

CEREALS PROTECTION

4.0

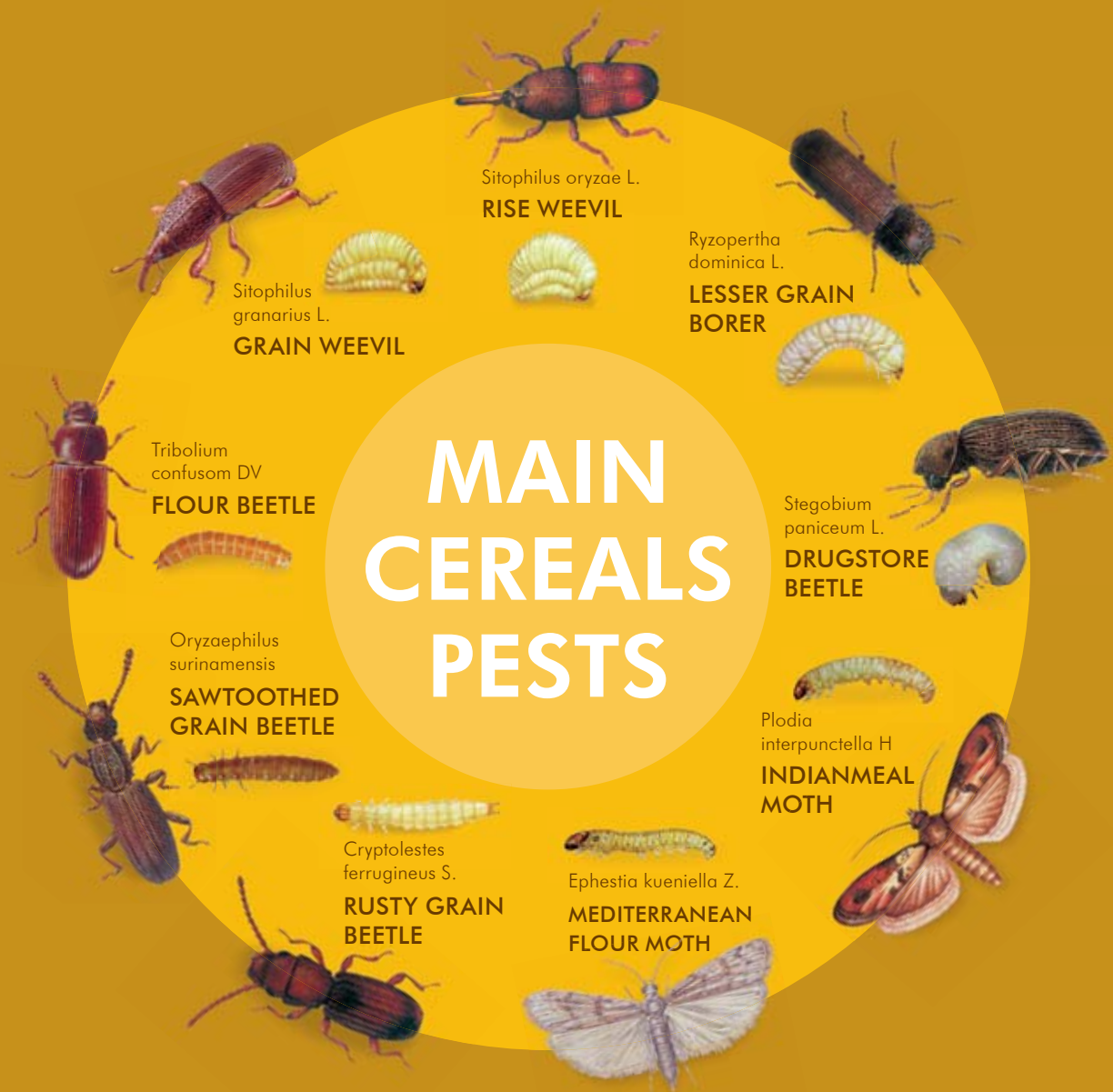


TARGETED SOLUTION FOR THE PROTECTION OF
STORED CEREALS, SILOS AND WAREHOUSES

www.protezionecereali.it



MAIN CEREALS PESTS



LET US FOCUS ON THE PROBLEM

Cereals pests are the most feared and widespread problem as they are responsible for major qualitative and quantitative losses of stored cereal. Heavy infestation can cause rises in temperature and humidity of the mass, thus increasing the risk of contamination by fungi (with mycotoxin production). Insects recognition and the knowledge of their biology is a key factor for an optimal cereals' preservation.

CEREALS PROTECTION PROJECT

Cereals protection project stems from a clear corporate philosophy gained through thirty years of experience. The aim is to offer targeted solutions able to control main pests of stored cereals. Cereals Protection project is the main reference today to the whole chain of cereals as it offers:

- ✓ The most complete and cutting edge range of products (environments disinfestation & disinfection and cereals disinfestation);
 - ✓ The easiest, safe and innovative application methods;
 - ✓ Consolidated technical assistance in all key aspects (entomology, chemistry, applications, regulations, etc.);
 - ✓ The maximum guarantee for the consumer;
- NEWPHARM is the main reference of the most important category associations. For the future it aims to offer increasingly specific and targeted solutions in full respect of the operator and the environment.

participating to

ITALMOPA



FEDERCHIMICA
ASSOCASA



ANI.D.
Associazione Nazionale
delle Imprese di Disinfestazione
Socio-fornitore

www.protezionecereali.it

WHAT MAKES THE DIFFERENCE

Pest colonization in warehouses is promoted by favorable climatic and environmental conditions: high relative humidity, high temperatures, presence of shelters in cracks and crevices and of course availability of nourishment. In order to preserve healthy cereals, storage facilities may choose the right intervention strategy among the several solutions developed. It is therefore important to:

- 1 - RECOGNIZE THE INSECTS
- 2 - ADOPT THE SOLUTION AMONG:
 - ✓ READY TO USE FORMULATIONS;
 - ✓ CONCENTRATED FORMULATIONS;
 - ✓ ORGANIC FORMULATIONS;
 - ✓ INERT POWDERS;
- 3 - CONSIDER THE MOST SUITABLE APPLICATION METHOD.

NEBULIZATION OF EMPTY SILOS AND WAREHOUSES

Nebulization of empty silos and warehouses is an essential factor for a correct preservation of cereals and it must be carried out before the cereal is stored, after a deep cleaning from powders and other residues. This treatment consists of making specific knock-down/residual actions, fogging on the walls, floors, ceilings, redler, elevators, hoppers, etc. This eliminates all present insects and mites (at all stages) and prevents the infestation of pests from outside.



SMOKE GENERATORS READY TO USE



ACTELLIC® SMOKE GENERATOR

INSECTICIDE SMOKE GENERATOR

COMPOSITION

Pirimiphos methyl 22,5%

DOSAGE

Package of 90 gr

A pack of ACTELLIC® SMOKE GENERATOR covers a volume of 570 m³.

ACTELLIC® SMOKE GENERATOR is suitable for use in warehouses, containers, wagons and environments used for storage, transportation and food transformation.

Crop protection product

CONCENTRATED PRODUCTS TO BE DILUTED OR READY TO USE



NUVACID® 7	NUVACID® 50	NUVACID® 50 COMBI PACK	BIOSOL® NEWSOL®
READY TO USE LIQUID	LIQUID EMULSIFIABLE CONCENTRATE	LIQUID CONCENTRATE + ACTIVATOR SOLVENT	LIQUID
COMPOSITION Tetramethrin 1,15% PBO 5,5%	COMPOSITION Tetramethrin 3,1% PBO 15,4%	COMPOSITION Tetramethrin technique 92% gr 3,1 (26 gr/lit) Piperonyl butoxide 90% gr 15,4 (130 gr/lit) Activator solvent	COMPOSITION BIOSOL®: Ethanol > 50% NEWSOL®: Isopropyl alcohol > 30% Polycarboxylates 5-15%
DOSAGE Cold method with hand pumps or atomizers: 1 liter per 100 m ² of surface to be treated. Cold/hot method with low-volume nebulizers (ULV) and thermal foggers: dose of 110-120 cc per 100 m ³ of volume to be treated. Active against MITES. Biocide	DOSAGE 1 - 1,5 lt of product per 100 lt of water. Against flying insects: 50-75 ml per 300 m ³ . Against crawling insects: 75-100 ml per 300 m ³ Active against MITES. Biocide	DOSAGE Mix the active substance concentration (0,5 liters) with the solvent activator (4 liters). The obtained solution is ready for use. NUVACID® 50 COMBI PACK is distributed with ULV sprayers (ultra low volume). AGAINST FLYING INSECTS: 50-150 ml per 200 m ² or 300 m ³ AGAINST CRAWLING INSECTS: 75-100 ml per 300 m ³ Biocide	DOSAGE BIOSOL® and NEWSOL® enhance the properties of the products used for the control of insects and parasites. Prepare a solution by diluting a concentrated product with 4-20 parts of BIOSOL® or NEWSOL®. BIOSOL® is recommended for the treatment on water repellent floors. Solvent

DIRECT TREATMENT OF CEREAL GRAINS

To preserve stored cereals preventive, curative and maintenance interventions are necessary. Transformers and exporters of foodstuff require a cereal absolutely insects free so as to be sold or to be allocated to processing and seed production.

SETTING UP OF A DOSAGE SYSTEM

The correct product application is essential to obtain a complete pest control.

Once you choose the right equipment according to your needs, it is important to evaluate carefully:

1. the type of nozzle,
2. the correct position/installation of the nozzles.

The right combination is crucial for a success treatment, to avoid product losses and to obtain a greater effectiveness of the product used.

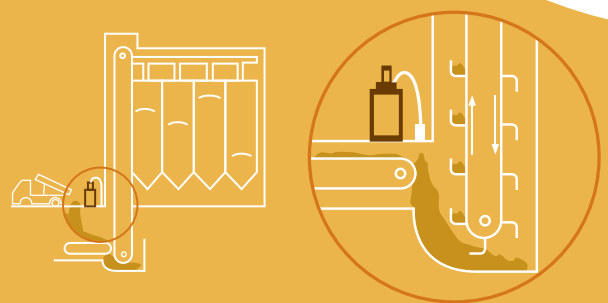
FAN NOZZLE (flat jet)

This type of nozzle is used when you have to treat on conveyor belts or cereals on a thin layer. The product is uniformly distributed throughout the layer of cereal in movement. You must arrange the nozzle carefully to a height such as to involve the entire width of the cereal's layer.

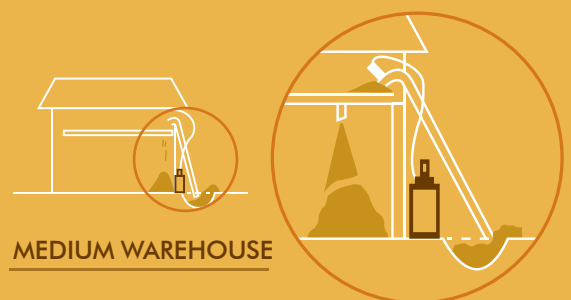
CONE NOZZLE

This type of nozzle is used when the cereal has a movement of free fall, redler, screw conveyors, etc. Nebulization through cone nozzles better invest cereals' kernels.

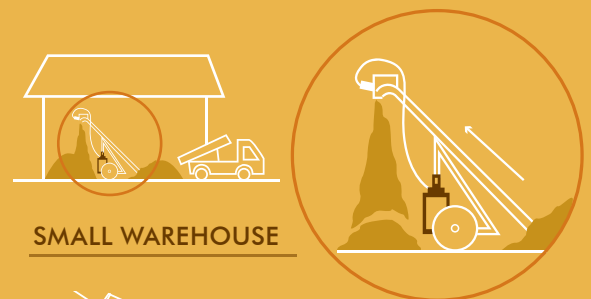
Once the equipment has been installed you must calibrate the flow pump based on the hourly flow of redler, augers, conveyor belts , etc.. and the type of nozzle or nozzles installed.



BIG WAREHOUSE



MEDIUM WAREHOUSE



SMALL WAREHOUSE



**ABSOLUTE
NOVELTY**



ACTELIC® 5

READY TO USE LIQUID

COMPOSITION

Pure Pirimiphos methyl
50 gr/ltr

DOSAGE

5-9 ml/q of cereals
(50-90 ml/ton)

Crop protection product

TANK CAPACITY 100 lt

Possibility of larger tanks on request.
(500 lt e 1000 lt)

FLOW RATE from 40 to 20.000 q/h depending
on CEREAL-SAN® model and on application
dosages.

MAIN CHARACTERISTICS

The pump assembly includes:

- ✓ Electric motor;
- ✓ Magnetic drive pump with BY-PASS;
- ✓ Float with a foot valve with filter.

ACCESSORIES:

- ✓ 1 complete spraying kit equipped with n° 2
injector bodies, n° 2 spray heads for each
type and n° 2 fixing supports;
- ✓ 20 meters rilsan tube 4-6 mm.

WITH READY TO USE PRODUCTS

USE: to disinfest incoming cereals, to prevent and/or eliminate the insects in the early stages of infestation. ACTELIC® 5 Newpharm (Pirimiphos methyl) is a ready to use product to be used alone and/or mixed. It allows you to control all infestations also of resistant insects as Sitophilus granarius L. (Grain Weevil).

TREATMENTS FOR STORAGE UP TO 6 MONTHS: use the minimum dosage indicated on the label.

TREATMENTS FOR STORAGE UP TO 12 MONTHS: use the maximum dosage indicated on the label.

**ABSOLUTE
NOVELTY**

ACTELIC® 5

- ✓ New refined vegetable solvent, which increases product adhesion;
- ✓ Favorable toxicological classification (no symbols);
- ✓ More efficacious;
- ✓ No odors;
- ✓ Stability at low and high temperature;
- ✓ Easy to mix.

EQUIPMENTS
**CEREAL
SAN®**



CEREAL-SAN® is a compact unit used for pest control of post harvest cereals.

Its strength, flexibility and ease of use, make it an ideal product for use also in extreme conditions. Its distribution system, with pressure gauge attached to the pump, can work with **3 spraying lines** of which one can be used for the possible insertion of a handgun (optional). CEREAL-SAN® can be equipped with both a product level control system to stop the pump when the product is finished and a digital flow meter to measure the product sprayed (optional).

BIOLOGICAL NEBULIZATION OF EMPTY SILOS AND WAREHOUSES



Organic silos and warehouses can be treated with natural products based on pyrethrum extract.

PYGRAIN® is an insecticide made of high quality natural pyrethrum. For optimal performance it is recommended to apply the product in the coolest and darkest hours of the day.

ENVIRONMENTAL TREATMENT:

For maximum knockdown effectiveness prepare a solution of 1 liter of PYGRAIN® and 4lt of NEWSOL®/BIOSOL®. 1 lt of solution for 700 - 1000 m³ of environment.



**BIOLOGICAL
NEBULIZATION**



PYGRAIN® - BIOSOL®

COMBINATION

THE MIXTURE SUGGESTED IS 1 PART OF
PYGRAIN® AND 4 PARTS OF **BIOSOL®**.

THE SOLUTION IS READY TO USE.



PYGRAIN®



PHYTOROB®

**LIQUID EMULSIFIABLE
CONCENTRATE**

COMPOSITION

Pyrethrum extract 50%: 4 gr

DOSAGE

10 ml/q CEREALS
(100 ml/ton)
Prepare the solution by diluting PYGRAIN® in water at 10% in relation to the degree of infestation. Spray 1 l of emulsion on 10 q of cereals, namely 20 liters of ready to use emulsion are sufficient to treat 20 tonnes of cereals.

Crop protection product

LIQUID

COMPOSITION

Rapeseed methyl ester

DOSAGE

To increase the wettability and adhesiveness on the cereal kernels it can be associated with PHYTOROB® in the ratio 1:1.

Vegetable solvent

DIRECT TREATMENT ON ORGANIC CEREALS

Organic cereals can be treated with natural insecticide products based on pyrethrum extract.

PYGRAIN® is an insecticide made of high quality natural pyrethrum.

For optimal performance it is recommended to apply the product in the coolest and darkest hours of the day.

DIRECT TREATMENT ON CEREALS:

10 ml/q. To increase the wettability and adhesiveness on the cereal it can be associated with PYGRAIN® a vegetable origin solvent (PHYTOROB®) in the ratio 1:1. Dose solution 20 ml/q.



EQUIPMENTS
**CEREAL®
SAN Air**

CEREAL-SAN® AIR is an innovative device for pest control of post harvest cereals. It's composed by:

- ✓ A vertical cylindrical stainless steel tank. The tank undergoes a pickling treatment and an electro-chemical polishing to ensure better resistance to corrosion.
- ✓ The distribution system displays a pressure gauge fixed to the tank and consists of 2 spraying lines. It is also possible to insert a handgun (optional).

CEREAL-SAN® AIR can be connected directly to compressed air or a portable compressor.

COVERING TREATMENT WITH POWDERS

ACTELLIC® 2/P Newpharm (Pirimiphos methyl) is a ready to use powder to be spread evenly on the surfaces of the mass with the use of dusters (or manually).

It is advisable to pulverize the surfaces before the storage.

This powder may be used also by mixing it directly with the cereal in reason of 200-500 gr/ton.



ACTELLIC® 2/P

READY TO USE
POWDER

COMPOSITION

Pirimiphos methyl 20 gr/kg

DOSAGE

20-40 gr/q (200-400 gr/ton)

Crop protection product



EQUIPMENTS
**CEREAL®
SANDust**

Cereal-San® Dust is an electric device recommended for post harvest cereal powder spraying. Powder dosing is positioned directly on an horizontal screw conveyor (speed and hole opening can be regulated). Its specific design ensures a constant, strong and enveloping pulverization.

Its strenght, robustness and functionality makes it an ideal product for cereals pest control

DISINFECTION OF EMPTY SILOS & WAREHOUSES

The sanitizing operations can eliminate a substantial portion of microorganisms and spores which often find in storage rooms perfect conditions for survival and proliferation.

However cleaning and detersion operations alone do not guarantee the complete removal of microbial contaminants. To eliminate pathogenic microorganisms (bacteria-fungus-virus) is therefore necessary to associate a proper disinfection procedure.



VIROSTER® FOOD INDUSTRY

POWDER

COMPOSITION

Peracetic acid, 19.5 grams of Tetraacetilendiammina 29 grams and equivalent sodium percarbonate to 12 grams of hydrogen peroxide.

DOSAGE

Diluted in water from 5 g / l to 20g / l depending on the result you want to achieve. Contact times: from 5 to 60 minutes. New generation of peracetic acid based disinfectant with broad spectrum of action. Thanks to its neutral pH is compatible with all washable surfaces, it is also safe for the operator, the environment and animals. It can be used in agri-food sector for the disinfection of equipment, floors and walls, furniture, vertical and horizontal silos, containers, warehouses and wagons.



The portable system **CEREAL-SAN® MIST** provides quick nebulisation with maximum knowckdown efficacy.

PRODUCT AND COMPOSITION	FORMULATION	DOSAGE	ACTION EFFECTIVENESS	RESIDUAL TOLERATED mg/kg		RANGE SAFETY IN DAYS	N° REG.	TYPE REG.	PACKAGE	
				cereali	sfar					
ACTELIC® 5 Pyrimifos methyle 50 gr/lit	Liquid ready to use	50-90 ml/ton	Contact medium to long residuality	5	2	-	11687	crop protection product	1x25 lt 4x5 lt 10x0,5 lt	DIRECT TREATMENT ON CEREAL
ACTELIC® 2/P Pyrimifos methyle 20 gr/kg	Dry powder	200-400 gr/ton	Contact medium to long residuality	5	2	-	11678	crop protection product	10x1 kg 1x20 kg	
ACTELIC® SMOKE GENERATOR Pyrimifos methyle 22,5%	Insecticide smoke generator	90gr: 1 per 570 m ³	Contact medium to long residuality	5	2	-	-	crop protection product	10x90gr	
PYGRAIN® Pyrethrum extract 50%: 4 gr	Concentrated liquid emulsifiable	80-100 ml/ton	Contact knockdown -	3	-	2	12763	crop protection product	4x5 lt 10x0,5 lt	DIRECT TREATMENT ON ORGANIC CEREAL
PHYTOROB® Rapeseed methyl ester	Liquid	1:1 with PYGRAIN®	-	-	-	-	-	-	1x25 lt	DIRECT TREATMENT ON ORGANIC CEREAL
NEWSOL® BIOSOL® Carrier alcoholic / alcohol glycol	Liquid	1:4 with PYGRAIN® or other concentrates	-	-	-	-	-	-	1x10lt	DIRECT TREATMENT ON ORGANIC CEREAL
NUVACID® 7 Technical tetramethrin 92% 1,15 gr (10 gr/lit) + PBO 90% gr 5,5 (47 gr/lit)	Liquid ready to use	1 lt x 100 m ² 110-120 ml x 100 m ³	Contact knockdown -	-	-	-	19841	Biocide	4x5 lt	NEBULIZATION OF EMPTY SILOS / WAREHOUSES
NUVACID® 50 Tetramethrin 26 gr/lit + PBO gr 15,4 (130 gr/lit)	Concentrated liquid emulsifiable	1-1,5%	Contact knockdown/residuality	-	-	-	19842	Biocide	12x1 lt	
VIROSTER® Peracetic acid 19,5 gr from Tetraacetiltilendiammina 29 gr and Sodium Percarbonate equivalent to 12 grams of water oxygenated	Powder to dissolve in water	da 5 a 20 gr/lit	disinfectant knockdown -	-	-	-	16442	Biocide	4x2 kg	DISINFECTION OF OF EMPTY SILOS / WAREHOUSES

Publication strictly reserved to the sales force, dealers and authorized technicians. Newpharm disclaims any liability for the misuse of the products and in the case in which the products are used in violation of any rule. Newpharm reserves the right to change this publication at any time. Before use carefully read the product label.

Ed.09.2016



NEWPHARM S.r.l. - Via Tremarende, 24/B
35010 Santa Giustina in Colle (Padova) - Italy
T. +39 049 9302876 - F. +39 049 9320087

info@newpharm.it - www.newpharm.it - www.protezionecereali.it