

Insectos y pesticidas

Cambiar de paradigmas

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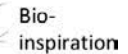
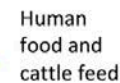
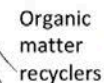
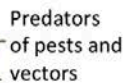
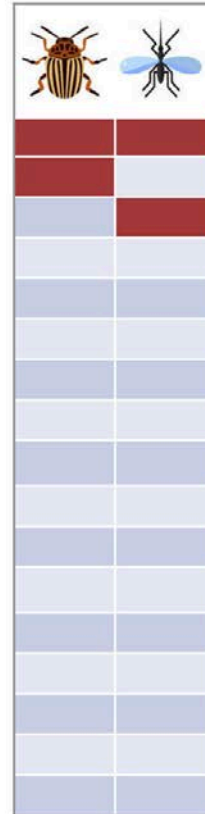




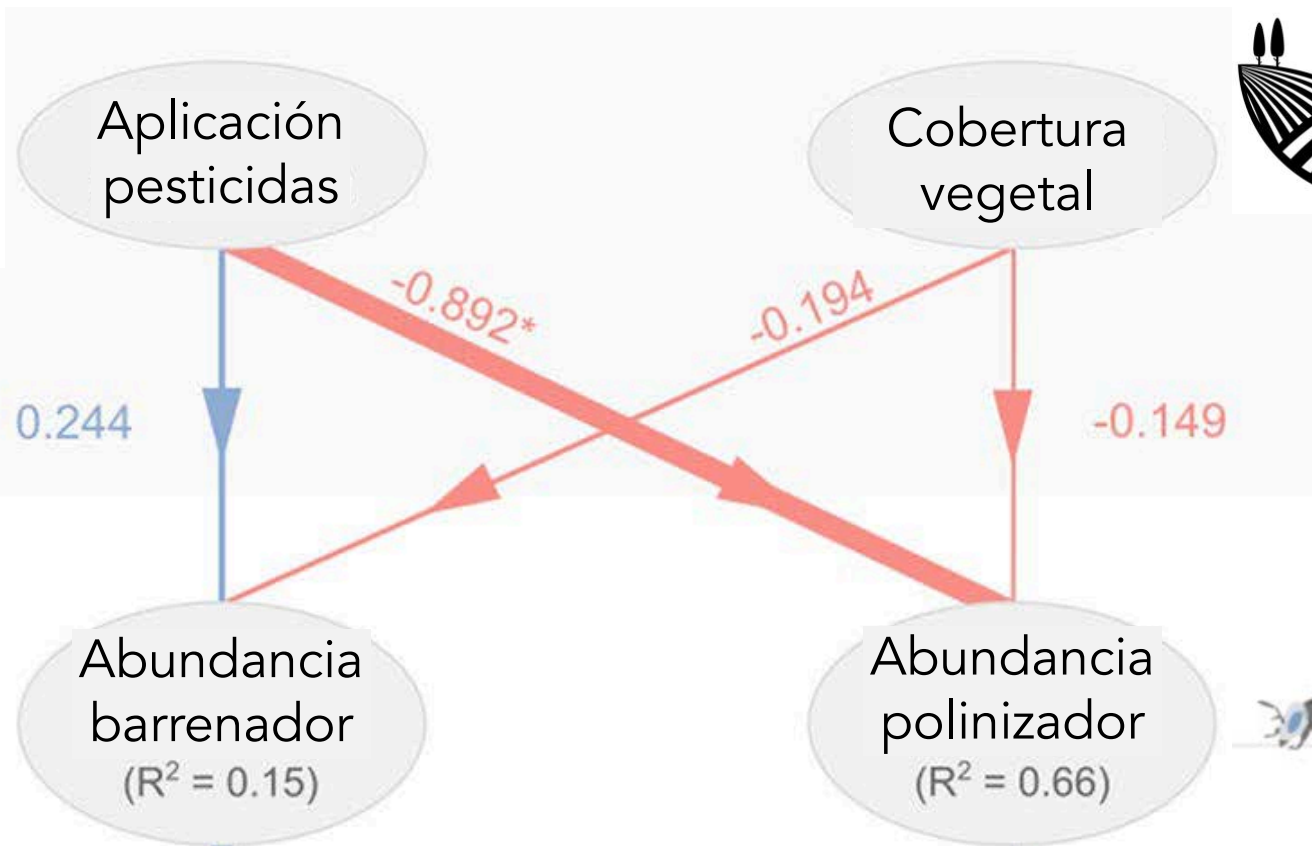




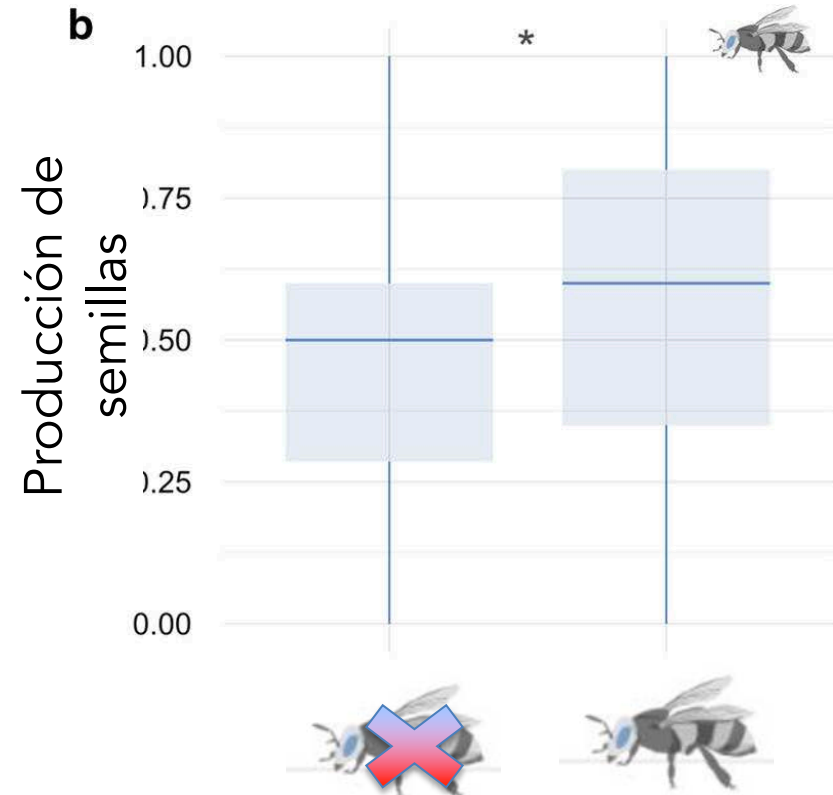
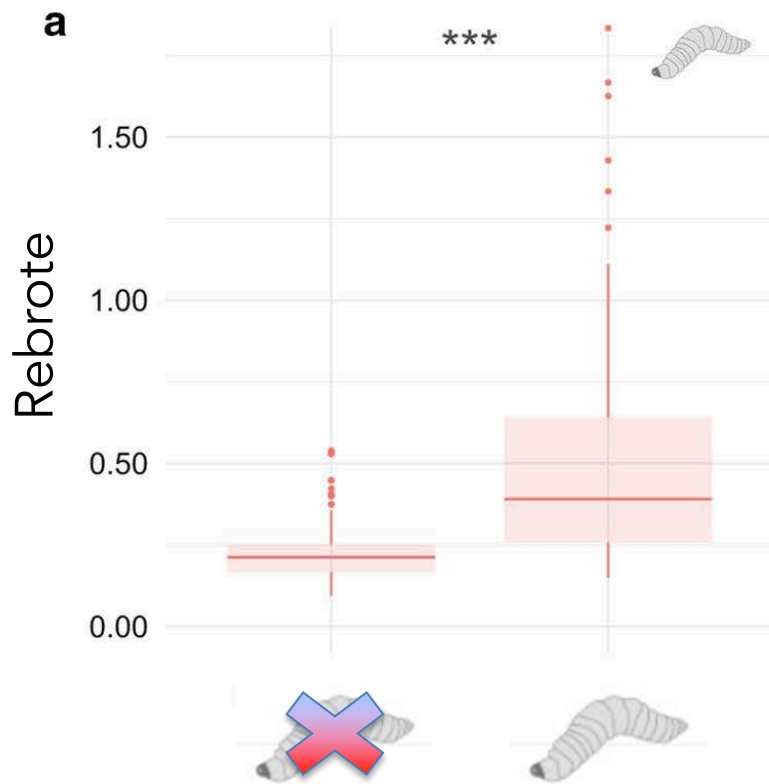
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Efectos de los pesticidas sobre las plagas y polinizadores del chocho/tarwi



Efectos de las plagas y lo polinizadores en el rebrote y la producción de semillas



Insect decline in the Anthropocene: Death by a thousand cuts

David L. Wagner^{a,1}, Eliza M. Grames^a, Matthew L. Forister^b, May R. Berenbaum^c, and David Stopak^d



Interaction Disruption

Climate change is affecting ranges globally. Here ants are invading and consuming wildlife in cloud forest never before exposed to these marauders.

Fire

Global warming elevates fire risk. Fires in Australia, Amazonia, and California burned an unprecedented >5 million hectares of forest in 2019.

Global Warming

Arctic sea ice is declining precipitously, arctic-alpine and other cold-adapted communities are contracting, while sea-level rise threatens coastal ecosystems.

Storm Intensity

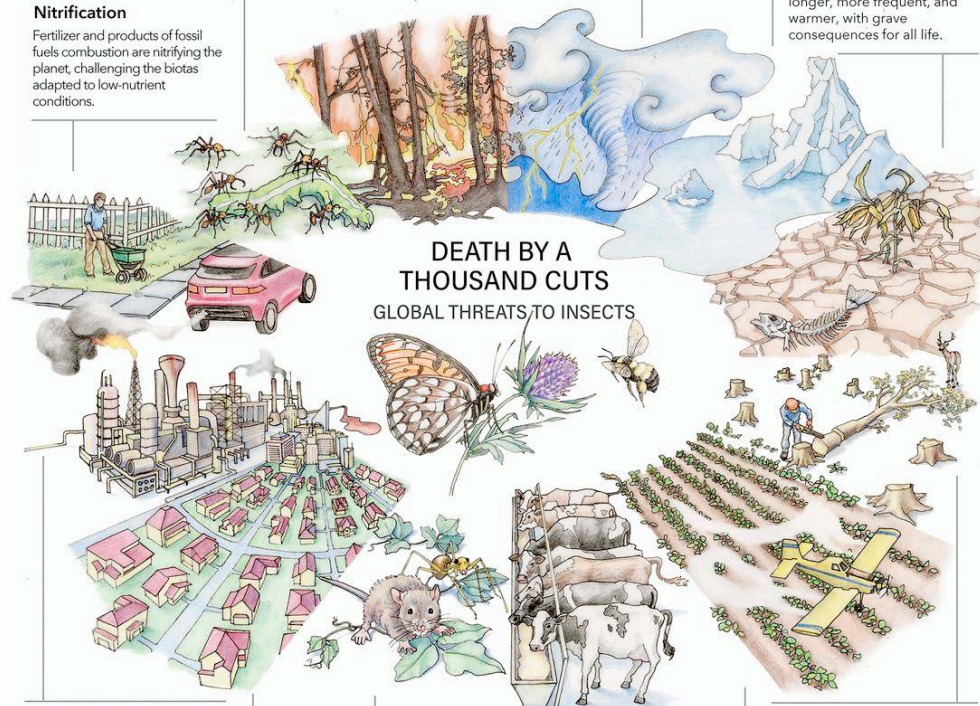
Climate changes bring stronger, more frequent storms and hurricanes; more fire-igniting lightning; and damaging flooding.

Droughts

Periods with diminished precipitation are becoming longer, more frequent, and warmer, with grave consequences for all life.

Nitrification

Fertilizer and products of fossil fuels combustion are nitrifying the planet, challenging the biotas adapted to low-nutrient conditions.



Pollution

Chemical, light, and sound pollution of water, air, and soil are impacting plant and animal life worldwide.

Introduced Species

Global trade is accelerating the movement of pernicious plants, animals, and pathogens to new regions—often with devastating consequences.

Agricultural Intensification

Industrialized agriculture, with its attendant increases in scale, monoculturalization, nutrient input, and pesticide use, is becoming increasingly nature unfriendly.

Deforestation

The tropics lost 11.9 million hectares of forest in 2019, mostly to agriculture.

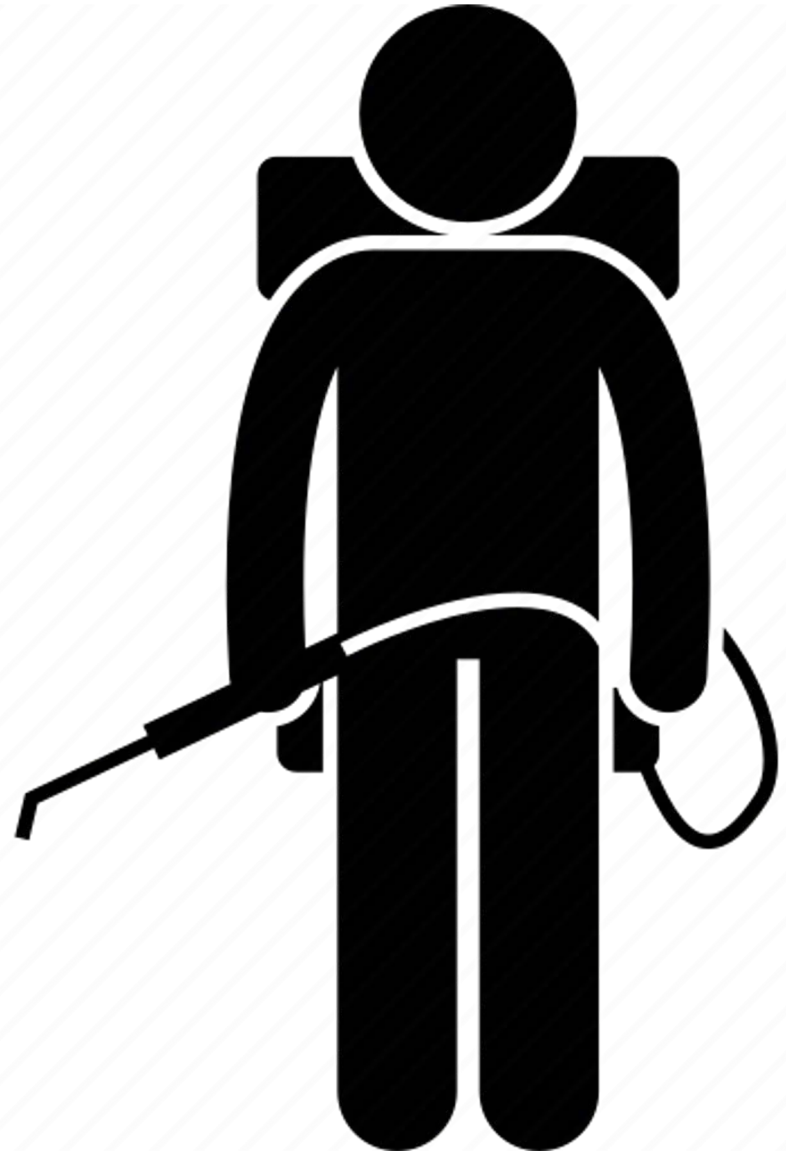
Insecticides

Modern, industrialized agriculture, with its increasing reliance on chemical insecticides, has led to chronic contamination of wildlands and impacts to non-target insects.

Urbanization

Our global population of 7.8 billion, spread planet-wide, comes at great cost to biodiversity and wildlands. Already, over 500 vertebrates have been driven to extinction.

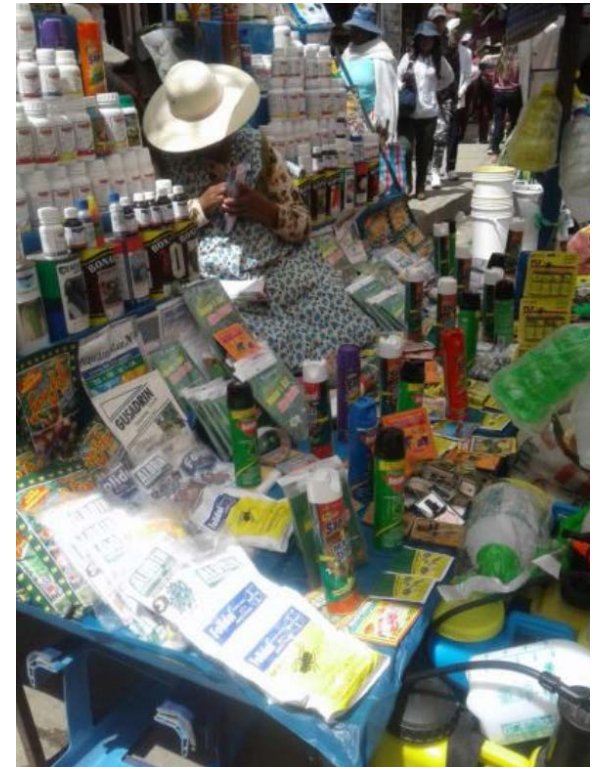
Porque los
agricultores
usan tantos
pesticidas?





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Vendedores de pesticidas en los Andes



Como hacer un estudio a nivel regional con resultados reproducibles?

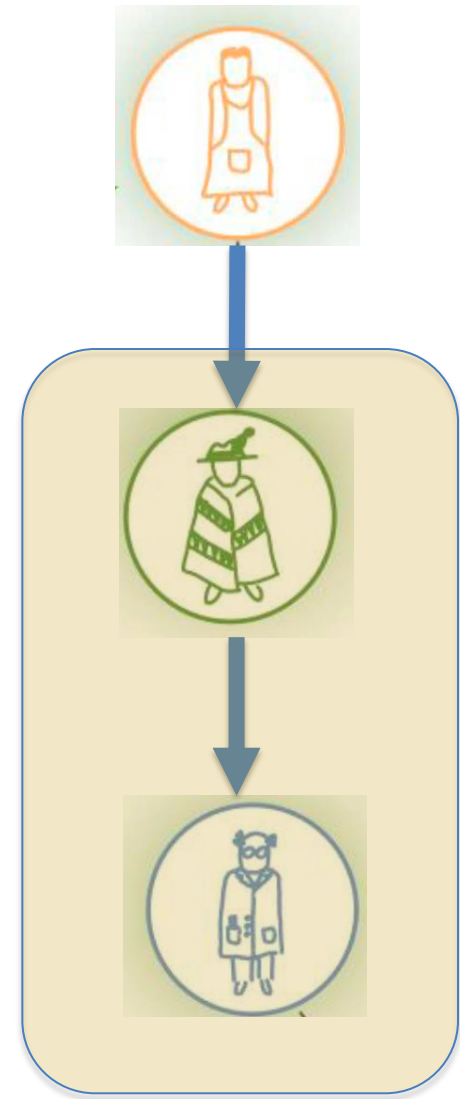


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Quien hace las
preguntas a los
vendedores?



Como manejamos
la cuestión de la
ética de la
investigación?



Acuerdo de entrevista
Propiedad intelectual

Que preguntamos al vendedor de químicos? (#5)

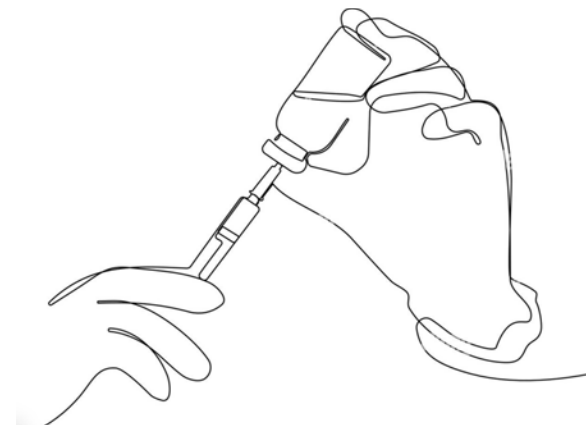


1. Plaga

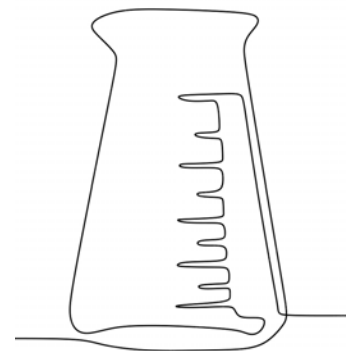
2. Nombre del producto(s)



5. Frecuencia de aplicación

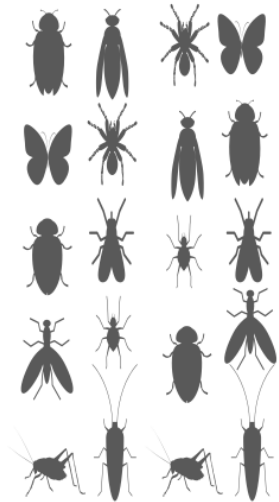


3. Dilución

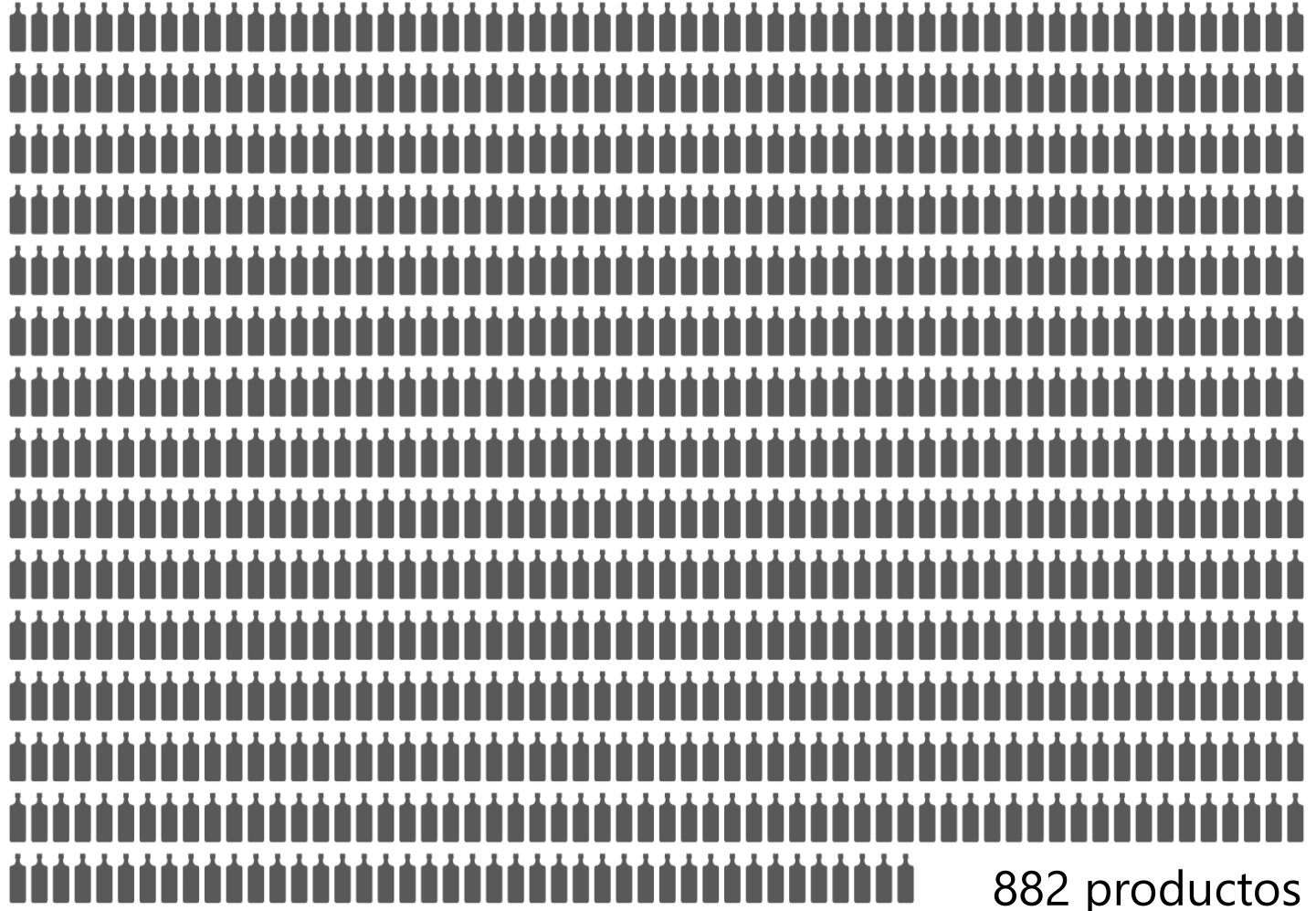


4. Cantidad/ha

Las plagas vs. los químicos



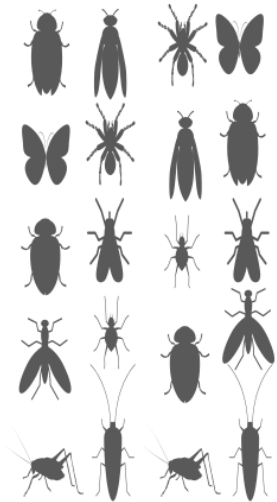
20 plagas
11 cultivos



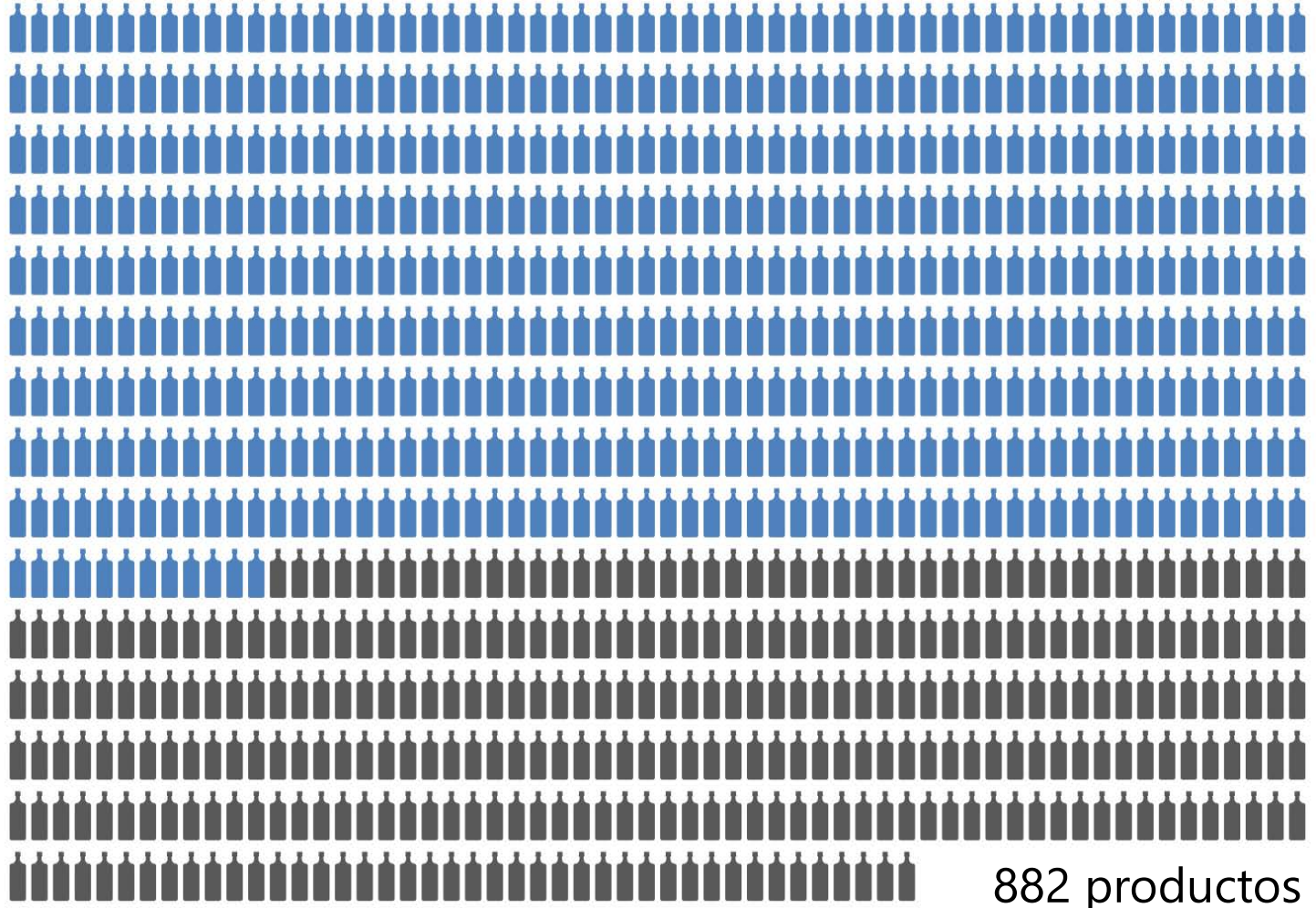
882 productos

Las plagas vs. los químicos

552 pudimos identificar

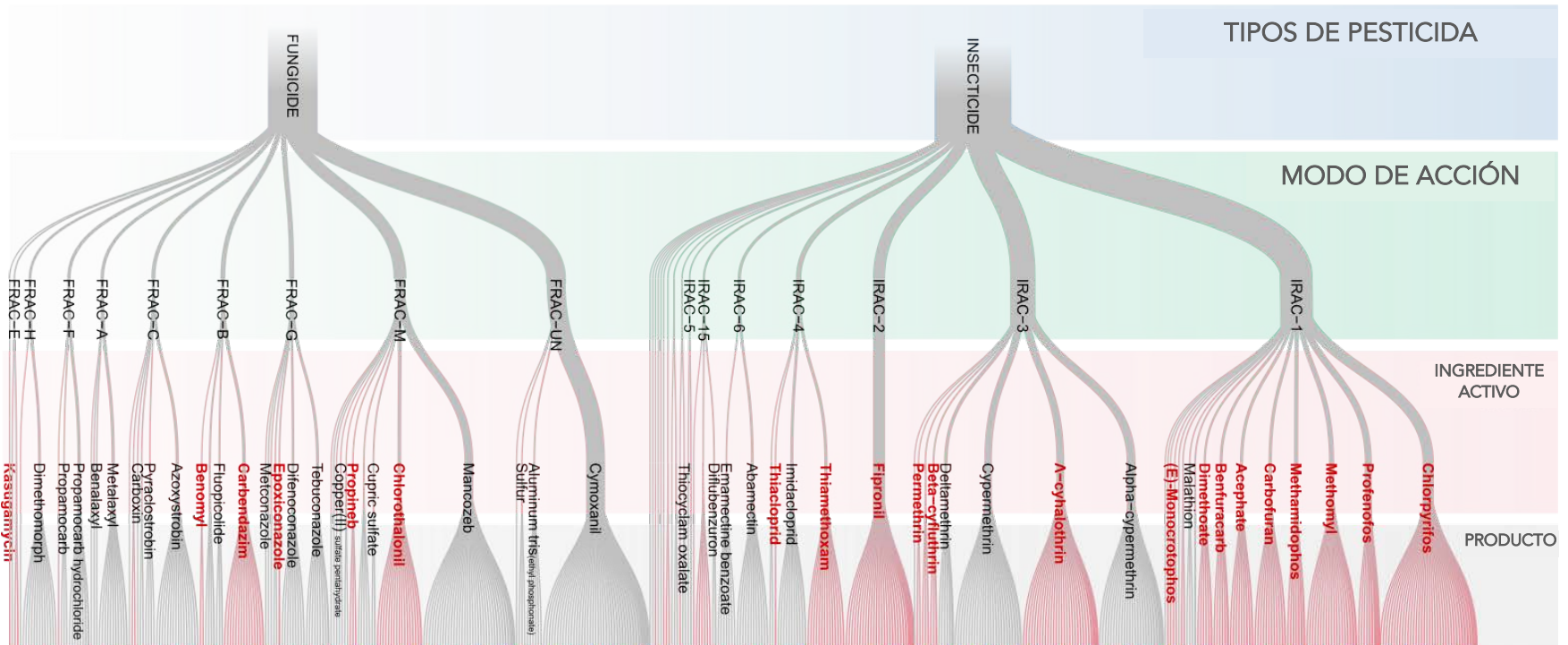


20 plagas
11 cultivos



882 productos

Productos y cocteles



Productos y cocteles

TIPOS DE COCTELES

Diferentes modos de acción

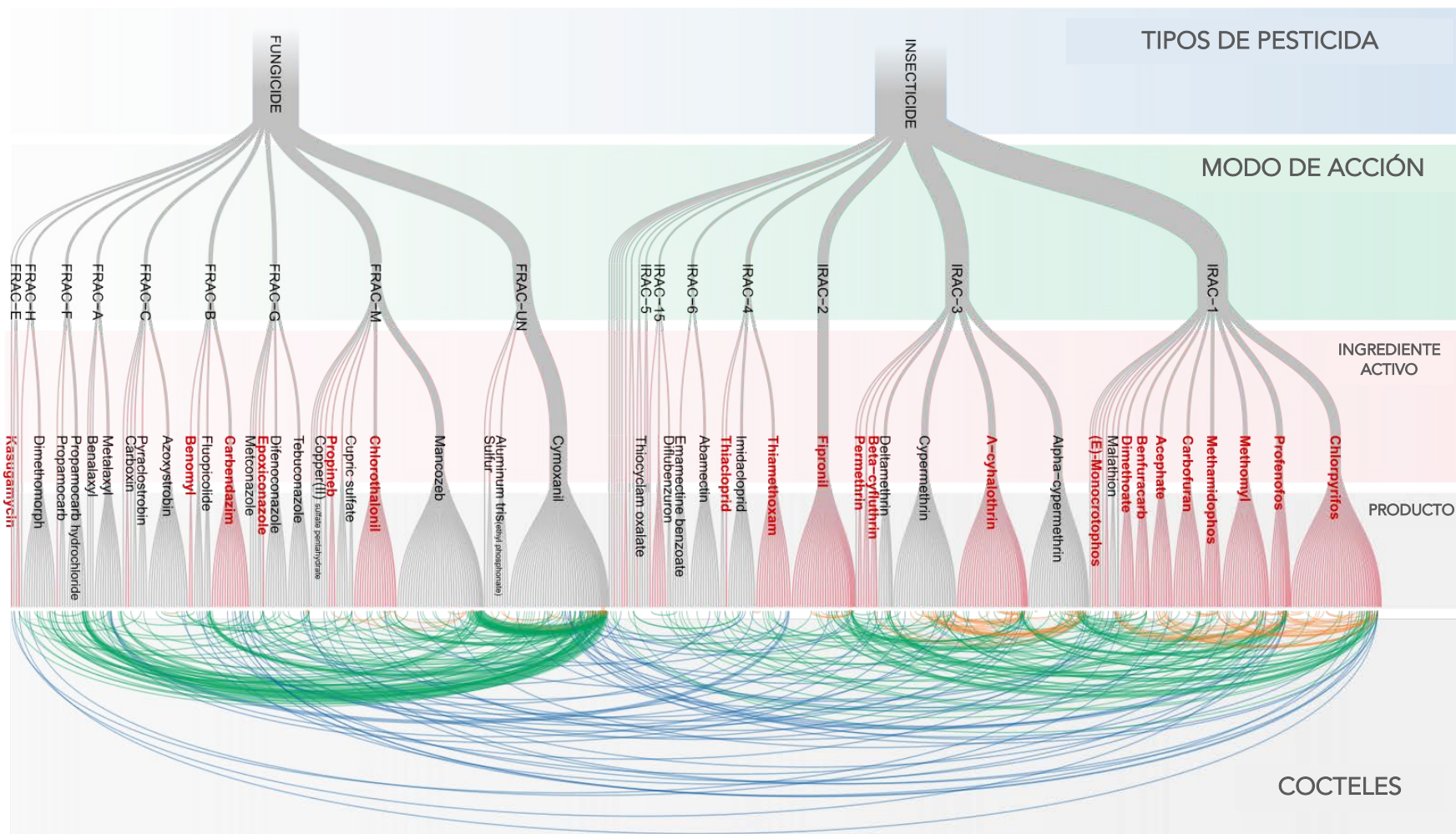
59.7%

Mismo modo
de acción

26.5%

Tipos
diferentes

13.8%



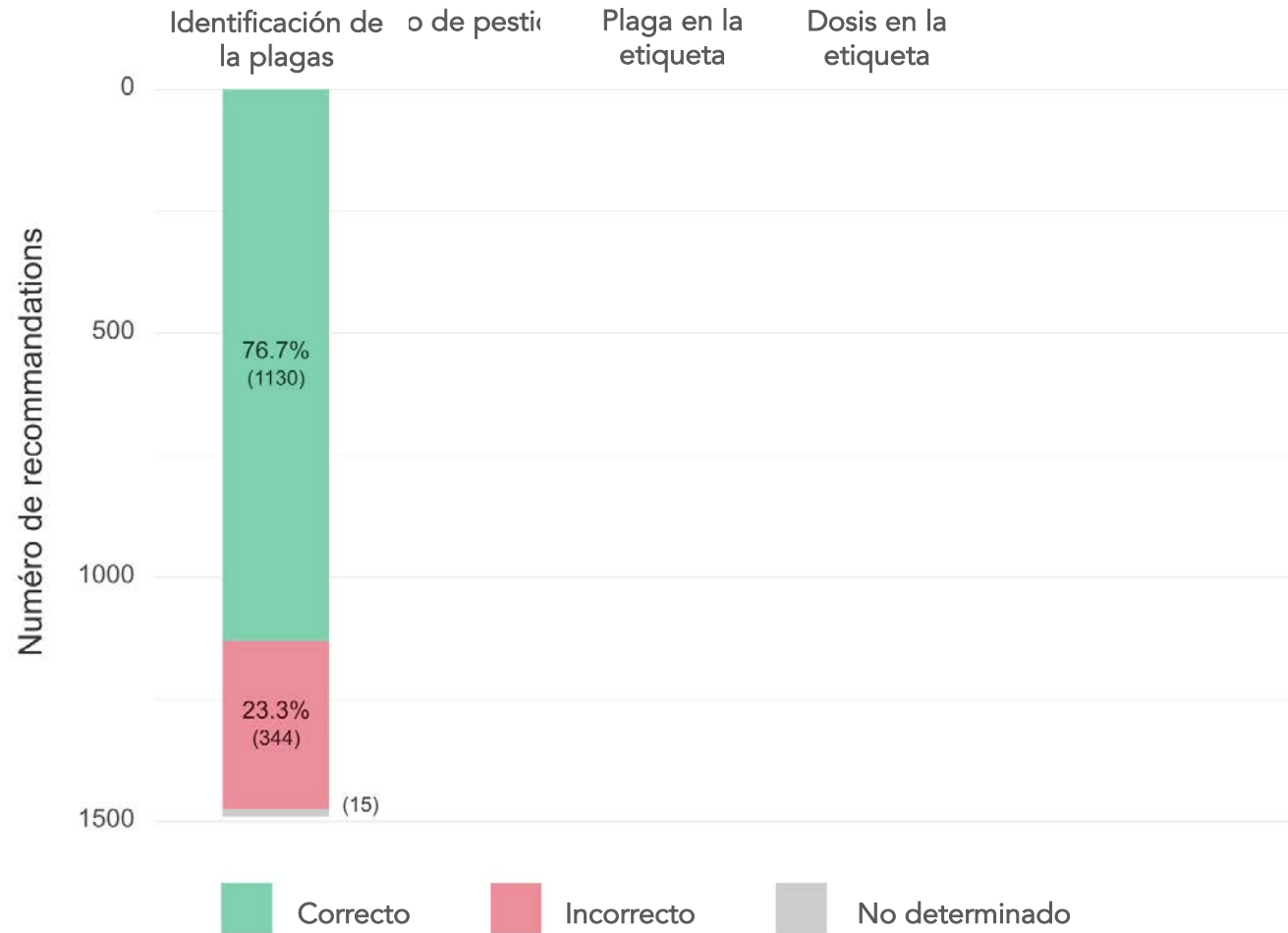
Calidad de las recomendaciones

Etapas de recomendación del vendedor



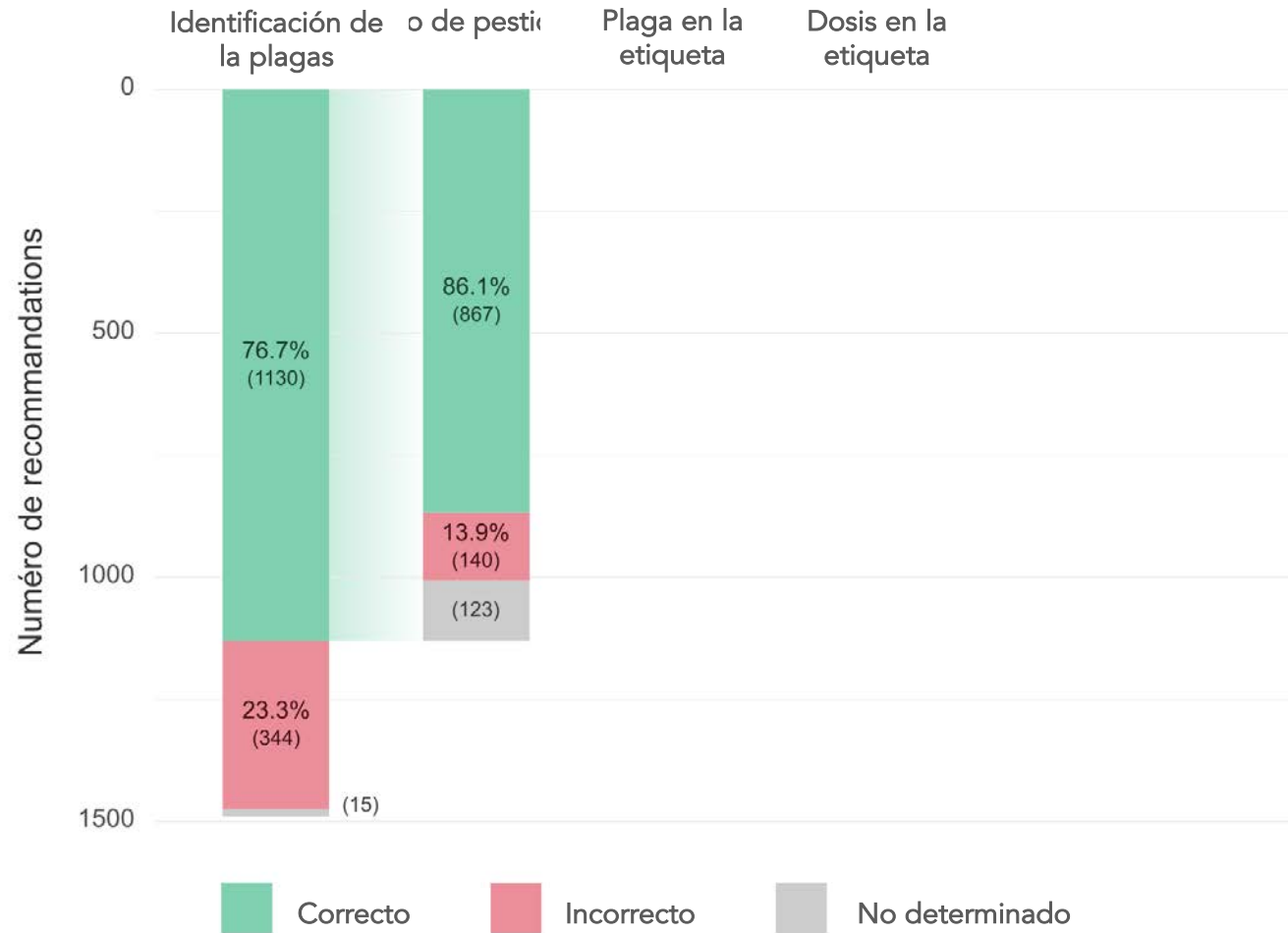
Calidad de las recomendaciones

Etapas de recomendación del vendedor



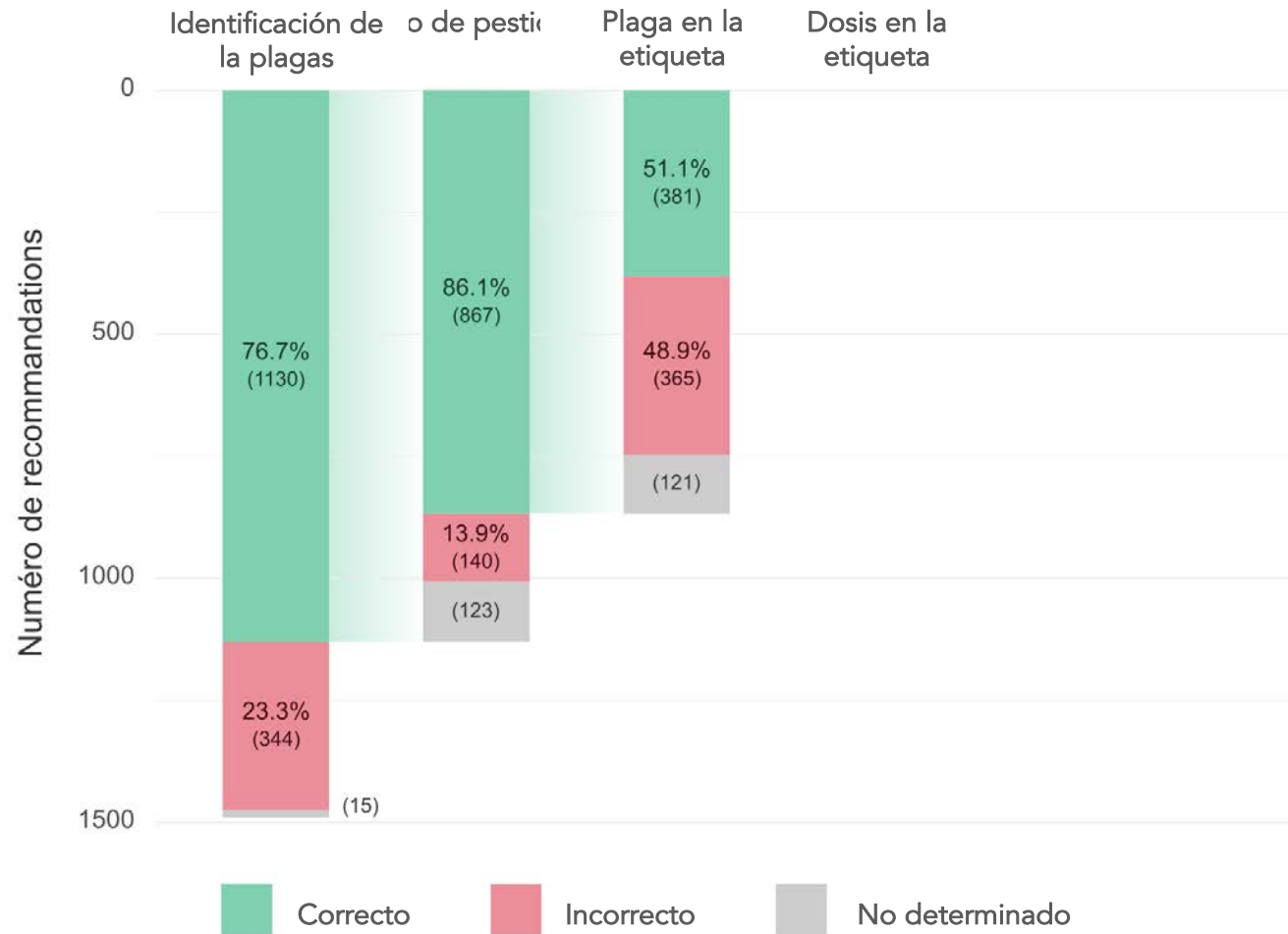
Calidad de las recomendaciones

Etapas de recomendación del vendedor



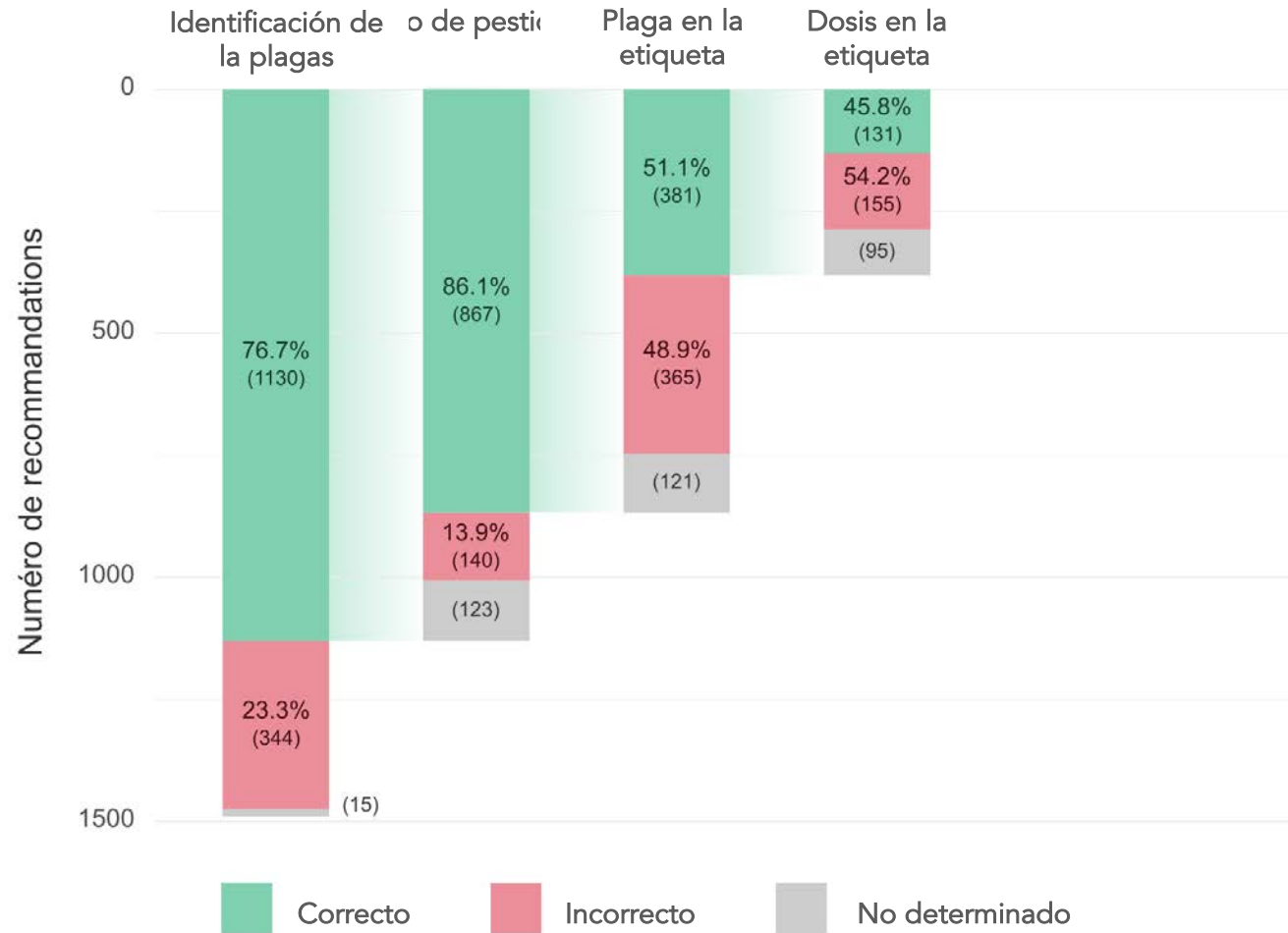
Calidad de las recomendaciones

Etapas de recomendación del vendedor



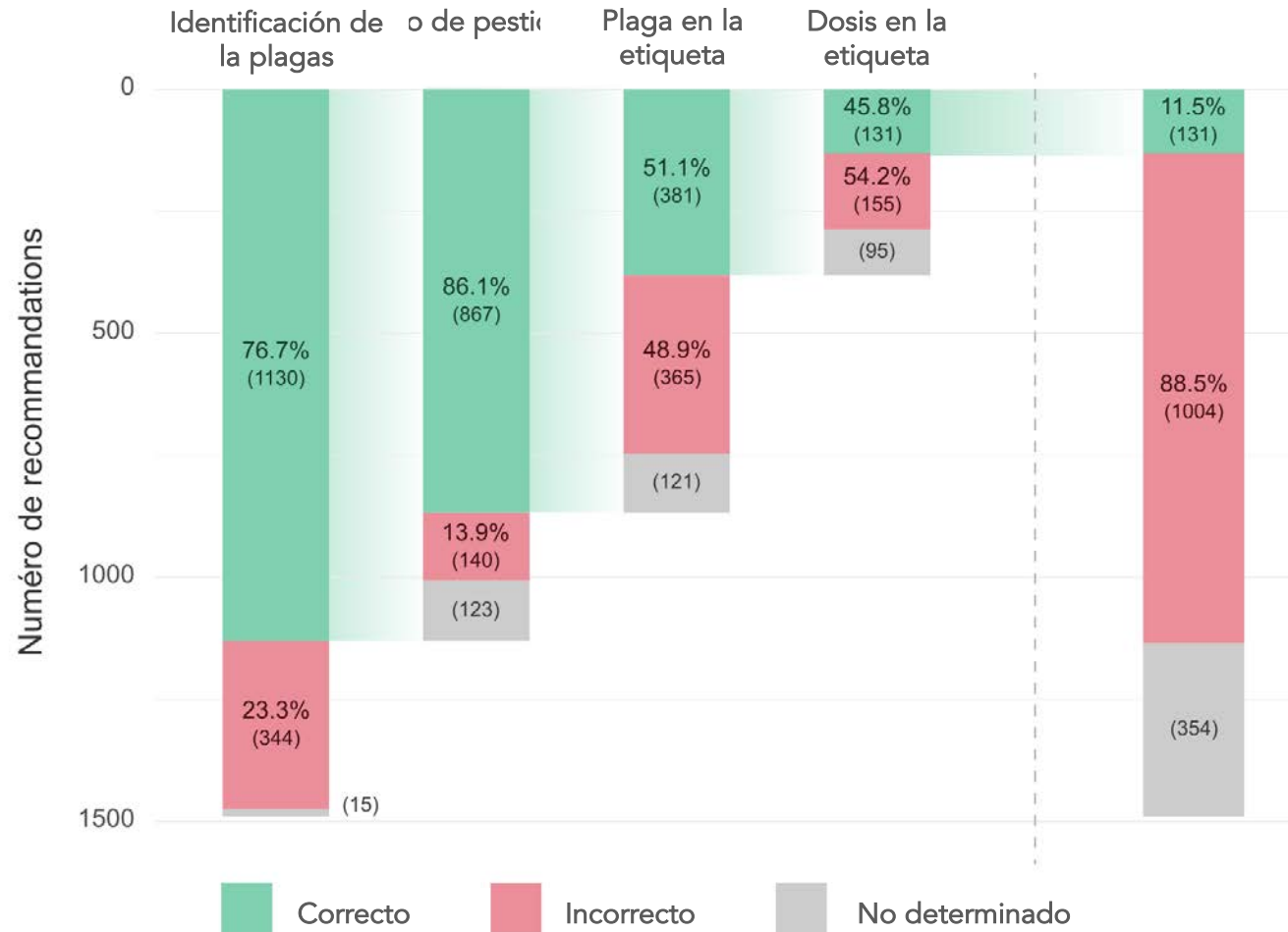
Calidad de las recomendaciones

Etapas de recomendación del vendedor

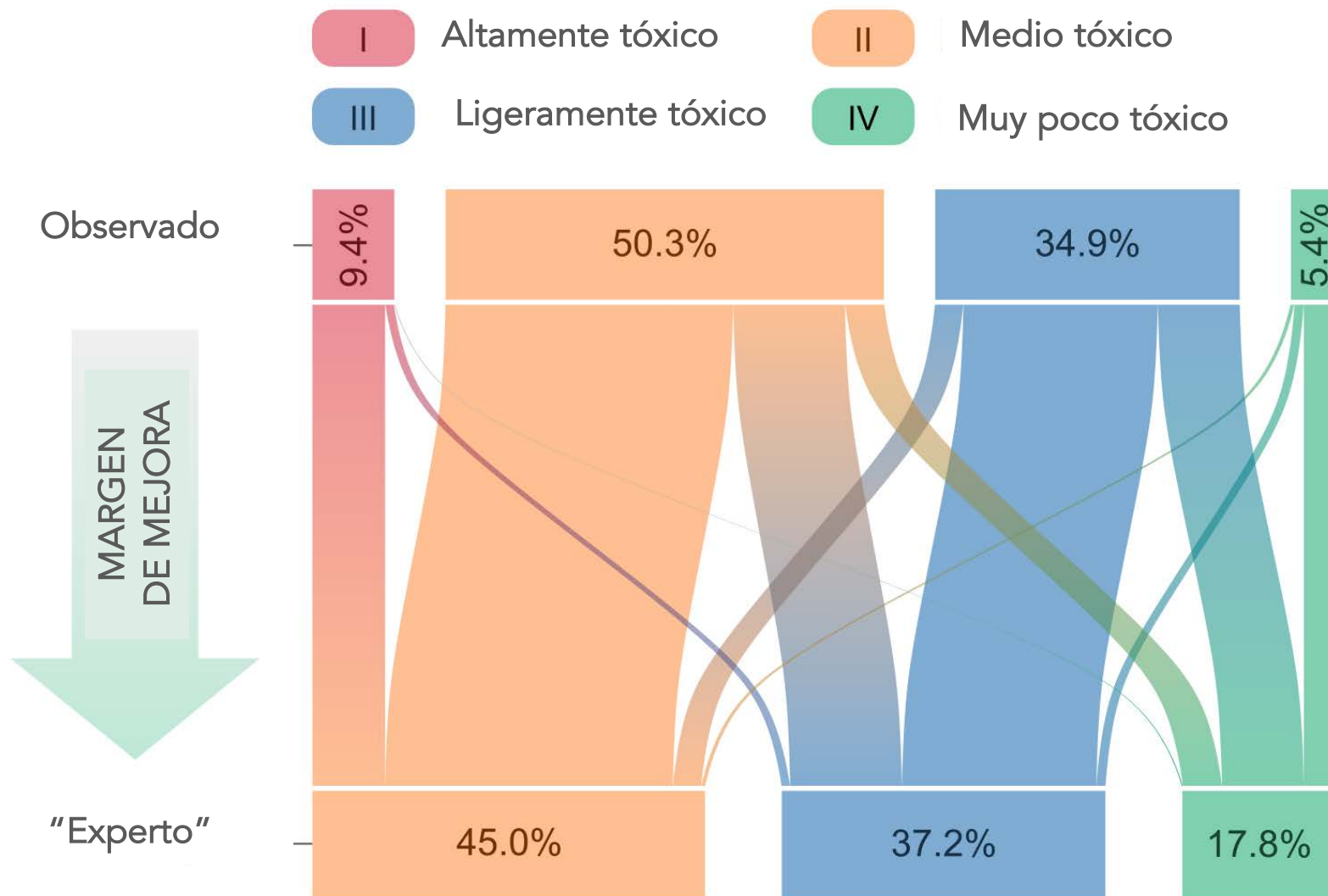


Calidad de las recomendaciones

Etapas de recomendación del vendedor



Modelo « vendedor experto »



Cambios de paradigmas

- Los insectos en los campos agrícolas no son solamente plagas, y hasta las plagas no son siempre « malas »
- Los pesticidas no son siempre eficientes para luchar contra las plagas pero siempre matan a los insectos que ayudan al cultivo
- No hay que culpar solo a los agricultores el mal uso de pesticidas; todos tenemos una responsabilidad y podemos mejorar la situación

Gracias por su atención

