

Technology Cooperation Office of the Presidency



IRAN

Technological Potential

Biocan Biofertilizer

International Department



By introducing the Bulletins of “Iran Technological Potential” provided by Technology Cooperation Office of the Presidency (TCO), we intend to encourage international cooperation aiming at sharing technological resources with others. We would put forward more publications of such bulletins in different arenas of science and technology in near future.

As a matter of fact, science and technology has a global nature rather than local or even national, so geographic boundaries has been crossed and as a result, exchanging ideas and maintaining joint research activities has become crucial to many scientists and researchers all over the world. In addition, developments of electronic communication tools as well as IT advances facilitate this process as never before.

The main objective of these bulletins is to improve the international community’s knowledge about recent advances of Iran capacities and capabilities in Science and Technology and to facilitate technological collaborations with other countries.

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Nature Bio Technology Company (Joint Stock)

NBTCo is the biggest company in Middle East which produces biological products in field of agriculture, public health and food industry.

Organization chart of Nature Biotechnology Company

1- Research and Development (R&D) unit

in order to new biotechnological achievements, a team work of researchers and experts in doctoral, MS and BS grades, in microbiology, biotechnology, chemical, industrial, mechanics, computer and agriculture engineering, work in these fields:

- ♠ Supervision on production processes and quality control of biological products
- ♠ Research for modern and advanced formulations and more effective microorganisms

2- Quality Control unit (QC)

By using expert & experienced personnel and modern equipments, this unit controls factory products from basic material to final product and guarantee optimum products quality.

3- Guarantee of quality unit

This institute has quality management in design and production of biologic products (ISO9001:2000), and Guarantee its products quality on the international management standard bases.

4- Survey of biologic material application unit

This unit tests the quality and effectiveness of bio preparation in green house and field experiments, and then suggests the best formulation.

Activities

Experience and expertise are two fundamental bases in this company to achieve new more qualify biologic products. These company products are available in various formulations. Currently, major activities are focused on bio-control agents. These materials contain bacteria and fungi that control pests, plant pathogens and harmful organism for plant and human and apply in certain stages of plant growth or pathogen life cycle.

Produced biologic materials of this company contain the most effective strains of relevant microorganisms and presented after testing procedure in effective, durable and easy to use formulations.

Nature Biotechnology Company products are:

- 1- biolarvicides (Bioflash)
- 2- biopesticides



3- bioFertilizers: these products contain useful microorganisms that capable to supply a part of plant nutritional needs, and improve plant growth directly and indirectly. These bio-fertilizers enhance plant tolerance to environmental stresses such as water shortage and salinity. Inoculation materials of growth motivating bacteria are different types.

4- Soil bacteria

5- Biologic surfactant

6- Detergent enzymes

7- Food industry enzymes

8- Livestock food

9- Aquatics food

10-Yeast

Biocan Biofertilizer (Biofertilizer specially designed for Canola , Brassica napus L.)

There is a mysterious world in the earth surface known as “Soil”. Residents of this magic world are diverse microorganisms struggling for life (1).

“biocan” biofertilizer for Canola is a collection of most effective bacteria species stimulate plant growth; formulated specially for Canola (*Brassica napus L.*) cultivation in liquid and powder forms.

Applying “biocan” biofertilizer enhances root hairs density; more effective absorbance of nutritional elements and water, also controls some soil- born pathogens.

Improve seed germination, rapid development of root system, strengthening of seedling in early growth stages and crop quantity and quality enhancement are expected results of biocan biofertilizer utilization.

Tabiatgera Biotechnology Company introduces biocan biofertilizer especially for improvement of canola (*Brassica napus L.*) crop, after various researches proudly. We hope this will be an effective step to be independent in oil production in Iran.

Method of application:

The best method for inoculation of canola is seed treatment before cultivation. To achieve optimal results, please focus on application procedures:



Biocan biofertilizer (liquid form):

500 ml (0.5 liter) of biofertilizer is recommended for inoculation of seeds adequate for 1 hectare (Canola).

Procedure:

- 1- Place Canola seeds in a proper container (for example: a large can, barrel)
- 2- Pour biocan biofertilizer on the seeds and mix uniformly, continue until all seeds impregnated with liquid homogenously.
- 3- Spread seeds in shade for 5-10 minutes, after drying, cultivate immediately.

Biocan biofertilizer (powder form):

500 gram (0.5 kilogram) of biofertilizer powder is applied for inoculation of canola seeds in 1 hectare.

Procedure:

- 1- Place Canola seeds in a proper and clean container, solve the attached sticky powder in 0.5 liter water, spread on seeds gradually and mix to obtain a homogenous mixture.
- 2- Pour biofertilizer on seeds and blend homogenously.
- 3- Spread impregnated seeds in shade for 5-10 minutes and cultivate immediately.

Advantages:

- ♠ Strengthening seedlings and increasing germination percentage
- ♠ Rapid extension of root system and induces plant growth-
- ♠ Increases chemical fertilizers and water use efficiency
- ♠ Increasing plant tolerance to water shortage, soil salinity and soil born diseases
- ♠ Increasing quality and quantity of crop yield

Notes

- ♣ Seed inoculation is more recommended than folier and irrigation application
- ♣ Inoculation operations should perform in shade
- ♣ Shake liquid biofertilizer bottle before use



Maintenance and safety

- ◆ keep in cool and dry place, it can be usable for 6 months in room temperature (RT), but for more than 6 months should be kept in 4-6 °c.
- ◆ Keep away from direct sun light and heat
- ◆ Avoid freezing
- ◆ Keep away from children
- ◆ Stop smoking while working with biocan biofertilizer, wash your hands and face after operation
- ◆ This fertilizer has no bad effect on human, warm blood animals, aquatics, useful insects and soil microorganisms.

Opportunities for Cooperation:

NBTCO is going to strength researches and development activities in biological control methods through close collaboration with universities and research centers. Also we are going to improve accessibility of customers to our product.

In general this company is ready to cooperate in the following fields:

1. Sale the product all over the world.
2. Give sale representatives to individual and companies according to company conditions.
3. Sale of production in the form of bulk and package and sale in the tertiary country.
4. Produce and sale the products in the tertiary country by getting the agreed payments
5. Technology Transfer.