

Rice Production Enhancing Technology (RPET)

1. Product description

RPET is a Hungarian innovation which is a complex solution **to increase the output quantity and quality of rice** from the same land territory.

2. Problem description and the solution by RPET

Collectively, rice diseases result in yield reductions of 10-15% in tropical Asia.

Sheath blight and blast are present wherever rice is grown; these two diseases are responsible for losses of 5% or more each. Blast epidemics in Malaysia and the Philippines have caused yield reductions of 50-70%.

RPET provides solution to both problems by

- a) allocating organic nutrients to the soil before and during sowing and
- b) spreading and incorporation of a special PGPR useful microbial consortium before seeding or at the same time
- c) spreading a liquid plant conditioner on the surface of the plants.

As a result of these treatments the quantity of rice production compared to non treated rice plantations might increase substantially, the quality of rice will also increase, furthermore the intensity and costs of pest management and fertilization might decrease by 15%.

This result has unlimited advantages for the world population: output of rice might increase, price of rice might decrease, use of human workforce might decrease, waste is reduced. Overall the general level of feeding the world population will increase.

3. Description of the Innovation

The innovation is based on three roots:

- a) spreading and incorporation of the slow-release organic fertiliser before seeding
- b) spreading and incorporation of the new PGPR useful microbial product into the topsoil layer to enhance effective plant nutrition and antagonistic effect against soil-borne pathogens
- c) a special and natural liquid plant conditioner suppresses harmful diseases. The overall improvement of the production output is the result of the effect of both innovative elements.

The innovation overall consists of 6 elements:

- a) **the material composition of the liquid plant conditioner,**
- b) **special equipment by which the special liquid plant conditioner can be placed on rice plants**
- c) **the method how the special plant conditioner can be placed on rice plants**
- d) **material composition and spreading technology of the new PGPR useful microbial product**
- e) **the material composition of the slow-release organic fertiliser**
- f) **the method how the slow-release organic fertiliser can be incorporated into the topsoil layer**

4. The present state of implementation of the Project

The innovation is under the process of patenting for Hungary, since 13.07.2016 under Reg. No. P1600433/6.

The engineering plans of the technology equipment are ready for production.

5. Subject of the agreement

The subject of the agreement is to sell the complex technology for the use on certain geographical areas (countries, group of countries, global). The subject of the transaction includes the description of the technology, engineering plans of necessary equipment, composition of the materials to be used.

Final transfer of the technology must be preceded by a 2 year's test period on the chosen production are using a 5-10 hectare territory.

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