

BIOCEBO/BIO

DOCUMENT M-CP, Section 3

DATA ON APPLICATION

Version history¹

Date	Data points containing amendments or additions and brief description	Document identifier and version number

¹ It is suggested that applicants adopt a similar approach to showing revisions and version history as outlined in SANCO/10180/2013 Chapter 4 How to revise an Assessment Report

Table of Contents

CP 3	DATA ON APPLICATION	4
CP 3.1	Field of Use Envisaged	4
CP 3.2	Effects on Harmful Organisms.....	4
CP 3.3	Details of Intended Use	6
CP 3.4	Application Rate and Concentration of Active Substance	6
CP 3.5	Method of Application	7
CP 3.6	Number and Timings of Applications and Duration of Protection.....	7
CP 3.7	Necessary Waiting Periods or Other Precautions to Avoid Phytotoxic Effects on Succeeding Crops	8
CP 3.8	Proposed Instructions for Use.....	8

CP 3 DATA ON APPLICATION

CP 3.1 Field of Use Envisaged

The product is an insect attractant, especially formulated for the control of the Mediterranean fruit fly (*Ceratitis capitata*) in fruit trees and the olive fly (*Bactrocera oleae*).

Its use is seasonal, mainly in summer / autumn. BIOCEBO is intended to be mixed with a properly authorized insecticide.

CP 3.2 Effects on Harmful Organisms

The formulated product BIOCEBO is not a plant protection product itself, it is a pest attractant, because the degradation compounds of the hydrolysed proteins, due to their organoleptic and nutritional characteristics, behave as an attract trophic. And finally, they are food for insects, in such a way that the insecticide applied to the mixing on crops attracts them and then, the product executes its adverse effect, causing the death of insects. Therefore, biting insects, mainly flies, are attracted by the odour of BIOCEBO and die due to the effect of the associated insecticide.

Ceratitis capitata

The Mediterranean fruit fly, or Medfly, is one of the world's most destructive fruit pests. Because of its wide distribution over the world, its ability to tolerate cooler climates better than most other species of fruit flies, and its wide range of hosts, it is ranked first among economically important fruit fly species. This pest attacks more than 260 different fruits, flowers, vegetables and nuts.

The damage to crops caused by Mediterranean fruit flies result from 1) oviposition in fruit and soft tissues of vegetative parts of certain plants, 2) feeding by the larvae, and 3) decomposition of plant tissue by invading secondary microorganisms.

Larval feeding damage in fruits is the most damaging. Mature attacked fruits may develop a water soaked appearance. Young fruits become distorted and usually drop. The larval tunnels provide entry points for bacteria and fungi that cause the fruit to rot. These maggots also attack young seedlings, succulent tap roots, and stems and buds of host plants.

Cycle

- Eggs: Eggs are deposited under the skin of fruit that is just beginning to ripen, often in an area where some break in the skin has already occurred. Eggs hatch in 1.5 to 3 days in warm weather.
- Larvae: Larvae pass through three larval stages, or instars. They are shaped typical of fruit flies, being elongate, cream coloured, cylindrical maggot-shaped, anterior end narrowed and somewhat recurved ventrally, with anterior mouth hooks, and flattened caudal end. Length of first larval stage is 1/25 inch or less, body mostly transparent; the second larval stage is partially transparent with the fruit in the gut visible; the fully grown third larval stage is 1/4 to 1/3-inch-long, with a body fully opaque white or the colour of ingested food. Exact size of larva depends on diet. The larvae can be distinguished from other fruit fly larvae by the anterior, or thoracic, spiracles that bear small, finger-like tubules ranging from 7 to 11 in number, typically 9 to 10 in number. The larval stage may last as short as 6 to 10 days or as long as 14 to 26 days depending on temperature and

host. By the time the larvae have fully developed and are ready to pupate, the fruit has usually dropped to the ground where pupation occurs.

- Pupae: Pupae are cylindrical, approximately 1/8-inch-long, and dark reddish brown. Minimum duration of the pupal stage is 6-13 days when the mean temperature ranged from 76°-79° F. Pupae usually develops in soil an inch or two below the surface.

- Adults: The adult is 1/6 to 1/5-inch-long which is about two thirds the size of a house fly. The general colour of the body is yellowish with a tinge of brown, especially the abdomen, legs, and some of the markings on the wings. The oval shaped abdomen is clothed on the upper surface with fine, scattered black bristles, and has two narrow, transverse, light coloured bands on the basal half. The female can be distinguished by its long ovipositor at the apex of the abdomen. When fully extended, the ovipositor (the egg laying tube) is about 6 times as long as its greatest width. Adults die in greatest numbers within 2-4 days after emergence if they cannot obtain food. Usually about 50% of the flies die during the first 2 months after emergence. Some adults may survive up to a year or more under favourable conditions of food, water, and cool temperatures. When host fruit is continuously available and weather conditions favourable, successive generations will be large and continuous. Lack of fruit for 3 to 4 months reduces the population to a minimum.

Behaviour

When the eggs hatch, the larvae begin feeding almost immediately. Tunnels are formed, but the larvae often feed together in the same vicinity until they are nearly fully grown.

Larvae leave the fruit in largest numbers at or just after daybreak and pupate in the soil or whatever is available.

Adults emerge from the pupal cases in largest numbers early in the morning during warm weather and emerge more sporadically in cooler weather. They can fly short distances, but winds may carry them a mile or more away. Copulation may occur at any time throughout the day. Newly emerged adults are not sexually mature. Males often show sexual activity 4 days after emergence, and copulation has been observed 5 days after emergence. Most females are ready to mate from 6 to 8 days after emerging from the pupa. Both sexes are sexually active throughout the day.

Rhagoletis oleae

Fruit Fly, common name for two families of true (two-winged) flies, the larvae of which feed on fresh or decaying vegetable matter. True fruit flies, such as the house fly-sized apple maggot. They are sometimes called peacock flies because of the way they wave and display their wings in courtship. The term *fruit fly* is also applied to the much smaller vinegar flies.

Among the true fruit flies, adults of the apple maggot are found in orchards throughout the summer months. The female punctures the apple skins with its sharp ovipositor and lays one or more eggs in each apple. The maggots bore through the pulp and grow to about 6 mm (about 0.25 in) in length. After the apple has fallen, the larvae burrow about 3 cm (about 1 in) underground, where they spend the winter and spring as pupae. The cherry maggots, the currant fruit fly, the melon fly, and the olive fruit fly have similar life cycles.

CP 3.3 Details of Intended Use

GAP table presented in the draft Registration Report of BIOCEBO.

Crop and/or situation (a)	Member State or Country	Product name	F G or I (b)	Pests or Group of pests controlled (c)	Preparation		Application				Application rate per treatment			PHI (days) (m)	Remarks
					Type (d-f)	Conc. a.s. (i)	method kind (f-h)	range of growth stages & season (j)	number min-max (k)	Interval between application (min)	g, kg a.s /ha min-max (l)	Water L/ha min-max	Kg, L product./ha min-max (l)		
Deciduous Fruit trees Citrus Olive trees	SPAIN	BIOCEBO	F	Diptera insects <i>Ceratitis capitata</i> , <i>Rhagoletis cerasi</i> , <i>Bactrocera oleae</i> and others.	SL	300 g/l	Patch Spray	BBCH 83/85/87 (*)	1-3 (*)	3/season (*)	450 g as/ha (*) 1350 g as/ha (*)	75-150 L/ha (*)	1.5 L/ha (*) 4.5 L/ha (*)	(*) Depends on the insecticide to be mixed with the attractant	

(*) Depends on the insecticide to be mixed with the attractant

CP 3.4 Application Rate and Concentration of Active Substance

Application rate: The recommended dosage for the preparation of insecticides baits is 1,5%, which can be modified according to the characteristics of the bait used.

1.5% = 1500 g/hl of plant protection product.

1.50 L of BIOCEBO per 100L of water.

Concentration of active substance in material used: Hydrolysed proteins 30% w/v → 450 g active substance/hl

CP 3.5 Method of Application

The product is intended to be diluted/mixed with an authorized insecticide. The application method is by terrestrial spraying or aerial spraying of high, low or ultra-low-volume, according to the characteristics of the bait, the insecticide and the quantity of proteins used.

It is crucial if we want to achieve an appropriate efficacy to perform a good coverage of the treated area and get all fruits covered and wet by the product.

The insecticide products mixed with BIOCEBO should be authorized for this kind of application and the dosage will be done according the authorization.

The applications can be done to the whole surface, by means of spraying strips or patching, according to the kind of plague, the degree of the attack or to the phenologic status of the crop and of the plague.

Equipment used: pulverizer

Volume of diluents: spray volume 75-150 L/ha

CP 3.6 Number and Timings of Applications and Duration of Protection

Maximum number of applications and their timings: 3 applications/season. However, the number of applications and their consequent distribution will be determined by the kind of insecticide that has been mixed with the formulated product BIOCEBO.

Growth stages of crops or plants to be protected: During the process of fruit maturation, BBCH 80 to BBCH 90. However, for each application, the growth stages of the crop or plants to be protected will be determined by the kind of insecticide that has been mixed with the formulated product BIOCEBO.

Development stages of the harmful organism concerned: Adult

Duration of protection afforded by each application: Not applicable as the product has only a use as attractant, and therefore the insecticide is supporting with the protection.

Duration of protection afforded by the maximum number of applications: Not applicable.

CP 3.7 Necessary Waiting Periods or Other Precautions to Avoid Phytotoxic Effects on Succeeding Crops

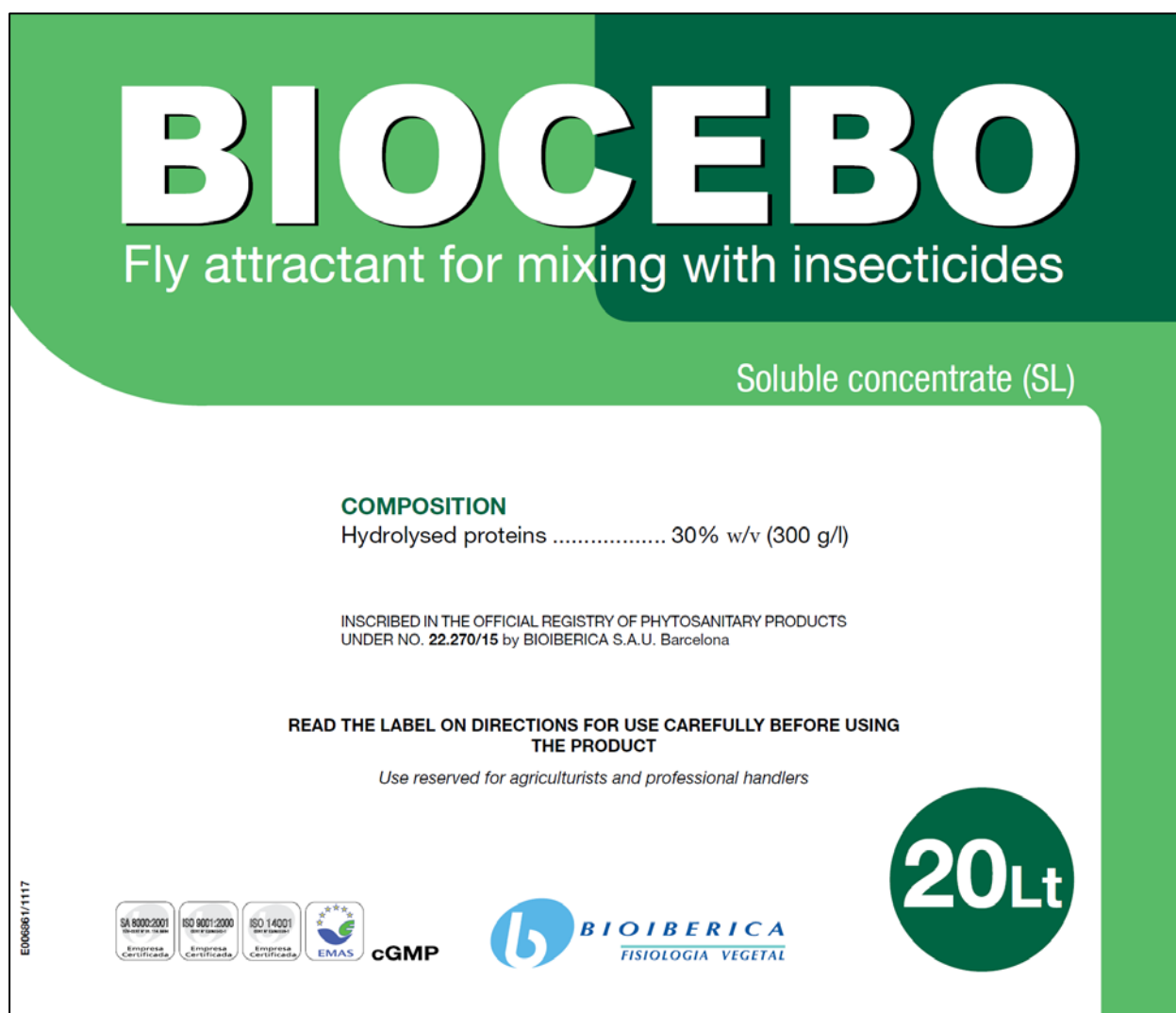
Not necessary due to the nature of hydrolysed proteins as there are natural and biodegradable substances already present in the environment. However, as BIOCEBO will be associated to an insecticide, waiting periods of the insecticide must be respected.

Minimum waiting periods or other precautions between last application and sowing or planting succeeding crops: Not applicable

Limitations on choice of succeeding crops: Not applicable

CP 3.8 Proposed Instructions for Use

See label below



BIOCEBO

Fly attractant for mixing with insecticides

CHARACTERISTICS
BIOCEBO is a formulation of hydrolysed proteins obtained by enzymatic hydrolysis. This product acts as a trophic attractant for adult diptera (flies) and is used as a base material for mixing with authorised insecticides in the preparation of fly bait.

AUTHORIZED APPLICATIONS
Citrus: Fly (*Ceratitis capitata*).
Olive: Fly (*Bactrocera oleae* or *Dacus oleae*).
Deciduous fruit trees: Fly (*Ceratitis capitata*).
 Acts as an attractant for adult *Ceratitis* and *Dacus*.

DOSE AND DIRECTIONS FOR USE
 Apply a dose of 1.5% (1.5 l per 100 l of water).
Volume: 50-125 l/ha (depending on the accompanying insecticide). 0.5 l per tree.
Maximum dose per application: 1.5 l/ha
Maximum dose per season: 4.5 l/ha

Mix the indicated doses carefully with the insecticide to ensure a homogeneous mixture and apply by ground or aerial spraying, in high, low or ultralow volumes, following the directions for use of the phytosanitary product. To be effective, good coverage must be ensured and all fruit trees must be well soaked in the product. Insecticide products used for the mixture must be authorized for these specific applications.

SAFETY PERIOD, NUMBER OF APPLICATIONS, INTERVAL BETWEEN APPLICATIONS AND VOLUME
 1-3 applications, interval of 7-15 days. The safety period, number of applications, interval between applications and volume used depends on the insecticide with which it is mixed.

OBSERVATIONS
 Always follow indications regarding phytotoxicity, toxicity and safety of insecticide with which the mixture is applied.

COMPATIBILITY
BIOCEBO is compatible with insecticides regularly used for the control of olive and fruit flies, such as dimethoate.

WARNING
 The recommendations and information provided here are the result of large, robust studies and trials. Nevertheless, numerous factors may occur during use which are beyond our control (preparation of mixtures, application, weather conditions, etc.). The Company guarantees the composition, formulation and content of the product. The user shall be liable for any damage caused (lack of efficiency, general toxicity, residues, etc.) due to failure to observe in full or in part the instructions of this label.

P102: Keep out of reach of children.
 P270: When using, do not eat, drink or smoke.
 P261: Avoid inhaling the spray.
 P262: Avoid contact with the eyes, skin, and clothes.
 P280: Wear gloves and protective clothing.
 EUH401: TO PREVENT RISKS TO PEOPLE AND THE ENVIRONMENT, FOLLOW THE INSTRUCTIONS FOR USE.

INFORMATION ON RISKS.
First aid:
 In case of contact with the eyes, rinse with abundant water for at least 15 minutes. Do not forget to remove contact lenses.
 In case of contact with the skin, wash with abundant water and soap, without rubbing.
 If necessary, bring the affected person to a hospital, along with the label or the container.
 - Provide symptomatic treatment.
DO NOT LEAVE THE AFFECTED PERSON ALONE UNDER ANY CIRCUMSTANCES. IN CASE OF ACCIDENT OR ILLNESS, CALL THE NATIONAL POISON CENTRE. TELEPHONE 91-562.04.20. In both cases, have the container or the label at hand.


RISK REDUCTION DURING HANDLING
Handler safety:
 For applications by patching, work clothes, chemical resistant gloves, and an FFP1 mask or mask with a P1 type filter or similar must be used during mixing/loading, application, cleaning and maintenance of equipment.
 - During the application of the product, the operator must avoid contact with the wet leaves.
 - Do not use this product if mechanical labour is planned that might damage the chemical resistant gloves.
 - Category L3 containers (200 and 1000 l drums) will be used in closed transfer conditions, using an automatic pump.

Worker safety:
 Work clothes and chemical resistant gloves must be used at all times.
 Do not enter the crop area until the product is dry.
 Work clothes consist of long sleeves, long trousers, and appropriate footwear.


REDUCTION OF ENVIRONMENTAL RISKS
 Spe3: To product aquatic life, maintain an untreated safety strip of 5 metres alongside open water masses.
 SP1: DO NOT CONTAMINATE WATER WITH THE PRODUCT OR CONTAINERS (Do not clean the product application equipment near open water / Avoid pollution via water outlet systems of farms or paths).

CONTAINER MANAGEMENT
 Rinse each container abundantly three times, or use a pressure hose, pouring the rinsing water into the spray reservoir. This container, when empty after use of the contents, is a dangerous residue and the user is obliged to deposit it in the collection points of the SIGFITO Integrated Management System.

E006861/1117



Manufactured by:



BIOIBERICA
FISIOLÓGIA VEGETAL

BIOIBERICA S.A.U.
 Ctra. Nacional II, km 680,6
 08389 Palafolls - (Barcelona) - Spain
www.bioiberica.com/salud-vegetal

