Bacticide consumption rate to control mosquito larva (Table 1)

Water reservoir characteristics	Product suspension concentration	Product consumption rate Product dosage	Suspension rate
Shallow water reservoirs (depth 0,3 – 0,5), With low and average plant cover	0,5-1%	0,5-1,0 kg/ha	100 L/ha
Water reservoirs with depth over 0,5m fully covered with plants	1-1,5%	1-1,5 kg/ha	100 L/ha
Water reservoirs, highly polluted by organic substances (collection reservoirs, waste channels, etc)	3%	3 kg/ha	100 L/ha
Water reservoirs of dwelling house basements	2-3%	1-1,5 gr/10m2	50 L/ha (0,05 L/10m2)

Consumption rate to control malaria mosquito larva is 2-3 kg/ha.
Bacticide consumption rate to control buzzer larvae is 3-9 kg/ha with working solution concentration not less than 3%.

Bacticide consumption rate to control blackfly larva (Table 2)

Water consumption rate	Product quantity, kg
1,0	2,4
5,0	12,0
10,0	24,00

Commodity form: powder, packed by 10, 15, 20 kg into hermetically sealed polyethylene bags, then multilayer paper bags, for household – packed by 15 gr into plastic bags or cans.
Warranted term of storage is 2 years at the temperature of natural conditions in original package.

2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

"Bona fide supplier" of the Federal register of bona fide suppliers

The company conforms the standard of the quality management system ISO 9001 : 2008

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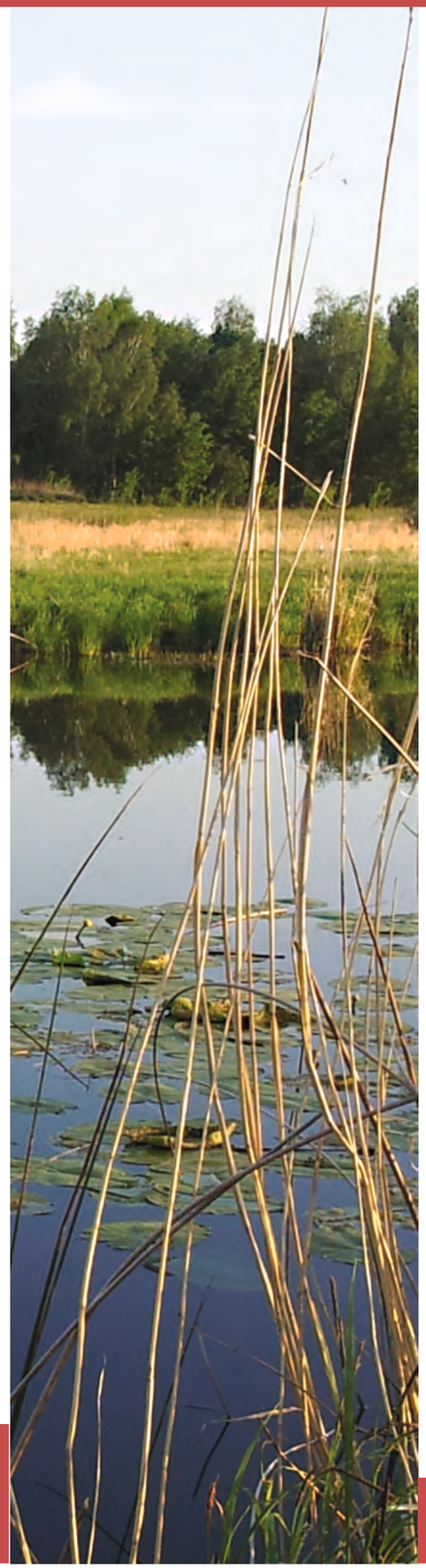

BACTICIDE ™

www.sibbio.ru

MICROBIOLOGICAL PRODUCT FOR MOSQUITO AND BLACKFLY LARVA CONTROL

Bacticide is the most perspective and effective agent to control mosquito and blackfly larva at their breeding sites. The product is obtained on the basis of microbial culture Bacillus thuringiensis var. israelensis.

Purpose
to control malaria and non-malaria mosquito larva (buzzers, Cricotopus silvestris) and blood-sucking blackflies in all natural zones, at all types of water reservoirs, including fishery ponds.

The product composition
Bacticide comprises the following components: bacterial spores and protein toxins, produced in the process of the culture Bacillus thuringiensis var. israelensis growth, inert fillers, providing product integrity and working suspension stability.

Bacticide mode of action
Bacticide is the product of intestinal action. When penetrating larvae intestinal tract, the product causes its disfunction and subsequent mortality. Maximum effect is achieved against larva of I-III instar.
Periods of larva mortality last from several hours to several days and depend on product dosage, larva age and physiological state, hydrological and biocenosis characteristics of water reservoirs.
The majority of larva die in 24 hours.
Product residual larvicidal effect lasts for 5-10 days and depends on chemical composition of water, content of organic admixtures in water, illumination, water temperature and larva instar.

Bacticide advantages
- Action selectivity – effect only on dipteran larva
- No pest resistance to Bacticide, therefore product consumption rate is not changed
- The product does not contaminate environment, including water reservoirs, it is not accumulated in biocenosis and agricultural products
- Bacticide belongs to the group of substances, which are low toxic for humans and warm blooded animals (IV hazard class). It is safe for non-target hydrobionts and other components of natural complexes. Bacticide MPC for fishery ponds: 5 mg/L.


Mosquito Anopheles

BACTICIDE APPLICATION AGAINST MOSQUITO LARVA


Mosquito Anopheles


Mosquito pupae


Mosquito larvae of II-III instar

MOSQUITOS are carriers of over 100 different diseases, including malaria, yellow fever, Dengue fever, Japanese encephalitis, etc. Up to 300 – 500 million people in the world get infected with malaria annually. About 3 million of infected people die, the majority of them are children.

Buzzers (Chironomidae) were named because of the characteristic sound, which is obtained due to the fact that the mosquito wings make up to 1000 strokes per second. Larva of buzzers develop in ooze and are the main feed for fish. The buzzers are harmless, however, in the years of outbreaks, they cause discomfort.

The breeding sites of mosquito larva are standing or low flow reservoirs.

The main method of Bacticide application - the coating of product suspension on water surface, flooded or water-logged land using ground or aviation methods. For basement treatments the hydraulic, hand and backpack sprayers with long booms are used. Small basement areas can be treated with a dry product, spraying it on the surface. It is necessary to start treatments in the period of predomination of I-III instar.

It is recommended to consider the data of Table 1, when making calculation of the amount of working suspension depending on the area and depth of reservoir. For the reference point in the Table 1 is taken the minimum product consumption rate - 0.1 gr/m2 of the reservoir area with depth 10 cm.


Colony of mosquito larva of II-III instar

BACTICIDE APPLICATION AGAINST BLACKFLY LARVA


Blackfly Simuliidae

The blackflies are the specific carriers of Onchocercosis, Tularemia, Anaplasmosis, Anthrax, Glanders, Leprosy and Plague. The bites of blackflies cause swelling, painful itching and allergy.
In animals blackfly bites due to a large amount of toxins in saliva cause Simulotoxicosis, which can lead to various consequences: from decrease in productivity (daily milk yield of cows is reduced by 5-15 %) to death.

The breeding sites of Blackfly larva are rivers and streams.

The main method of Bacticide application
The streams and small rivers should be sprayed from the bank using hand, backpack and motor sprayers of various types. On larger reservoirs it is recommended to apply working suspension into the river bed from boats using spraying method or dosing method.
To calculate the required amount of Bacticide working suspension one should mention that the dosage of working suspension is 4 gr Bacticide per second for 1 m3 of water.
It is recommended to consider the data of Table 2, when making calculation of the amount of working suspension depending on the speed of the water flow.


Colony of blackfly larva of II-III instar


Blackfly Simuliidae


Blackfly pupae


Blackfly larvae of II-III instar