



Beloukha®

Technical leaflet

A new biobased suckercide



Beloukha®

TECHNICAL LEAFLET

OVERVIEW

- **Beloukha®** is a bio-sourced suckercide based on 680 g/L of pelargonic acid
- Pelargonic acid was originally isolated from the South African plant *Pelargonium graveolens*
- Pelargonic (or nonaioic) acid is a fatty acid with 9 atoms of carbon which is very common in diet of animals (mammals and birds)
- Naturally present in the environment pelargonic acid is quickly breakdown in the soil, producing CO_2 and H_2O , that remains in the carbon cycle



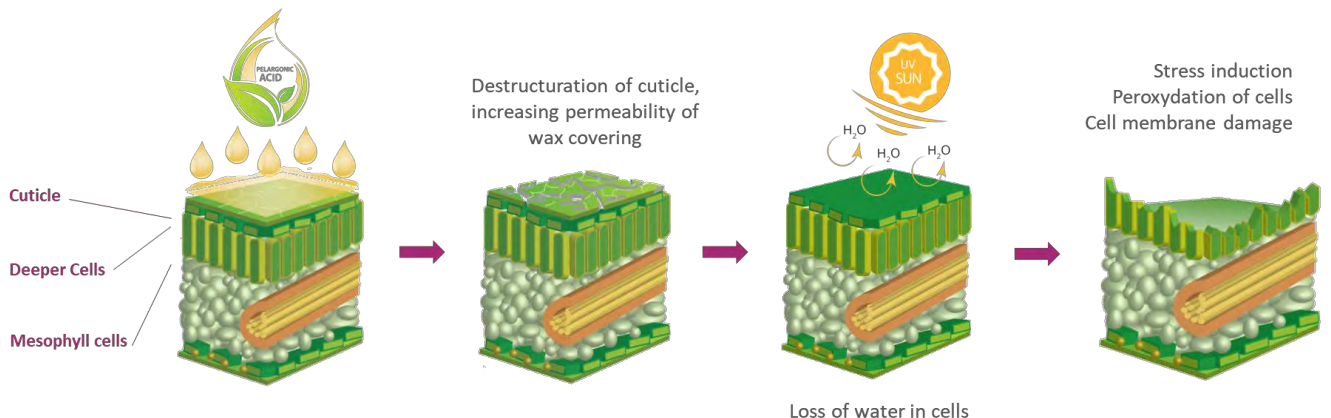
About the USDA BioPreferred Program and Certified Biobased Product label

The BioPreferred Program is a USDA-led initiative that assists the development and expansion of markets for biobased products. The BioPreferred Program is transforming the marketplace for biobased products through two initiatives: mandatory purchasing requirements for Federal Agencies and Federal contractors and voluntary product certification and labelling.



MODE OF ACTION

- Removal of cuticular wax layer : leaf or bud protection layer is destroyed
- Intercalation of pelargonic acid into the cell membranes of the epidermis : cell leakage due to membrane rupture
- Peroxidative radicals from photosensitized chlorophyll released by destabilized membranes : self destructive breakdown of the leaf or bud

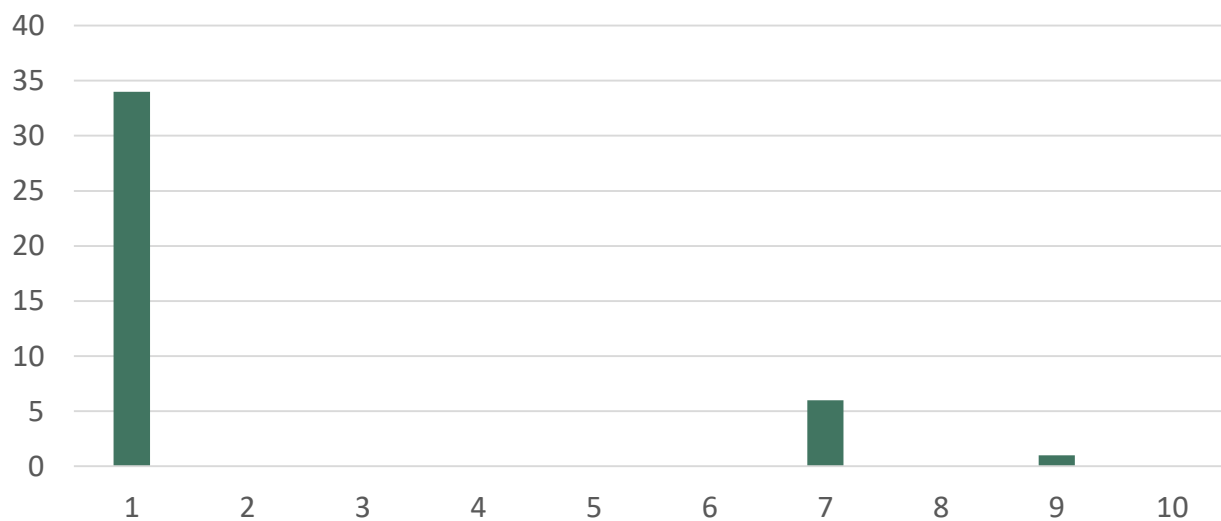


TRIAL SYNTHESIS

TOBACCO RESEARCH BOARD – ZIMBABWE – CULTIVAR T75

#	Suckercide	Concentration L/L water	Time of application	Volume ml/plant
1	Untreated control	-	-	-
2	0.25% Beloukha + Flumetralin 150 EC	1:400 + 1:66	At topping	8 cup
3	0.5% Beloukha+ Flumetralin 150 EC	1:200 + 1:66	At topping	8 cup
4	0.75% Beloukha + Flumetralin 150 EC	1:133 + 1:66	At topping	8 cup
5	1% Beloukha + Flumetralin 150 EC	1:100 + 1:66	At topping	8 cup
6	1.5% Beloukha + Flumetralin 150 EC	1:67 + 1:66	At topping	8 cup
7	1.5% Beloukha (alone)	1:67	At topping	8 cup
8	Flumetralin 150 EC (alone)	1:66	At topping	8 cup
9	N-Decanol 790 EC (alone)	1:25	At topping	8 cup
10	N-Decanol 790 EC + Flumetralin 150 EC (standard)	1:25 + 1:66	At topping	8 cup

Plants topped at the recommended leaf number. All suckers greater than 2cm were removed before suckercide application. First suckercide application was done soon after topping and the second application was applied 14 days later.



Sucker counts 14 days after the second application.
Suckers > 2cm are counted.

Conclusions

A combination of **Beloukha**® at 0.75 and 1% concentrations with Flumetralin 150 were effective in controlling tobacco axillary shoots. Results from previous seasons indicate that the biosuckercide is effective in controlling suckers only when combined with a locally systemic suckercide. **Beloukha**® can therefore, be recommended as an alternative contact suckercide to N-Decanol 790 EC in tobacco production at a concentration of 0.75%.

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TECHNICAL LEAFLET

USE PATTERN

- Do not use at higher concentration of 0.75% with an 8 ml cup.
- 2 applications :
 - first soon after topping
 - second 14 days later
- Plants topped at the recommended leaf number
- All suckers greater than 2cm removed before suckercide application



ID CARD

Active ingredient	Pelargonic acid (680 g/l)
Origin	Plant origin
Specificity	Natural Extraction
Formulation	EC
Color	Clear yellow
pH	3,5
Tox Classification	Irritant for eyes and for skin (H315/H318)
Ecotox Classification	Not classified
Re-entry Timing	24 hours
Timing before crops	Non pertinent (1 day)
Rainfastness	2 hours
Maximal Residue Limit	Not concerned



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