

Pre-Emergent Weed Control with Effective Microorganisms - A Case Study

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Abstract : *Weeds are often a significant problem in tropical agriculture, and the impact of these unwanted plants is considered greater in organic or nature farming systems. Hence studies were carried out on two occasions to determine the impact of using a microbial inoculant (Effective Microbes - EM) combined with different mulches for controlling pre emergent weeds under upland organic farming conditions. The study involved the use of rice straw, leaves of a perennial legume or coir dust to a thickness of 2cm, and was wither sprayed with a solution of EM or water to moisten the mulch to the same extent. A plot without mulch was also maintained for comparison. The weed populations and dry weights were recorded at two stages of the growth of abean crop, and the pod yields of the beans were also recorded.*

Application of the mulches reduced the weeds and the impact of the mulches was increased when EM was applied. The greatest impact of the microbial inoculant in controlling weeds was seen with coir dust, which had a very high C: N ratio, thus delaying the process of decomposition. However the most significant observation was the increase in weed populations when EM was sprayed to the unmulched plot. Application of EM increased crop yields, and the impact of the microbial additive was greater with mulches with a low C : N ratio. The benefits of using mulches with EM for weed control in organic systems and increasing crop yields are presented on the basis of these results.
