

Appendix 2. List of Permitted Crop Protectants, Growth Regulators and Seed Treatments for the Production of Organic Food

Substances Description, Compositional Requirements	Conditions for Use
I. CROP PROTECTANTS	
Chitin nematicides	
Coffee grounds	
Corn gluten meal	
Natural acids (e.g. vinegar)	
Preparations/products from Neem (<i>Azadirachta spp.</i>)	
Fermented product from <i>Aspergillus</i>	
Plant oils	
Natural plant preparations such as tea seed meal, Fishtail palm extracts.	
Plant based repellents such as fermented plant juice, marigold.	
Preparations of <i>Chrysanthemum cinerariaefolium</i> .	The addition of synthetic Piperonyl butoxide to Chrysanthemum preparation is prohibited
Preparations from <i>Quassiaamara</i>	
Preparations of Rotenone from <i>Derris elliptica</i> , <i>Lonchocarpus</i> , <i>Thephrosia spp.</i>)	The substance should be used in such a way as to prevent its flowing into waterways.
Preparations from <i>Ryaniaspeciosa</i>	Need recognized by the certification body or authority.
Spinosad	Use only where measures are taken to minimize the risk to parasitoids and to minimize the risk of development of resistance.

	Need, prescription and application rates recognized by certification body or authority
Sabadilla ¹	
Tobacco tea (pure nicotine is forbidden)	Need to be recognized by the competent authority
Chloride of lime	
Copper salts (e.g. sulfate, hydroxide, oxychloride, octanoate, cuprous oxide, Bordeaux mixture and Burgundy mixture)	Need, prescription and application rates recognised by certification body or authority. As a fungicide on condition that the substance is used in such a way as to minimise copper accumulation in the soil. Competent authority should set limits for the maximum application on a national level taking into account pedo-climatic conditions type of crops and periodic disease attacks.
Diatomaceous earth	Need be recognized by the competent authority
Light mineral oils (paraffin)	Need to be recognized by the competent authority
Lime sulfur (Calcium polysulfide)	
Sodium bicarbonate	
Calcium hydroxide (hydrated lime)	For application on aerial plant parts only
Potassium bicarbonate	
Potassium permanganate	Need to be recognized by the competent authority
Iron phosphates	Need to be recognized by the competent authority
Calcium Oxide (Quicklime)	
Sulfur (in elemental form)	Other forms need to be recognized by the competent authority

¹Sabadilla is derived from the seeds of the Sabadilla lily – a native plant of South America.

Fungal preparations (e.g. <i>Metarhizium annisoplea</i> , <i>Trichoderma harzianum</i> , <i>Beauveria bassiana</i>)	
Bacterial preparations (e.g. <i>Bacillus thuringiensis</i> , spinosad)	
Release of parasites (e.g. <i>Trichogramma sp.</i>), predators (e.g. ladybird beetle, earwig and lacewing) and sterilized insects	
Viral preparations (e.g. <i>granulosis virus</i> , Nuclear Polyhedrosis Virus (NPV), etc.)	
Potassium soap (soft soap)	
Rodenticides	Should come from natural origin.
Sulfur dioxide	
Thermal controls	
Traditional preparations (of non synthesized chemical nature) based on natural products	
Physical methods (e.g. chromatic traps, mechanical traps)	
Mineral oils	Need to be recognized by the competent authority.
Mulches (including plastic mulch), nets	
Pheromones and attractants	Use in traps and dispensers only
Preparations on the basis of metaldehyde containing a repellent to higher animal species	As far as applied in traps.
II. GROWTH REGULATORS	
Algal preparations e.g. (Chlorella)	
Animal preparations and oils e.g. fish extracts	

Beeswax	
Dairy products (e.g. milk, casein)	
Seaweed, seaweed meal, seaweed extracts	
Gelatine	
Lecithin	
Extract from mushroom (Shiitake fungus)	
Propolis	
Ethylene	<p>For degreening of citrus for fruit fly prevention and as a flowering agent for pineapples.</p> <p>As sprouting inhibitor for potatoes and onions: Need recognized by the certification body or authority for sprout inhibition of stored potatoes and onions where varieties that have long dormancy characteristics are not available, or these varieties are not suited to local growing conditions.</p> <p>Must be used in a manner that minimizes exposure to operators and workers for ripening of kiwifruit, bananas and other tropical fruit.</p>
Potassium hydrogen carbonate	
III. SEED TREATMENTS	
Wood ash	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Silicates (e.g. sodium silicates, quartz)	
Carbon dioxide and nitrogen gas	
Ethyl alcohol	
IV. GROWTH REGULATOR AND SEED TREATMENT	

Mineral powders (stone meal)	
V. CROP PROTECTANT AND SEED TREATMENT	
Sterilized insect males to be used transferred under crop protectant category	
Sea-salt and salty water	
VI. CROP PROTECTANT, GROWTH REGULATOR AND SEED TREATMENT	
Herbal and biodynamic preparations	
Soda	
Sterilized insect males	
Homeopathic and Ayurvedic preparations	