## **Research on Sustainable Agriculture Farming Systems in Nepal: Applications of EM Technology**

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Abstract : The observation trials on the efficacy of EM in composting began in 1996. They show that compost can be made within 4 weeks compared to about 6 months under conventional procedures. Furthermore, the compost was more efficient and effective in better plant growth and increased crop yields than the usual compost.

Research on rice with EM commenced during 1997. Similarly, vegetable crops related research activities commenced from 2000. The results so far indicate that rice and vegetables yields from EM applications are higher than with chemical fertilizers. It has also been observed that EM applications have additional advantage of inhibiting the occurrence of blast, blight and other diseases in crops.

The applications of EM in animal husbandry have indicated positive results. Broiler chickens fed with EM are higher in meat weight than the control. Layers have increased better quality egg production. Furthermore, applications of EM are excellent in controlling the foul odor emanating from the shed/pens of the animals/birds. The bedding and excreta of animal/birds' shed/pens have better quality manure with the application of EM.

The availability of quality organic manure has remained a big hurdle in promoting sustainable agriculture practices in Nepal. The application and integration of EM at the farming households level has helped farmers in maintaining soil fertility which in turn is helpful in sustaining and rather improving the productivity of crops and livestock. Furthermore, EM technology is very cost effective and simple in its applications. The integration of EM technology has helped many more farmers adopting sustainable agriculture and increasing number of farms are converting to organic production system.