

ECONOMICS OF IMPROVED PRACTICE IN MAIZE UNDER EAST GODAVARI DISTRICT,  
ANDHRA PRADESH

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Maize (*Zea mays* L) is one of the most important cereals having wider adaptability under varied agro-climatic conditions. In addition to staple food for human being and quality feed for animals, maize serves as a basic raw material as an ingredient to thousands of industrial products that includes starch, oil, protein, alcoholic beverages, food sweeteners, pharmaceutical, cosmetic, film, textile, gum, package and paper industries etc. The productivity of maize in Godavari district is very low due to adoption of local varieties and use of imbalanced nutrients. Paddy is grow in kharif season hence the sowing of rabi maize is delayed. Zero tillage is under these conditions so that the sowing may be done in due course of time. The field experiments were conducted on farmer's field with improved production management (zero tillage, balanced use of fertilizers and improved variety of maize) using maize as test crop in Godavari district of Andhra Pradesh.

The field experiments on maize were conducted in collaboration with Directorate of Maize Research, New Delhi and Krishi Vigyan Kendra, Pandirimamidi, East Godavari district, (Andhra Pradesh) during 2011-12 to 2015-16. The treatments considered of (1) farmer practice

and improved practice (zero tillage, balanced use of fertilizer and hybrid DHM117). Recommended dose of 100kg N + 50kg P<sub>2</sub>O<sub>5</sub> + 40kg K<sub>2</sub>O ha<sup>-1</sup> were applied through urea, single superphosphate and muriate of potash, respectively. Half dose of N and full dose of P and K were applied at sowing. Remaining half dose of N was applied in two splits. Crop was sown (var hybrid DMH 117 treated with thiram) in the month of November using 20kg seed ha<sup>-1</sup>. At maturity yield and yield attributes were recorded. Economics of the treatments was computed on the basis of market price of inputs and produce.

The data (Table 1) revealed that number of cobs under improved practice were more (2 cobs/ plant) compared to farmer's practice (1 cob/plant). Similarly 1000 grain weight was also high (221- 250 g) under improved practice compared to the farmer's practice (186-211.5g) which ultimately resulted in higher grain yield of 84.4 q.ha<sup>-1</sup>. On an average, maize grain yield under improved practice was higher by 39.7% as compared to farmer's practices (60.4 q ha<sup>-1</sup>) The higher productivity of maize under improved practice was due to the adoption of improved nutrient and pest management techniques. Similar results were reported r by Dhaka *et al.* (2010) and Singh *et al.*, (2016).

Table 1: Yield of maize as affected of improved practices of cultivation

Year	Grain yield FP	(q ha <sup>-1</sup> ) IP	% response	CD (P=0.05)
2011-12	60.0	85.0	41.7	15.3
2012-13	62.5	85.5	36.8	17.0
2013-14	53.5	76.5	43.0	14.2
2014-15	34.0	88.0	37.5	18.0
2015-16	62.0	87.0	40.3	16.5
Mean	60.4	84.4	39.7	16.2

The mean net returns under improved practice (Rs. 60,446 ha<sup>-1</sup>) increased by 55.8 % over the farmer's practice (Rs. 38780 ha<sup>-1</sup>). The increase in net profits and B:C ratio may be attributed to increased yield of maize with improved practice (zero tillage). During 2011-

12, 2012-13, 2013-14, 2014-15 and 2015-16 the benefit cost ratios ranged from 3.12 to 3.81 where as in farmers practice it ranged from 2.29 to 2.99 (Table 2). The results are similar to other workers (Dhaka *et al.*, 2010).

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Table 2: Economics of maize cultivation under improved practice (IP) and farmers practice

Year	Cost of cultivation Rs ha <sup>-1</sup>		Gross returns Rs ha <sup>-1</sup>		Net returns Rs ha <sup>-1</sup>		BC Ratio	
	IP	FP	IP	FP	IP	FP	IP	FP
2011-12	22,300	20,100	85,000	60,000	62,700	39,900	3.81	2.99
2012-13	23,220	21,540	85,500	62,500	62,280	40,960	3.68	2.90
2013-14	24,500	22,350	76,500	53,500	52,000	31,150	3.12	2.39
2014-15	24,800	21,650	88,000	64,000	63,200	42,350	3.55	2.96
2015-16	24,950	22,460	87,000	62,000	62,050	39,540	3.49	2.76
Mean	23705	21620	84400	60400	60446	38780	3.53	2.80

It may be concluded from the results that maize production improved by adopteding zero tillage after paddy. Better production and income

also increased over farmer practice by adopting improved practice in maize cultivation.

## REFERENCES

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