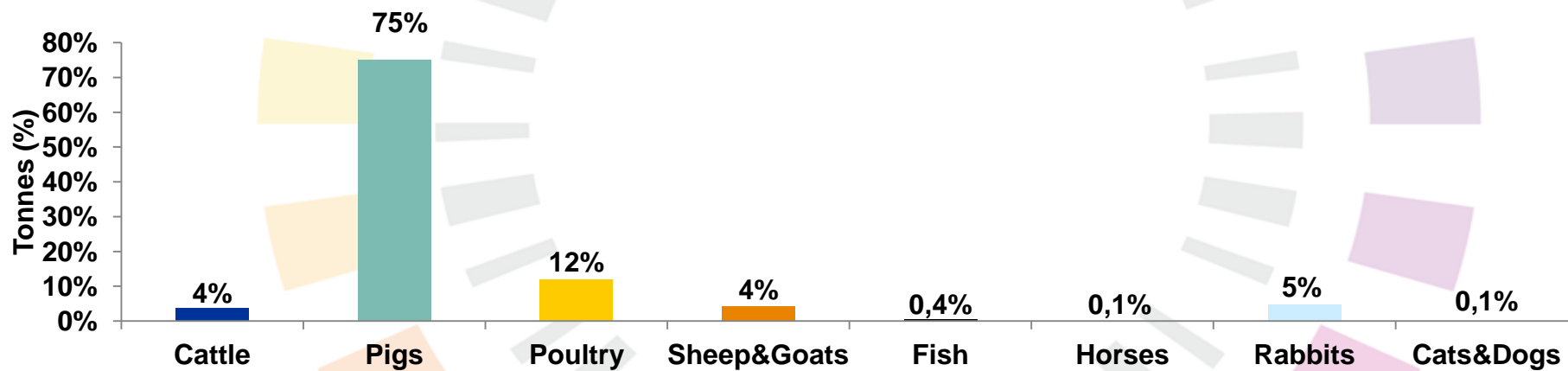
SITUATION OF THE CONSUMPTION OF VETERINARY ANTIBIOTICS

CIA



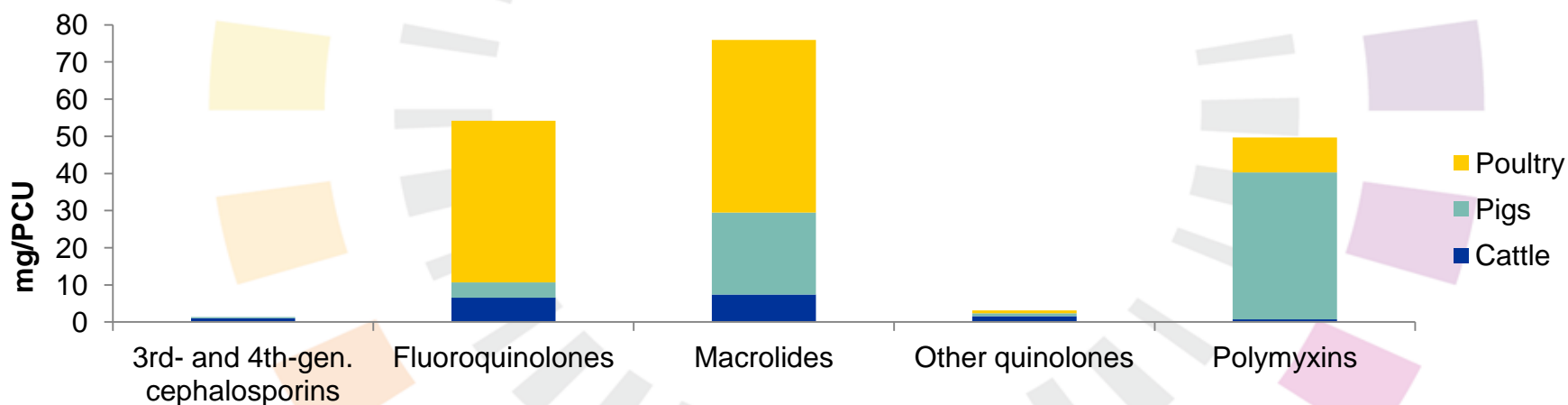
SITUATION OF THE CONSUMPTION OF VETERINARY ANTIBIOTICS YEAR 2016

TONELADAS



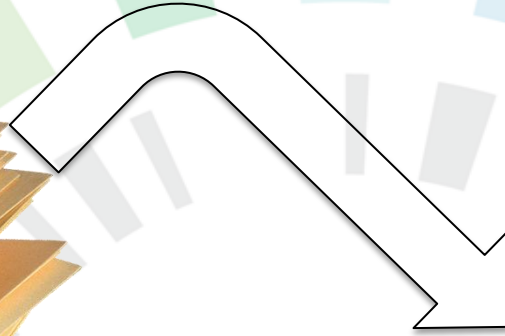
SITUATION OF THE CONSUMPTION OF VETERINARY ANTIBIOTICS YEAR 2016

PORCINE, PIGS, CATTLE



PRAN in Animal Health:

Plans to voluntarily reduce the consumption of antibiotics in Animal Health



MOST IMPORTANT SECTOR OF ANIMAL PRODUCTION IN SPAIN

GREAT CAPACITY OF IMPROVEMENT

INTEGRATION



PRAN in Animal Health:

Plans to voluntarily reduce the consumption of antibiotics in Animal Health

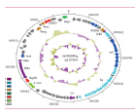
THE CASE OF COLISTIN



In veterinary medicine, **colistin was widely used**, especially for controlling diarrhea in pigs after weaning.



In human medicine, treatment options are limited for patients infected with resistant bacteria such as **carbapenem-resistant Enterobacteriaceae and Acinetobacter spp.** Colistin is “old” antibiotic that have been reintroduced to human medicine to **treat multi-resistant infections.**



Emergence of the **mcr-1 gene**, which confers resistance of the enterobacteria to colistin. This mcr-1 gene, apart from China, has been isolated in more countries in Europe (Holland, France, United Kingdom, Denmark, Spain and Portugal) and also in the USA, which is showing its worldwide distribution.

On July 27, 2016, the EMA (European Medicines Agency) established a maximum use threshold of 5 mg / PCU, which must be reached by the Member States in a period of three years, 1mg / PCU being the ideal goal.



Updated advice on the use of colistin products in animals within the European Union: development of resistance and possible impact on human and animal health



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COLISTIN CONSUMPTION (mg/PCU): consumption of COLISTIN in Spain, based on ESVAC analysis about sales of veterinary antibiotics.

Spain, in the ESVAC sales report of 2014, presented the highest consumption of colistin, 37 mg / PCU and also the highest total consumption of veterinary antibiotics. In 2015 it dropped to 35 mg / PCU.

**How much colistin
do we consume?**

**COLISTIN SALES LEVEL IN 2014 IN
COUNTRIES WITH THE SAME
LEVEL OF SWINE PRODUCTION:**

Denmark: 0.5 mg / PCU

Netherlands: 0.9 mg / PCU

France: 6 mg / PCU

Germany: 13 mg / PCU

Spain: 37 mg / PCU





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Agreement for Voluntary Reduction of Colistin Consumption in Porcine Sector

Taking into account all the antecedents, on September 15, 2016, representatives of the national associations of veterinarians and professionals of the swine production sector met in the headquarters of the AEMPS, with the **objective of preparing an agreement to reduce the consumption of colistin**



Agreement for Voluntary Reduction of Colistin Consumption in Porcine Sector

Programa
Reduce
Colistina





Agreement for Voluntary Reduction of Colistin Consumption in Porcine Sector

- **members:** associations of veterinarians and professionals of the swine production sector

- Asociación de Veterinarios de Porcino de Aragón (A.V.P.A)
- Asociación de Veterinarios de Porcino de la Región de Murcia (AVEPOMUR)
- Asociación Gallega de Veterinarios de Porcino (AGAVEPOR)
- Asociación Nacional de Porcinocultura Científica (ANAPORC)
- Asociación Nacional de Productores de Ganado Porcino (ANPROGAP)
- Asociación Nacional de Veterinarios de Porcino (ANAVEPOR)
- Asociación Nacional de veterinarios de Porcino Ibérico (ANVEPI)
- Associació Catalana de Fabricants de Pinsos (ASFAC)
- Associació de Veterinaris de Porci de Catalunya (AVPC)
- Asociación de Veterinarios de Porcino de Castilla y León (AVEPORCYL)
- Confederación Española de Fabricantes de Alimentos Compuestos Para Animales (CESFAC)
- Cooperativas Agroalimentarias.





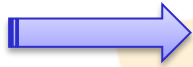
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Agreement for Voluntary Reduction of Colistin Consumption in Porcine Sector: *MAIN OBJECTIVES*

The main objectives of the agreement are the following:



Reduce the consumption of colistin in pig production. The reduction will be established in sections, with the quantitative target of **5 mg / PCU** in the maximum period of three years.



To control the alternative consumption of antibiotics, avoiding the increase in the consumption of **neomycin and / or apramycin** as a possible substitution to colistin.



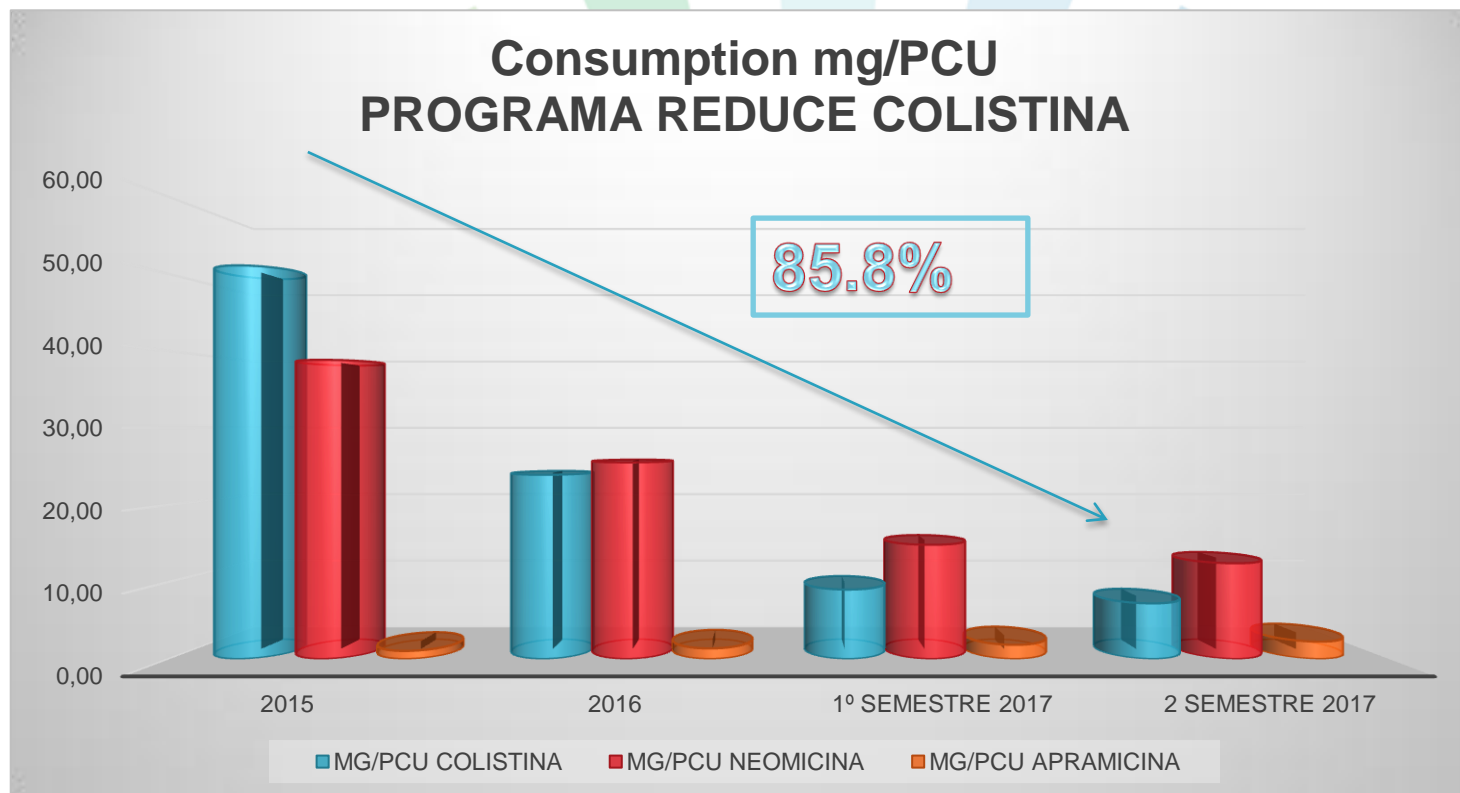
55 companies adhere to the Agreement

AGROALIMENTARIA PORCINA S.A
AGROPECUARIA DE GUISSONA. SCL
AGROPECUARIA OBANOS S.A
AGROPOR S.L
ARS ALENDI S.A
BARROS VIEJO S.L
CINCAPORC S.A
COOPERATIVA D'IVARS
COOPERATIVA DE ARTESA SCCL.
COOPERATIVA GANADERA DE CASPE
COPISO SORIA, SOC. COOP
CORPORACIÓN ALIMENTARIA GUISSONA S.A
CUARTE S.L
EXPLOTACIÓ AGROPECUARIA LA VALLETA S.L
EXPLOTACIÓN AGROPECUARIA LOMA DE UCIEZA S.A
Explotaciones Bajo Aragón S.L.
Explotacions Artigas, SLU
FAMADESA (ALMARGENA DE INTEGRACIÓN S.A)
GANADOS L.M.
GESCASER S.A

GRANJA LOS ALECOS, S.L
GRUP GEPORK S.A.
GRUPO PREMIER PIGS, S.L
ICPOR SORIA, S.L
IMAQ Porcino, S.L.U.
INGA FOOD, S.A.
JUAN JIMENEZ GARCÍA S.A.U.
MAZANA PIENSOS COMPUESTOS S.L.U
PICBER S.A
PIENSOS COSTA
PIENSOS DEL SEGRE S.A
PROGATECSA
Proinserga Alimentación S.L
QUERIBER S.L P.P
S.A.T HNOS CHICO S.L.
S.C.L AGROPIENSO
SCCL Camp i Secció de Credit SANT ISIDRE (COOPERATIVA DE BELLCAIRE)
SELECCIÓN BATALLÉ S.A
SINOVAPORK, S.L

SOCIEDAD COOPERATIVA LTDA. BAJO DUERO, COBADU
UVE S.A
VALL COMPANYYS
VIDAL e HIJOS S.L
LERIDANA DE PIENSOS S.A
INTEGRACIONES EL COCHINILLO SEGOVIANO S.L
COREN SCG
ARAGONESA DE PIENSOS
PORCINO TERUEL S.A
CRIANZAS ARAGONESAS
AGROPORC ALESVES SL
Agasur S.L
Granja El niño cachete
Hendrix
PORCISAN SA

55 companies adhere to the Agreement



	2015	2016	2017	2018
MG/PCU COLISTINA	51,09	23,91	9,00	7,2
MG/PCU NEOMICINA	38,83	25,51	14,81	12,4
MG/PCU APRAMICINA	1,04	1,37	1,83	2,25



Agreement for Voluntary Reduction of Colistin Consumption in Porcine Sector: RESULTS.

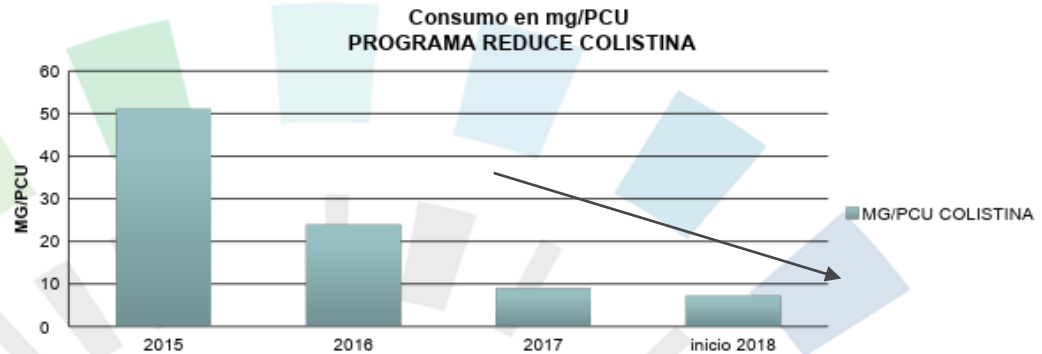
55 companies adhere to the Agreement (80% pigs slaughtered)

•REDUCTION OF 85.8% IN THE CONSUMPTION OF COLISTINA BETWEEN 2015 AND THE BEGINNING OF 2018

•REDUCTION OF 68% IN THE CONSUMPTION OF NEOMICINA BETWEEN 2015 AND THE BEGINNING OF 2018

•VERY LOW CONSUMPTION OF APRAMYCIN

52 mg/PCU



7mg/PCU

How do we achieve this?

➡ **Spread awareness** to the veterinarian and porcine sector about **antibiotics** that are **only used for treatment** and not for prophylactic use.

➡ **Improve:**

- Feeding
- Weaning management in pigs: ventilation, temperature, animal welfare (no overcrowding), homogeneous batch with appropriate numbers of animals.

➡ **Increase immunity:** food, vaccination of mothers and piglets.

➡ **Improve the biosecurity and hygiene of the farms**

How is this made possible?

Significant investment by the swine industry (Spain is the 3rd largest swine producer in the world)



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Agreement for Voluntary Reduction of Colistin Consumption in Porcine Sector: DISTINCTIVE RECOGNITION.



Companies that voluntarily adhere to the Agreement sign a public declaration of compliance.

The Agreement involves a distinctive recognition for those companies who comply.

Agreements for Voluntary Reduction of Antibiotics: implemented

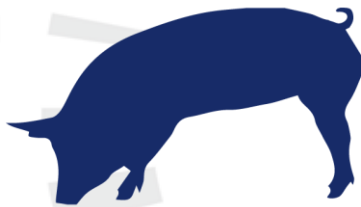
They provide consumption data at the farm level.

Implication in the prudent use of antibiotics

Example for other production sectors.

Use of alternatives and improvement of farm management, hygiene and biosecurity

Programa
Reduce
Consumo



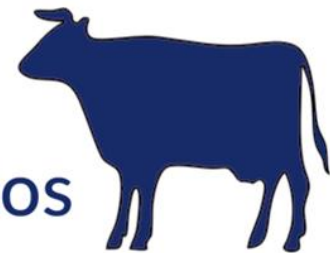
Programa
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Antibióticos



Programa
Reduce
Antibióticos



Programa
Reduce
Antibióticos

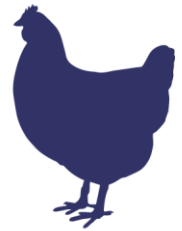


Agreements for Voluntary Reduction of Antibiotics in BROILERS

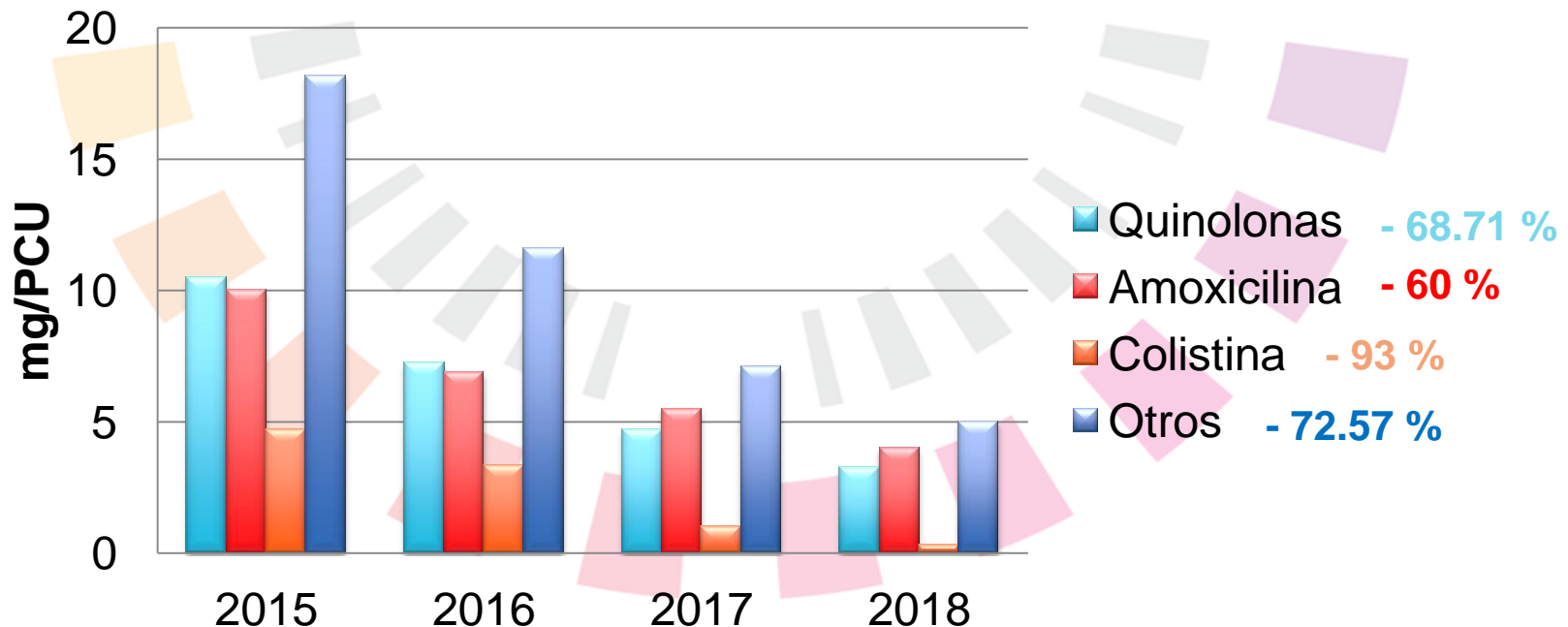
In Broiler poultry farming, a **45% drop in the total consumption of antibiotics in 2020** has been set as the target

20 companies adhere to the Agreement
(75% broiler production)

Programa
**Reduce
Antibióticos**



Spain Antibiotic consumption in BROILERS



Agreements for Voluntary Reduction of Antibiotics in BROILERS

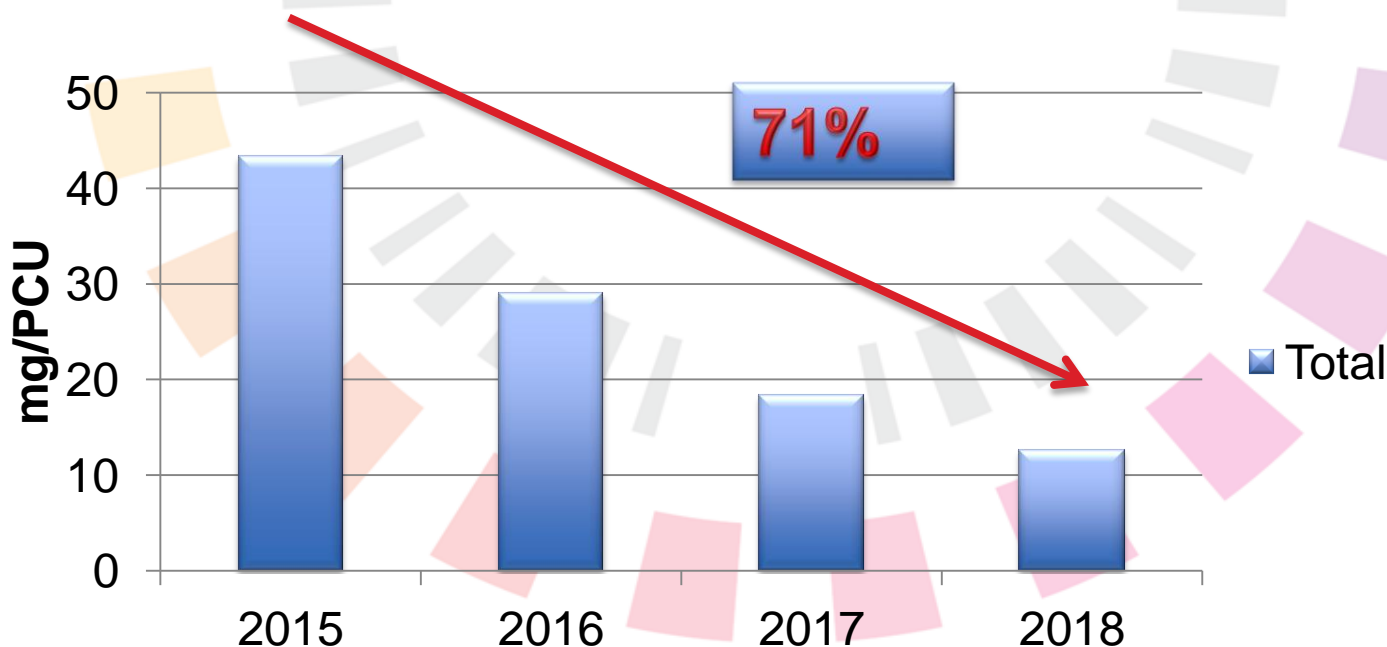
•**REDUCTION OF 71% IN THE CONSUMPTION ANTIBIOTICS BETWEEN 2015 AND FIRST SEMESTER OF 2018**

20 companies adhere to the Agreement
(**75% broiler production**)

Programa
Reduce
Antibióticos



Spain Antibiotic consumption in BROILERS





➡ Reduce the consumption of antibiotics **by 30% in the maximum period of two years.**

➡ Within the first year of this period, it is established **not to prescribe the antibiotic Colistin in its oral form via medicated feed.**

➡ **Establishment of specific guidelines for the prescription of AB:**

✦ The normal status of the **maternities** is "**without medication**".

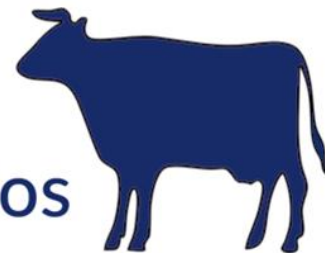
✦ In "peridestete" (25 days around the weaning to technical criteria), because of the high incidence of **Mucoid Epizootic Enteropathy**, we can establish an early metaphylaxis with **maximum two antibiotics via feed.**

✦ The feed in the **last phase will never be medicated** (nor with authorized molecules with zero days of suppression).

✦ Be especially careful with the prescription of the antibiotic **Oxytetracycline**

Agreements for Voluntary Reduction of Antibiotics in CATTLE

Programa Reduce Antibióticos



- ➡ The main objective of the agreement is based on **eliminating completely the systematic use of premixes** with antibiotics in its composition.
- ➡ **Limit the use of antibiotics in oral solution**, administered via water and milk, to defined and justified clinical needs.
- ➡ Increase the use of **rapid diagnostic tests to identify pathogens** and increase the use of **sensitivity tests** to determine the most appropriate treatment.
- ➡ **Reduce the use of category 2 antibiotics** to very defined and justified clinical needs.
- ➡ **Involve the whole cattle sector**

Agreements for Voluntary Reduction of Antibiotics: implemented

They provide consumption data at the farm level.

Implication in the prudent use of antibiotics

Example for other production sectors.

Use of alternatives and improvement of farm management, hygiene and biosecurity



PORCINO



POLLOS BROILER



CUNICULTURA



BOVINO CARNE



BOVINO LECHE



OVINO Y CAPRINO



AVICULTURA DE PUESTA



PAVOS



PEQUEÑOS ANIMALES

Campaña PROA

Hospital La Paz



Plan Nacional
Resistencia
Antibióticos

The campaign affects:

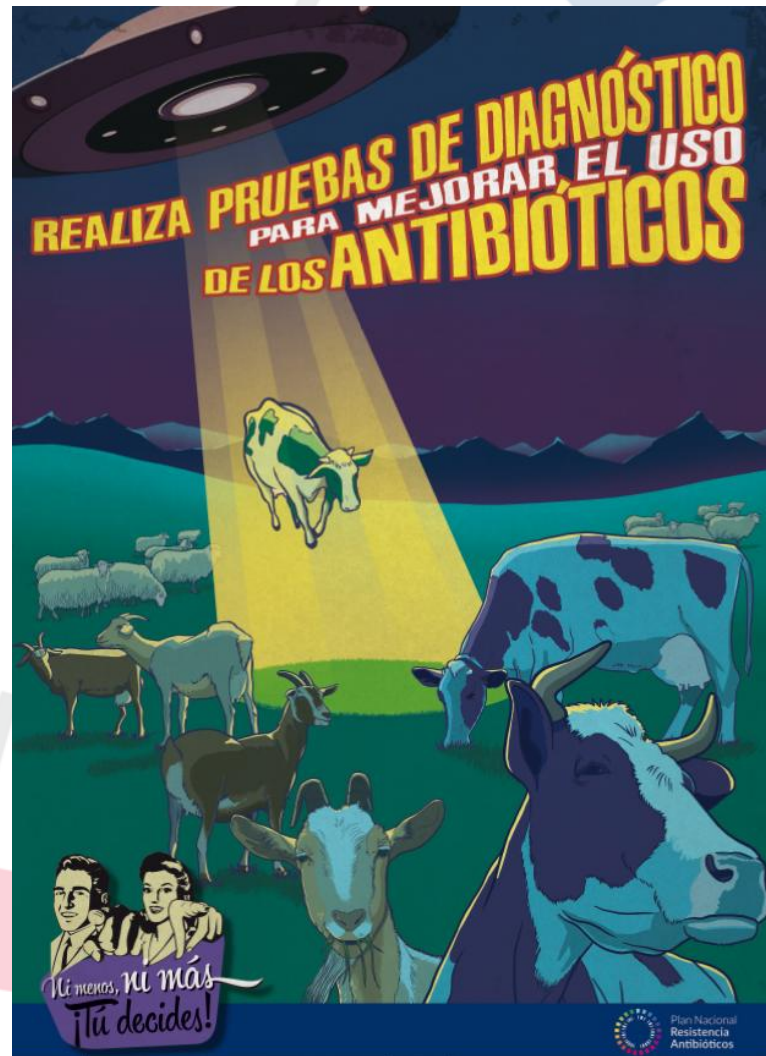
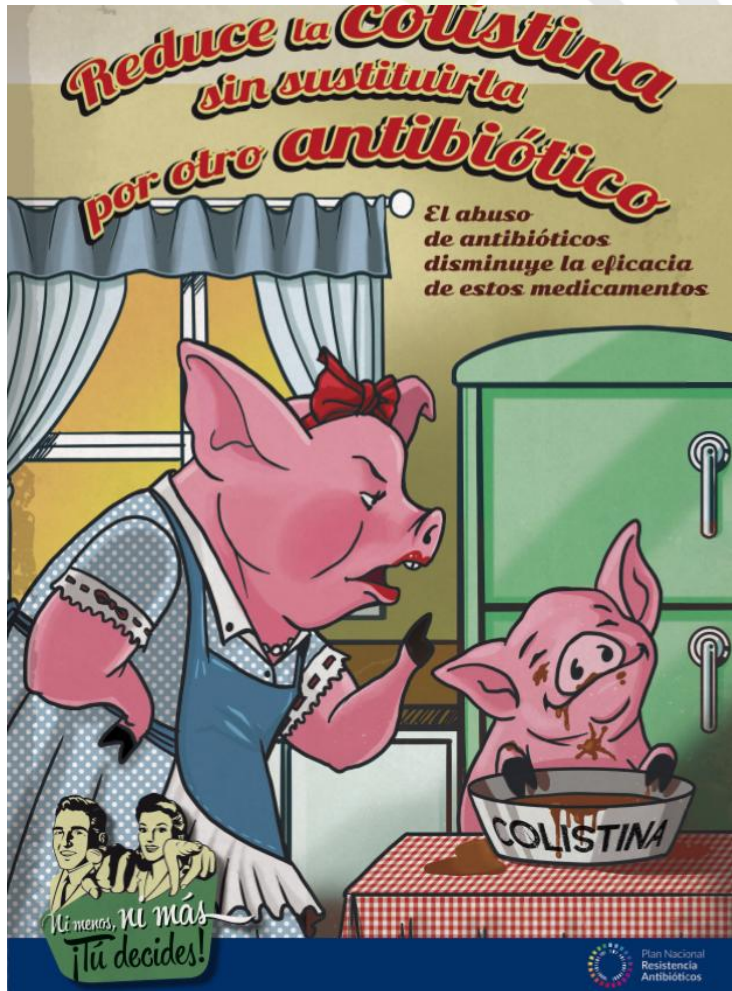
- Duration of treatment and dosage
- Overtreatment
- Treatment in serious infections
- Local guides
- Antibiotic plan in clinical history
- Sequential therapy
- Antibiotic adjustment
- Re-evaluation of the treatment



Campaign PRAN - VETERINARY



Campaign PRAN - VETERINARY



Campaign PRAN - VETERINARY



Check List

DISPONER DE UN PROGRAMA SANITARIO ELABORADO CONJUNTAMENTE CON EL VETERINARIO DE LA EXPLOTACIÓN:

- BIENESTAR ANIMAL
- BIOSEGURIDAD (INTERNA Y EXTERNA)
- BUEN MANEJO DE LOS ANIMALES
- BUENAS PRÁCTICAS DE HIGIENE Y DE LIMPIEZA Y DESINFECCIÓN
- PLAN VACUNAL
- REGISTRO CORRECTO DE LAS ACCIONES REALIZADAS

VIGILANCIA DEL ESTADO SANITARIO DE LOS ANIMALES:

- REVISIÓN DIARIA DE LOS ANIMALES
- CHEQUEO DE LOS INDICADORES DE SALUD
- ANÁLISIS DE LOS DATOS PRODUCTIVOS

DETECCIÓN DE LOS ANIMALES ENFERMOS TANTO POR EL GANADERO COMO POR EL VETERINARIO

DIAGNÓSTICO:

- CLÍNICO POR EL VETERINARIO
- LABORATORIAL MEDIANTE TOMA DE MUESTRAS
- ESTUDIOS DE SENSIBILIDAD

TRATAMIENTO:

- EL TRATAMIENTO Y LA PRESCRIPCIÓN DEL FÁRMACO ÚNICAMENTE LO PUEDE REALIZAR EL VETERINARIO A CARGO DE LA EXPLOTACIÓN
- ADMINISTRACIÓN DEL TRATAMIENTO: ☐ VÍA ☐ TIEMPO ☐ DOSIS

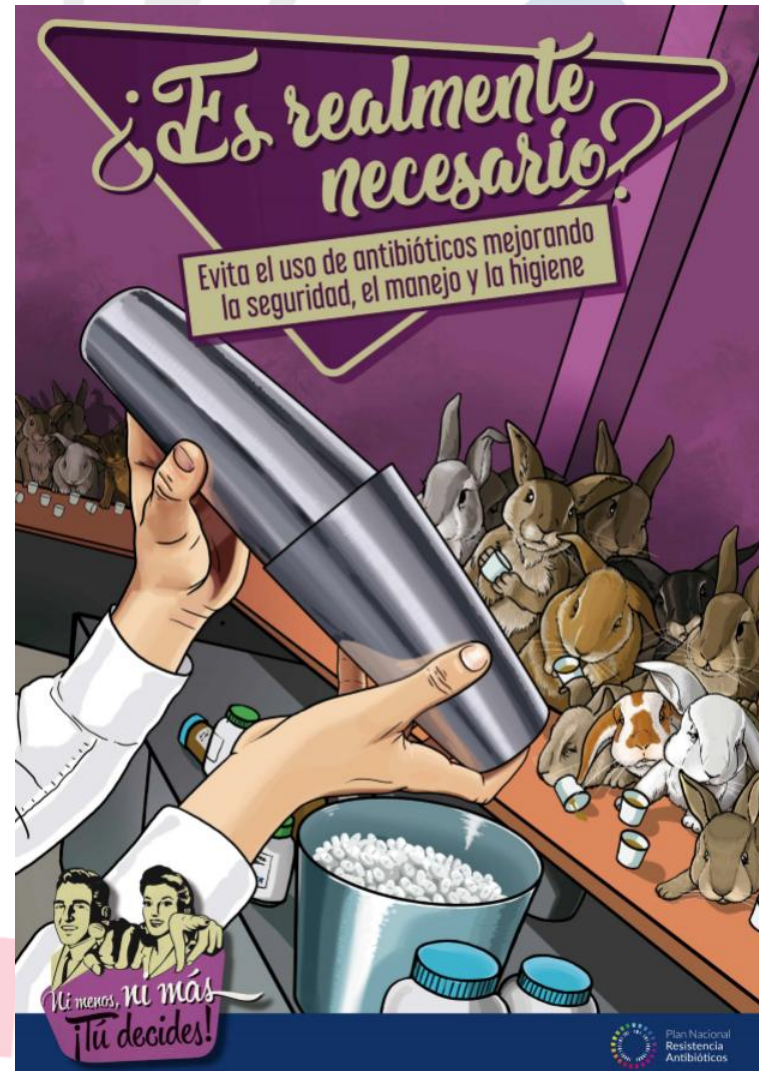
REVISIÓN DEL FUNCIONAMIENTO DEL TRATAMIENTO, TOMAR MEDIDAS PREVENTIVAS O MODIFICAR EL PROGRAMA SANITARIO.

Acciones en un plan sanitario

ACCIÓN	RESPONSABLE
PLAN SANITARIO	EXPLOTACIÓN + VETERINARIO + GANADERO
VIGILANCIA SANITARIA	GANADERO + VETERINARIO
DETECCIÓN DE ENFERMEDAD	GANADERO + VETERINARIO
DIAGNÓSTICO	VETERINARIO
PRESCRIPCIÓN	VETERINARIO + GANADERO
ADMINISTRACIÓN	VETERINARIO + GANADERO
REVISIÓN DEL RESULTADO	VETERINARIO + GANADERO

¡Ni menos, ni más! ¡Tú decides!

Plan Nacional Resistencia Antibióticos



¿Es realmente necesario?

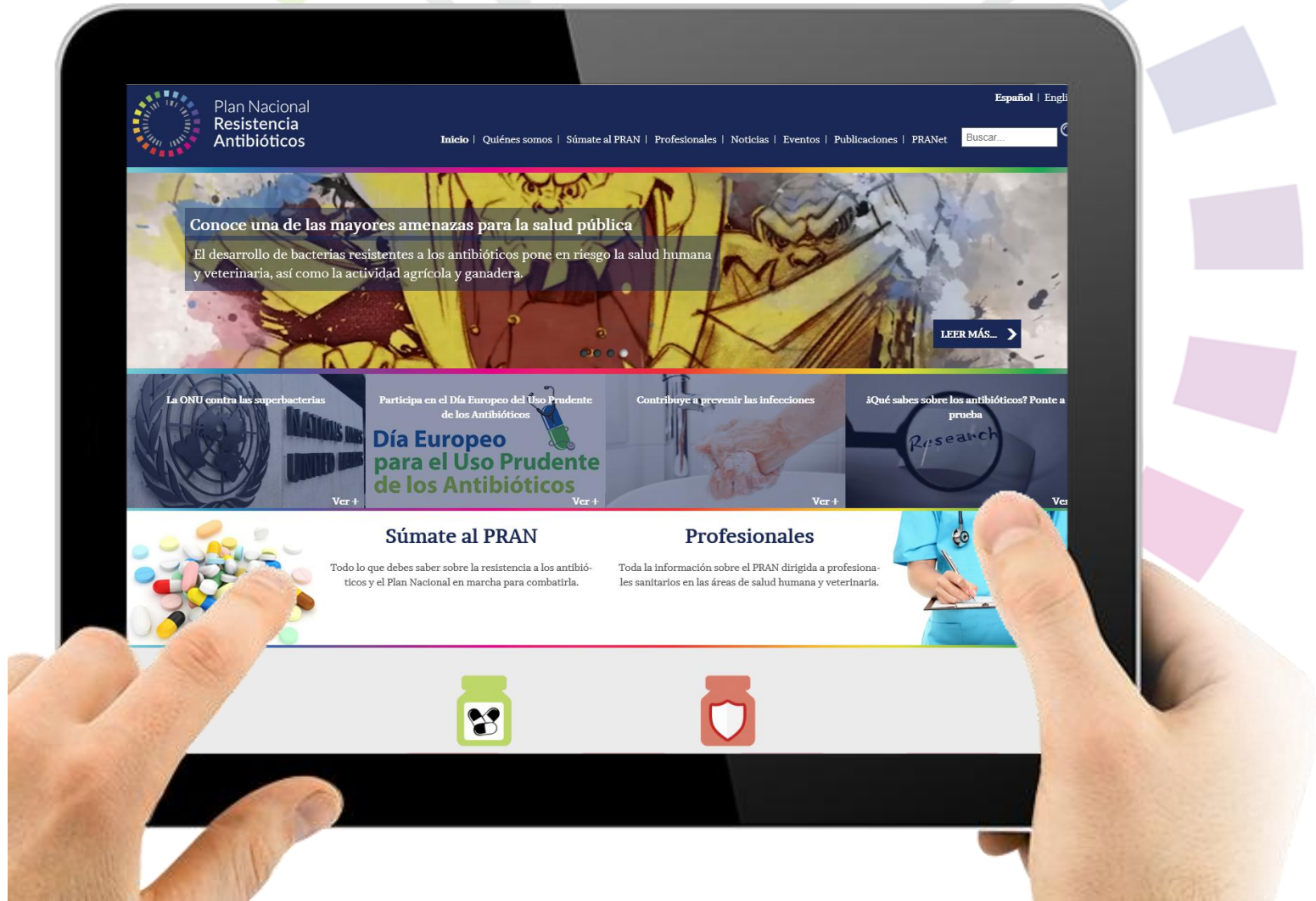
Evita el uso de antibióticos mejorando la seguridad, el manejo y la higiene

¡Ni menos, ni más! ¡Tú decides!

Plan Nacional Resistencia Antibióticos

<http://resistenciaantibioticos.es/es>

Our web page



Social Media

@PRANgob



Twitter profile page for @PRANgob. The header features a dark blue background with the text "Plan Nacional Resistencia Antibióticos" in white. Below the header, the profile name "Plan Antibióticos" and handle "@PRANgob" are displayed. The bio states: "Plan Nacional frente a la Resistencia a los Antibióticos (PRAN)". The location is "España". The profile statistics show: 149 Tweets, 84 Siguiendo, 687 Seguidores, and 115 Me gusta. A "Seguir" button is visible. The main content area shows a pinned tweet from @PRANgob dated 10 ene, with the text: "Profesionales sanitarios, pacientes, ganaderos, investigadores, estudiantes... Todos podemos combatir la #ResistenciaBacteriana y conseguir que los #antibióticos sigan funcionando. ¡Tómatelos en serio!". A sidebar on the right contains a "¿Nuevo en Twitter?" section with a "Regístrate" button.



Facebook profile page for @PRANgob. The header features a dark blue background with the text "Plan Nacional Resistencia Antibióticos" in white. Below the header, the profile name "Plan Nacional frente a la Resistencia a los Antibióticos - PRAN" and handle "@PRANgob" are displayed. The bio states: "Plan Nacional frente a la Resistencia a los Antibióticos - PRAN". The location is "España". The profile statistics show: 149 Tweets, 84 Siguiendo, 687 Seguidores, and 115 Me gusta. A "Seguir" button is visible. The main content area shows a pinned post from @PRANgob dated 10 ene, with the text: "Profesionales sanitarios, pacientes, ganaderos, investigadores, estudiantes... Todos podemos combatir la #ResistenciaBacteriana y conseguir que los #antibióticos sigan funcionando. ¡Tómatelos en serio!". A sidebar on the right contains a "¿Nuevo en Facebook?" section with a "Regístrate" button.



¡Muchas gracias!



www.resistenciaantibioticos.es



@PRANgob



pram@aemps.es