

## Conservation Farming in Garlic

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Since ancient time various conservation farming practices are followed. Zero tillage is one them. Zero tillage (ZT) completely avoids the primary tillage and secondary tillage restricted to seed-bed preparation in the row zone only. This means it minimize soil disturbance and allow previous crop residues in the field. In Nepal, Zero till practices in garlic cultivation was started about 15 years ago as local initiative from Terai (tropical region) of Nepal. In spite of having various benefits from zero tillage cultivation in garlic it is still uncommon due farmer small landholder, lack of promotion, plan practices and proper strategy. Generally in western part of Terai during October-November garlic seed is planted directly into the soil soon after harvesting of rice with the help of sickle or sharp pointed wood in roots of every rice plant. So, Appropriate time of planting depend on previous rice harvesting time. Spacing of 20\*15 cm<sup>2</sup> is appropriate and the entire field is covered with mulching material (in layer up to 10-15 cm of thickness). Malabar nut, Rice straw and rice husk are commonly used mulching material. Among them farmer prefer rice husk more than else. Sprouting, weed suppression, moisture conservation, soil improvement, minimizing erosion are major benefits of mulch.

Economic benefit of zero till directly attract farmer to adopt it. Major advantages of zero tillage (ZT) in garlic is labor saving, cost saving, yield increment minimize greenhouse emission, grown in less water available places etc. In my field visit I have found that ZT is more economic in term of labor and cost by more than 25% and better yield increment in comparison to conventional practices. Inappropriate in non-rice cultivation, no use of Farmyard manure and difficult in weed control are major disadvantages of it. Fertil-

zer is not essential but addition of nitrogenous and Diammonium phosphate enhances the yield. So, Zero tillage in garlic cultivation in terai belt is best conservation approaches which need to follow in appropriate region of Nepal. Currently Nepal Agriculture Research Council performs conservation practices in mustard and Lentil. In Banke, Bardiya and Dang districts we can see conservation farming in mustard crop. This shows that we can initiate conservation farming in many other crops also.

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