

Annex 4 Experiments of synergy effect between biofertilizer and irradiated oligochitosan

Experiments of Synergy Effect between Biofertilizer and Irradiated Oligochitosan

FNCA 2011 Workshop on Biofertilizer Project

Experiment I. Synergy of Biofertilizer with Irradiated Oligochitosan

- (1) Oligochitosan will be supplied by Dr. Yokoyama or Dr. Machi
- (2) Test plant is rice for FNCA countries except for Mongolia and China (wheat)
- (3) Treatments:
 - Control
 - Biofertilizer + 50 percent Chemical fertilizer
 - Oligochitosan + 50 percent Chemical fertilizer
 - Biofertilizer + Oligochitosan + 50 percent Chemical fertilizer
 - 50 percents Chemical fertilizer
 - 100 percents Chemical fertilizer

Field Experiment

Design of experiment: RCBD with 4 replications

Greenhouse experiment: CRD with 4 replications

Parameter (POT experiment)

1. Plant height (30 DAT and 70 DAT)
2. Number of Productive tillers (80 DAT)
3. Yield
4. Roots and shoots biomass
5. Nutrient uptake(N,P,K)
6. Soil Analysis before planting and after harvesting

Experiment II. Study on plant pathogen suppression

- (1) Collaborate with plant pathologist
- (2) Test plant: tomato or other plants suitable for the experiment
- (3) Treatments:
 - Control
 - Guidelines will be prepared by Dr. Aino