

## **Active research work in organic fertigation**

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Fertigation, a practice of conjunctive application of fertilizers and water to crop plants is an inevitable component of modern day scientific agriculture. Soluble fertilizers like urea, potash and a wide variety of fertilizer mixtures available in the market could be well mixed with irrigation water, filtered and then passed through the irrigation unit. In the normal sense it refers to the conjunctive application of chemical fertilizers and water. However in the present situation of increasing demand for organic products and an inclination to organic farming practices, the scope for "Organic Fertigation" is very large. However, there are many hurdles to overcome, in making organic fertigation a reality. The major hurdle is regarding the solubility of organic manure.

### **More residues**

Solid residues are more in organic manures. The best filtering mechanism will be required to screen out the solid wastes. Otherwise, they could clog the drippers and sprinkler heads thereby making the irrigation system inefficient. The Agronomic Research Station, Chalakudy functioning under the Kerala Agricultural University Thrissur is conducting active research in organic fertigation. The research was initiated with the popular organic manure — cow dung. The optimum proportion of cow dung water has been experimentally worked out so as to get quality filtrate. Also a multitier filtration mechanism using three sets of sieves has been standardized for screening out the organic residues to get clear filtrate.

### **Ensuring quality**

The quality of the filtrate was ensured through laboratory tests. It was noticed that the filtrate still contained almost the same quantity of plant nutrients as compared to the solid manure. The filtrate was mixed with water and passed successfully through drip irrigation system without any problem of clogging. Research works are going on to standardize the filtration techniques for other organic manures. Work is presently being carried out to fabricate a portable organic fertigation with a multitier filtration mechanism unit suitable for homes.

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