Artemis & Angel Co. Ltd.
99/296 President Park, Sukhumvit 24, Klongtoey,
Bangkok 10110, Thailand
Tel.: (President) +66-86-329-6038; (Sales): +66-99-337-7866
E-mail: artemisandangelcoltd@gmail.com **Website:** www.artemisthai.com

Bio-chemical Farming with Bio-Plant and Pro-Plant

1. Overcoming Chemical Farmers' Fear of Change to 100% Organic Farming

- Often, chemical farmers do not like to change to organic farming, especially if they have been farming with chemical fertilizers for many years. Even though using Bio-Plant and Pro-Plant in 100% organic farming will result in a higher yield than chemical fertilizer, the farmers are usually still afraid to change. You can solve the problem by means of bio-chemical farming.

2. How to Make the Bio-chemical Fertiliser

- Use 330 cc of Bio-Plant with each 50 kgs bag of any kind chemical fertiliser.
- Place a 50 kg. bag of the chemical fertilizer on a plastic sheet (1.5 m x 1.5 m) on the ground. Spread out the fertilizer and spray or pour the bio-fertilizers on top. Then mix the two together before using them. Use it the same day. Or if the farmers want to use it another day, they should let it dry in the wind.
- You can mix the Bio-Plant with a little water, but not with so much that the chemical fertilizer takes a long to dry out.
- Make sure that you first shake the contents of the bottle of Bio-Plant by turning it upside down and shaking it. If the contents have gone hard in the bottle, dilute the bio-fertiliser with water.

3. How to Use the Bio-chemical Fertiliser

- In bio-chemical farming the farmers can halve the number of bags of chemical fertilizer that they normally use, and replace the other half with the bio-chemical NPK, Urea, DAP, etc. So, instead of using the common amount of 10 bags of Urea and NPK, for example per hectare (5 bags of Urea and 5 bags of NPK), chemical farmers will only need to use 5 bags of chemical fertilizer (2.5 bags of bio-chemical Urea and 2.5 bags of bio-chemical NPK). If they normally use 5 bags of NPK only and no Urea, then they only need to use 2.5 bags of bio-chemical NPK.

4. The Benefits of Using Microbial, Bio-chemical NPK

4.1 Plants Receive More NPK: The NPK makes available to the roots the 80% of chemical NPK, which is lost unabsorbed in the soil when chemical NPK fertiliser is used. The NPK is very soluble and is easily absorbed by the roots. It increases the Nitrogen absorbed by plants compared to chemical fertilisers.

4.2 Additional Nutrients: The bio-chemical NPK increases the uptake of NPK as well as macro-nutrients and trace nutrients in the soil through microbial action. If you produce bio-organic NPK mixed with Pro-Plant as well as Bio-Plant, the plants will receive the 50+ nutrients in Pro-Plant as well.

4.3 All of the NPK is Absorbed: The soil does not have the problems caused by chemical NPK fertilizers. For example, there are no deposits of chemicals which cannot be absorbed by the roots, and which make the soil hard.

4.4 Other Benefits: The bio-chemical NPK promotes root development and branching. In addition, it increases the plant's drought tolerance when irrigation or rain is delayed; and it is non-toxic to humans, plants, animals, and the environment. The yield will increase because of the activity of the micro-organisms in restoring the soil's fertility. The health of all kinds of plants and trees will improve.

5. Five Ways to Increase the Effect of the Bio-chemical NPK

5.1 Add Chicken Manure: Adding chicken manure to the bio-chemical NPK will increase the effect. Adding one-third of a 50 kgs. bag of chicken dung to a 50 kgs. bag of the bio-chemical NPK would be beneficial for the crops.

5.2 Make Compost with the Microbial NPK: Farmers can also place around plants and trees compost made over 6-8 weeks by mixing a 50 kgs. bag of the bio-chemical NPK with compost. 5MT of compost will be enough for 1 hectare. The soil will then be full of minerals and micro-organisms, which will increase the fertility of the soil rapidly.

5.3 Mulch the Soil: Mulch leaves around the plants or trees on top of the bio-chemical fertiliser. Spray the leaves on top with water.