

Basic Substances as Renewable and Affordable Crop Protection Products

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Abstract

Under EU pesticide regulation, it was possible to approve and thus legalize the traditional practices of common natural plant protection products from mineral, vegetal and animal origin used as "biopesticides". The use of these compounds was made possible by field trials together with the collection and display of the gray literature references. The usages of these low concern natural plant protection products are therefore established and are available not only legally to all European farmers, but directly transferable to any agricultural entity or farmer able to dispose of these handy compounds.

Keywords: Basic substances, biopesticides, foodstuff, biodegradability

1. Introduction

The opportunity of using low-concern natural products (plant extracts and light compounds, light supports/aids and plant defence enhancers) in agriculture for crop protection as phytochemical is now operative¹ at EU Plant Protection Regulation. These plant protection named "basic substances" are from different origin: foodstuff, products from natural origin (mineral, animal, plant decoction) and very light chemicals.² Up to now they are all granted without MRL (Maximum Residue Limits). These light agricultural tools are considered as biopesticides although most of them are not assorted with a biocidal mode of action (MOA).

Available and operational in all EU they may be employed around the world for themselves and of course as allowed pesticides for exportation. Most of them are also allowed in organic production.³

2. Plant extracts

Although some plants as decoction or tea are not accessible all over the world, some are well known in many places. As example, *Equisetum*, *Urtica* and *Salix* spp. are already allowed and more plant extracts are coming.

3. Foodstuffs

On the contrary to plant extracts, all approved³ foodstuff⁴ for this plant protection purpose are easily available on the planet (vinegar, chitosan, sucrose, sodium bicarbonate, fructose,

whey, di-ammonium phosphate, sunflower oil and lecithin).

4. Results

All the core of the plant protection uses, the Good Agricultural Practices (GAP) tables are of public occurrence.⁵ In this database, the list of the basic substance may be found in "Search active substances" and sub-selection "Advanced Search" then "type" and finally "Basic substance". For each **approved** basic substance, the "Review Report", available on each individual corresponding web page, contains the dedicated GAP table where Usages are detailed in the Appendix II.⁶

5. Conclusion

Renewable and readily affordable plant protection products and substances are described in their status, accessibility and Usage. These bioresources mainly from plants are commonly available inside EU and abroad. Non-biocidal, thus non-toxic, mode of actions, including lure effect, are privileged for these crop protection products. Hopefully, more substance will come into force in the next years, including many foodstuff or additives.

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7. References

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