Sustainable formulation design: polymer-free ingredients boosting biocontrol impact

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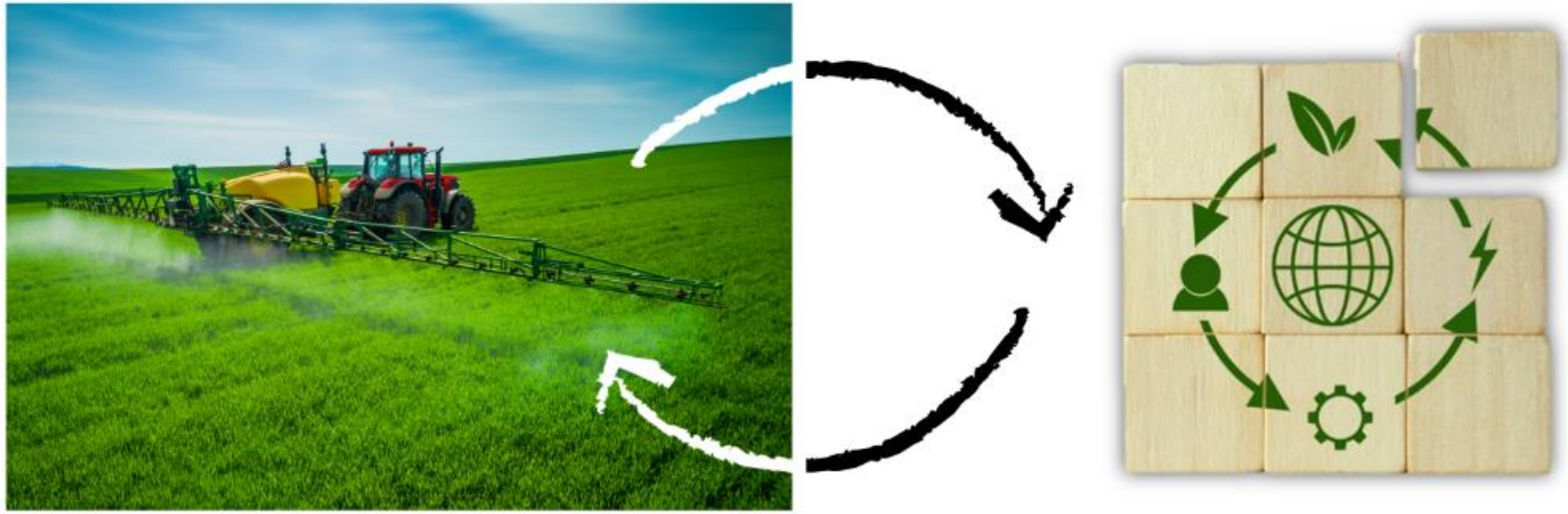
20 YEARS ABIM
Annual Biocontrol Industry Meeting®

From Fossil-Linear to Biobased-Circular

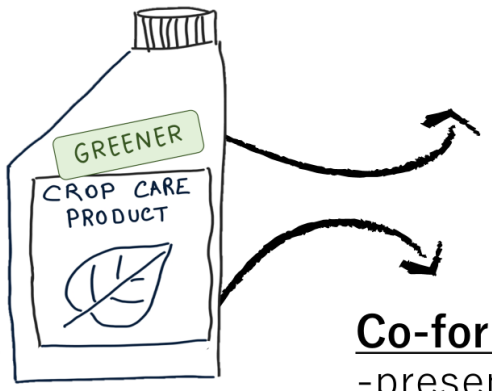


Sustainable Agriculture **Bioeconomy**

Molecule by molecule, including co-formulants

Present in all pesticides …

also under regulatory pressure

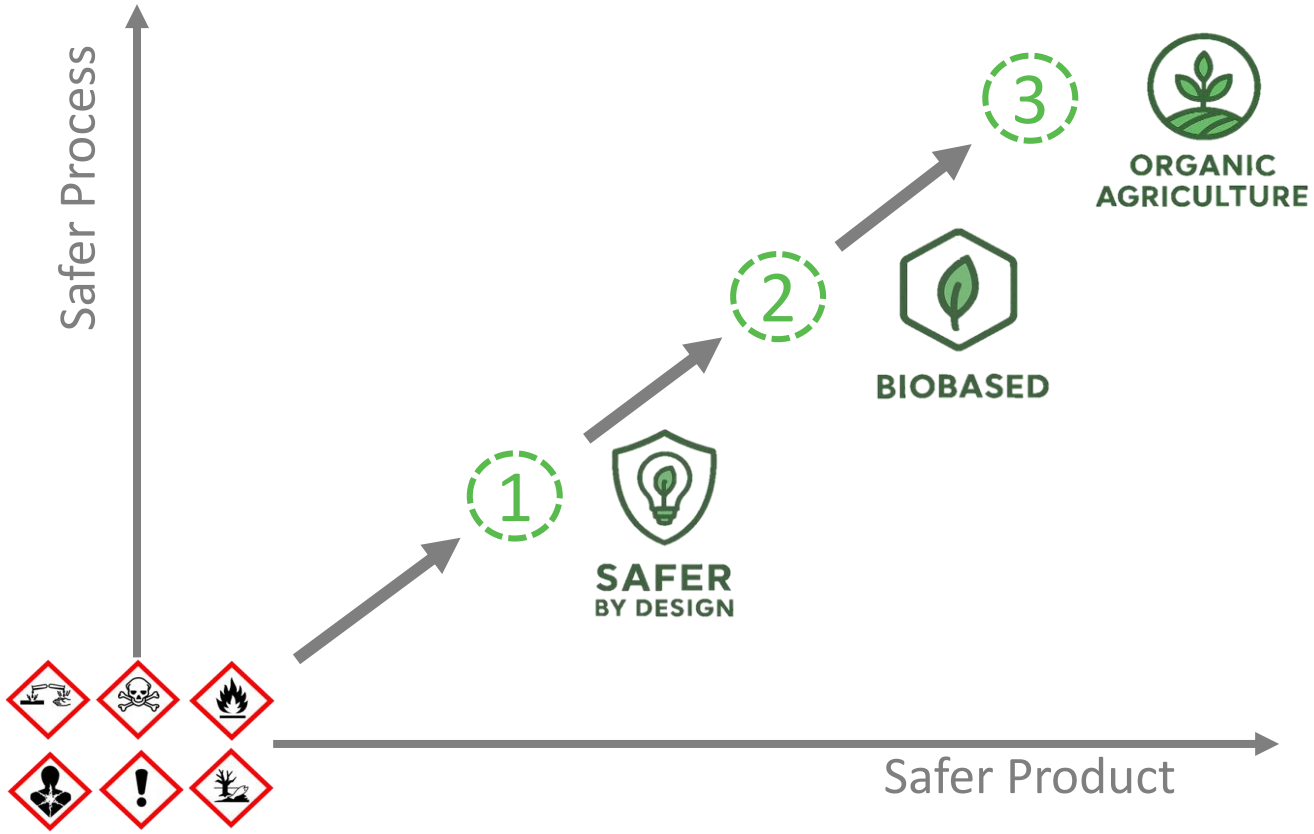


Active Ingredients
insecticides, fungicides, herbicides, biostimulants…

Co-formulants
-present in **all** pesticides (up to 50%)

Our Solution - Applicative Platform

Supporting the entire agrochemical sector transition



Minagro with co-formulants is driving a sustainability shift, easy to implement and scalable across the entire industry

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Our Solution – Platform of alternative chemicals

		Current CRL	Maturity year
In-can Preservatives *7 products*	TRL 1 - 3 → TRL 4 - 6 → **TRL 8**	8	2028
Adjuvant *5 products*	TRL 1 - 3 → TRL 4 - 6 → **TRL 8**	8	2030
Biofertiliser / Stabiliser *2 products*	TRL 1 - 3 → **TRL 5**	5	2030
Solvent *2 products*	**TRL 3**	3	2035
Functional ingredients *Green defoamer, sticker, coating...*	***R&D project on biobased adjuvant to be initiated in 2026.***		

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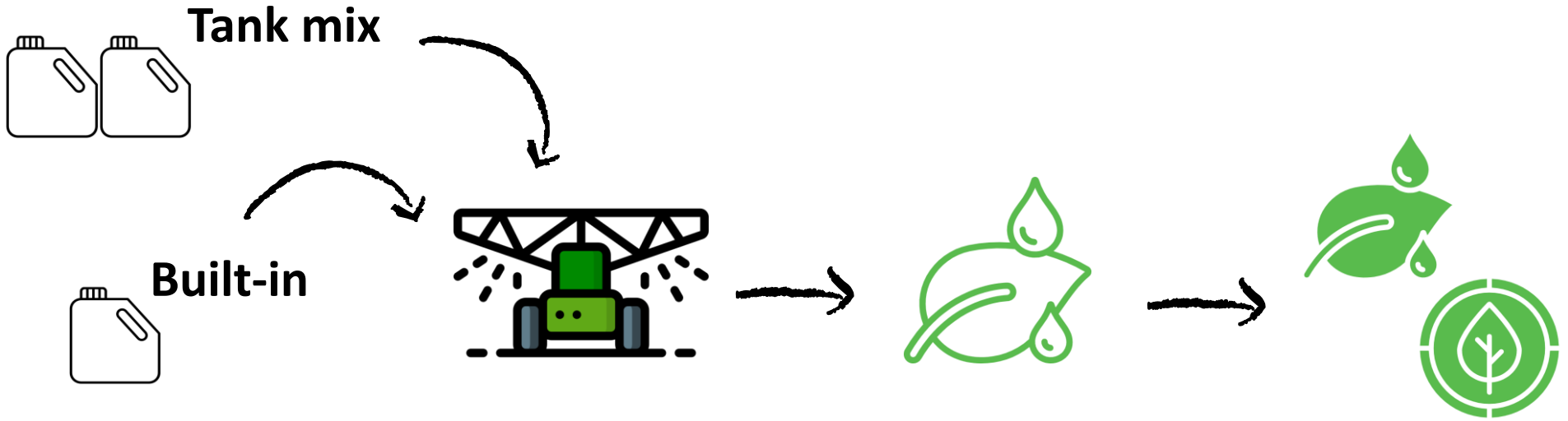
Adjuvants - Context

Molecules without biological activity that can enhance the efficacy of the delivery system



No sustainabilty without performance

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Case study – Adjuvants Sovinol A (Built-in)

Product	REACH	Recommended dosage (on leaf)	Wetting	Spreading	Penetration
Sovinol A800 **Sovinol A800/N** Biobased	✓	0,5%	✓	✓	✓
Sovinol A010 **Sovinol A010/N** Biobased *Expected in 2030*	✓	0,03%	✓	✓	✓

- Readily biodegradable
- Safe tox-ecotox profile

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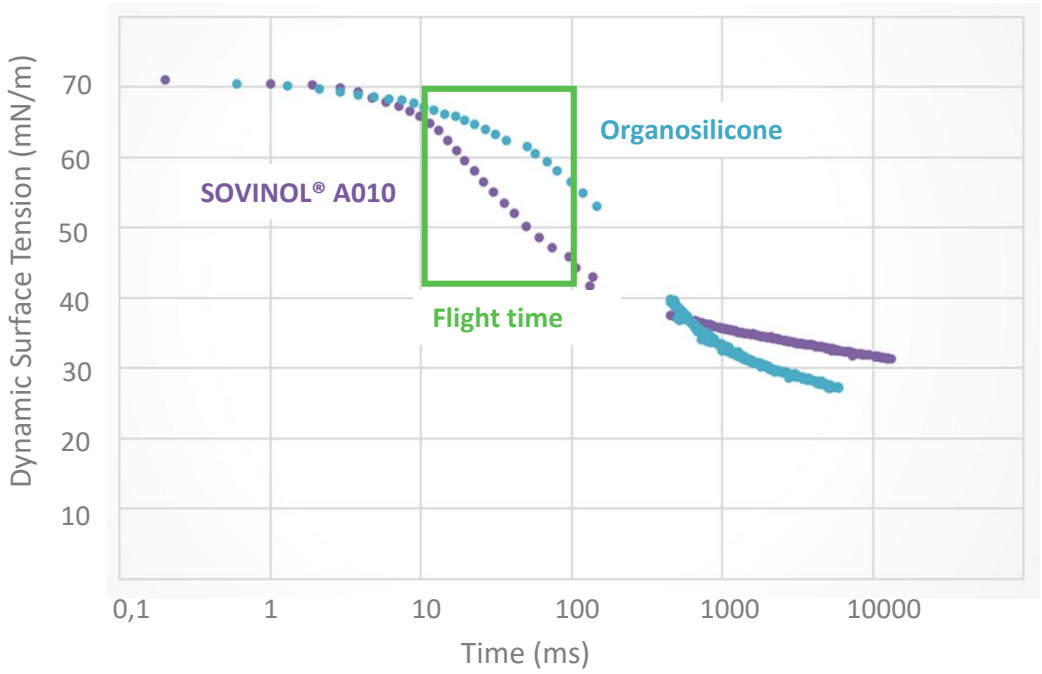
SOVINOL® A010 – Retention & Sticking

Sovinol® A010 *vs* Organosilicone at **0,035%**



Drops of 2µl under UV light

H_2O

SOVINOL® A010 **0,03%**

Faster reduction DST with sticking and wetting effects at 0,03%

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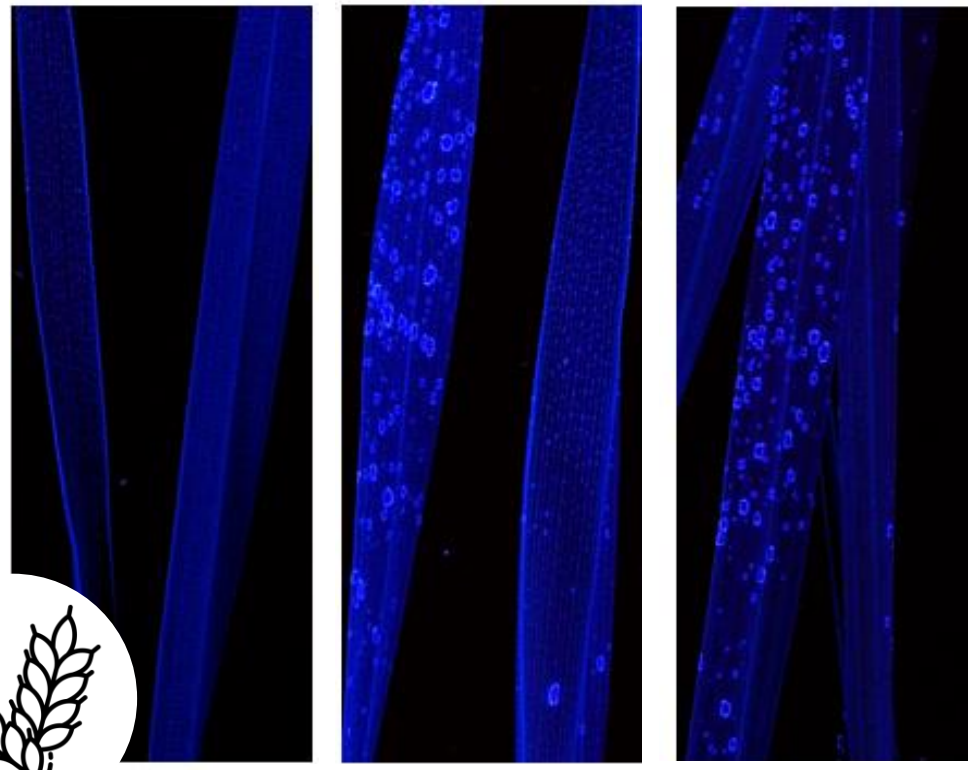
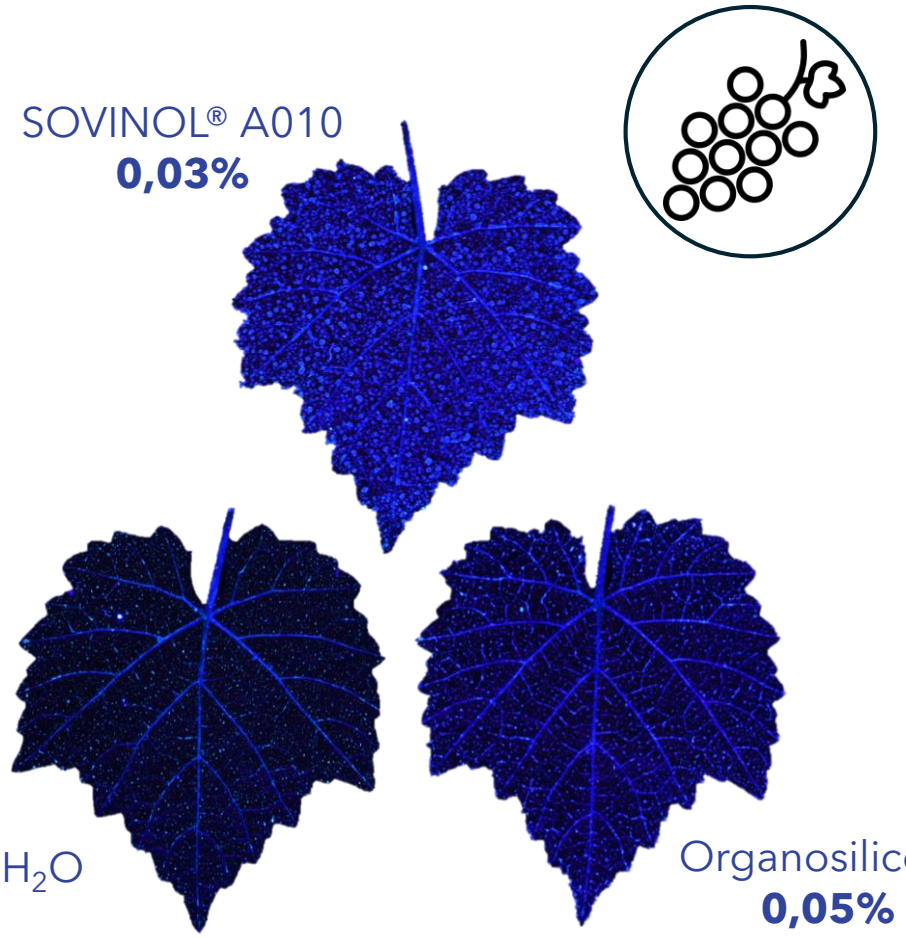
SOVINOL® A010 – Spraying



H_2O

SOVINOL® A010
0,03%

Organosilicone
0,05%



Very good coverage

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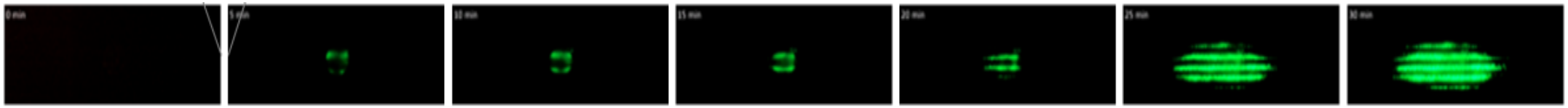
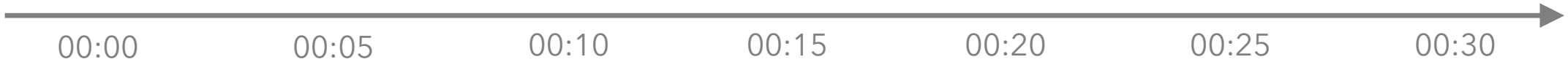
SOVINOL® A010 – Penetration

SOVINOL® A010 - **0,03%**

The dye becomes fluorescent inside the cell
Higher fluorescence means higher penetration

Methylated Seed Oil - **0,5%**





Time (min) after 1 µL deposition under UV light

Excellent penetration driving force at 0,03%

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Our contribution

Easy-to-implement sustainable shift

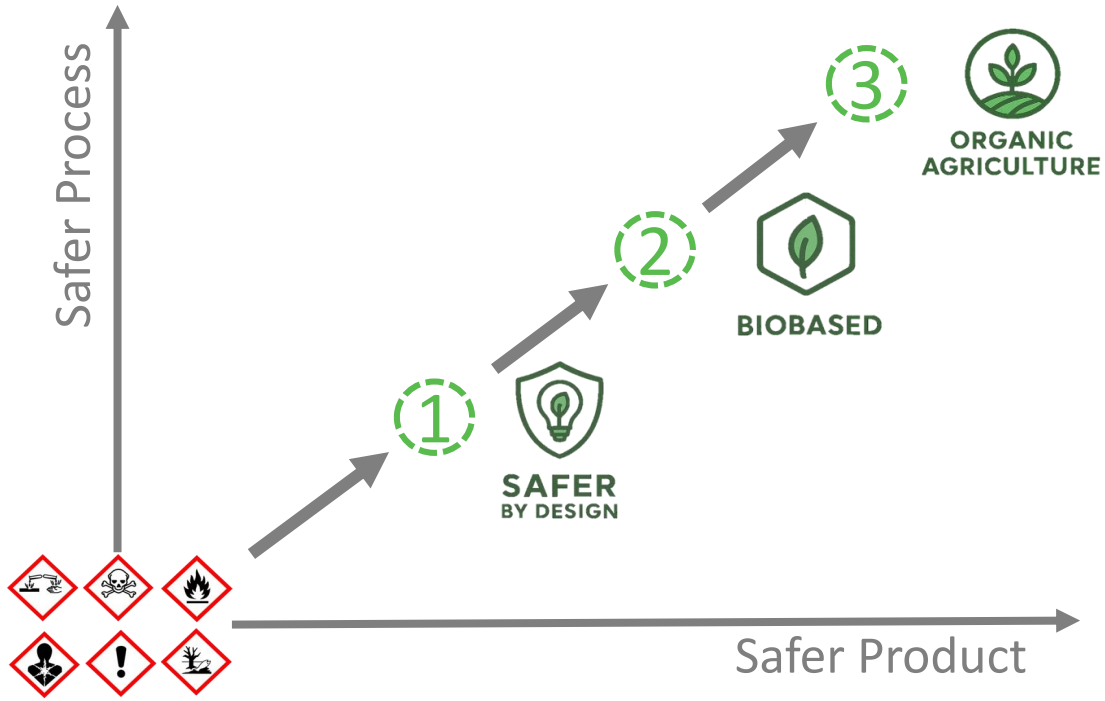
Anticipating future changes

In-can Preservatives
7 products

Adjuvant
5 products

Biofertiliser / Stabiliser
2 products

Solvent
2 products



Sustainable alternatives are ready, what's blocking the shift?

A rigid regulatory framework:

- **No proactive substitution**
- **Long timeline** for new registrations

Agriculture and the bioeconomy remain disconnected

As always, innovation moves first and regulation follows

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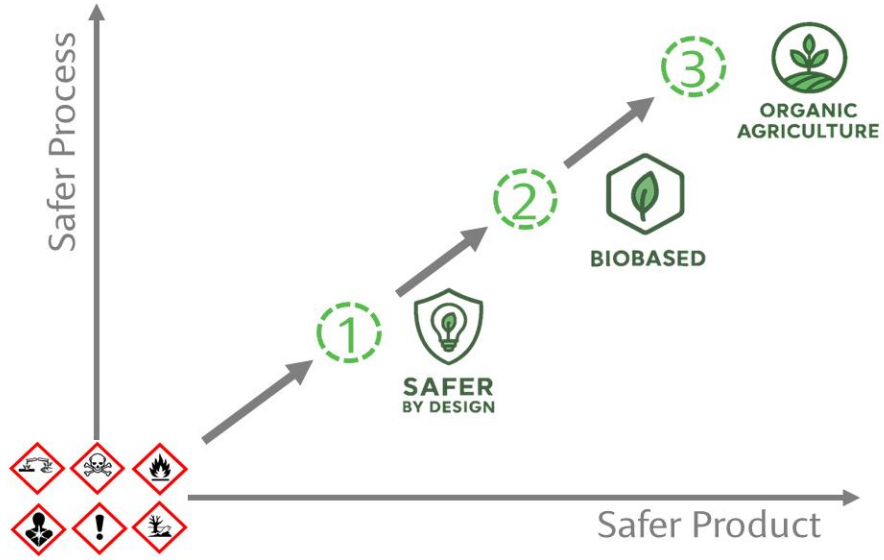

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