Instructions for use

Product name: *'BioFil® Pea' Soil Inoculant*

Purpose of application:

The product is used in pea cultures for soil inoculation, for promotion of nodule forming and for soil life stimulation. The concentrated inoculant is applied in a dose of 0.4 l/ha diluted in 50-200 l/ha water (depending on the spraying tool), landspread and immediately rotated into the soil during seedbed preparation. In combined technology the ***BioFil® Pea*** is applied in a dose of 0.4 l/ha together with 1 l/ha specific (Acidic, Alkaline or Normal) ***BioFil®*** soil inoculant, mixed in a tankmix. If the inoculant is intended to be sprayed together with other products, we recommend making a sample mix before use.

Composition:

Bacteria: *Rhizobium leguminosarium*. Bacteria (1.0 m/m %), substratum (0.9 m/m %), water (98.1 m/m %).

Storage:

Indoors, in original, sealed packaging, in dry, refrigerated but frost-free place. Do not expose the product to direct sunlight and radiant heat.

Best before: in original, unopened packaging:
between 0-5°C for 6 months (temperatures lower than 0 °C damage the product)
between 6-10°C for 4 months
between 11-20°C for 1 month
between 21-25°C for 2 weeks

BioFil® soil inoculants must not be mixed with the following compounds: acids, alkalis, cleaning supplies, disinfectants and bactericides.

Treatment:

The product does not have any known negative environmental or health hazards, it is not flammable or explosive.
The product is non-toxic, has no harmful effects on plants and animals. Neither the ingredients, nor the process of production involve GMO or GMO-related elements, the product can be used in organic farming.
Regular conditions of hygiene must be implemented.
Health hazard period at work: 0 days.
Please consider general rules of work safety when using the product. Avoid the product getting in eyes, mouth or damaged skin. After finishing the work wash hands, take a shower and change clothes. After use the clothes and protective equipment have to be washed properly with cleaning solution. By observing allergy symptoms, the work has to be stopped immediately.

Application:

1. ***BioFil® Pea*** provides the symbiont nodule-forming and nitrogen-fixing bacteria for the rhizosphere. Bacterial strains in the product are plant-specific, therefore can only be used for inoculation of pea *(Pisum sativum),* field bean *(Vicia faba),* vetch *(Vicia spp.)* and vetchling *(Lathyrus spp.)* and are not effective with other crops.

2. The application of the product is strongly recommended in a combined technology with soil-specific (Acidic, Normal, Alkaline) inoculants ***BioFil®.***

3. Based on crop yield results of several years, it is recommended to use 0.7-0.75 l/ha ***BioFil®*** soil specific (Acidic, Normal, Alkaline) inoculant combined with 0.7-0.75 l/ha ***BioFil® Pea*** soil inoculant for maximal performance (total: 1.4 – 1.5 l concentrate/ha). **The increased dose of *BioFil® Pea* produces better yield results.** Accordingly, with the application of this combined technology crop yield increase may reach up to 20-60% compared to the control area.

4. The dilution (tankmix) has to be prepared with 50-200 l/ha water, depending on the equipment of application and the soil conditions (less in case of higher water content - more in case of dry soil). By using tap (chlorine) water to make the solution, let the water lose the chlorine content (let it aerate for a few minutes).

5. The order of mixing ***BioFil®*** soil-specific inoculant and ***BioFil® Pea*** into the tank is arbitrary, and does not affect the effectivity of the product.

6. The inoculant concentrate must be shaken properly before use (i.e. before mixing with water)

7. Any sprayer can be used for the landspreading. It is recommended to choose the height of dispersion close to the soil surface to avoid product drift. If possible, use equipment that has a permanent tank mixer, to ensure even distribution of the ingredients. The treatment has to be performed with soil temperature over 0°C; intensive (over 6) UV radiation has to be avoided. The tank must be thoroughly cleaned before use, carryover of formerly used pesticides may cause effectivity loss of the product.

8. Don't mix the inoculant with bactericides and fungicides because most of these compounds have negative effects on the performance of the product.

9. After preparing the tankmix the product has to be applied to the soil as soon as possible (ideally within 2-3 hours after mixing), or at latest within 12 hours after mixing!

10. The product has to be sprayed directly to the soil surface and rotated or mixed into the soil as soon as possible (e.g. with disc harrow, hoe). The dispersion can be performed simultaneously with seed bed preparation (1-2 weeks before seeding) or seeding, also in the same run. Soil mixing depth of the product has to reach at least the depth of seeding. The effectivity of the product left on the soil surface is affected negatively by drying and UV radiation. Use the product under environmental conditions generally suitable for seedbed preparation or seeding.

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