

Effect of contour bunding on yield of maize crop in North Eastern Ghat Zones of Odisha

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ABSTRACT

A trial was conducted during the year 2008-09 to know the effect of contour bund in farmers' field at Rajikakhhol village of Khajuripada block of Kandhamal district, Orissa. As Kandhamal district was effected mostly by heavy rainfall during rain season, the crop lands were mostly damaged by the heavy rain and top fertile soil was eroded, so the poor tribal farmers they face a heavy loss. So this trial was conducted with two treatments. T1-Contour bund in 10 m horizontal interval and control, with an objective to assess the crop damaged area and soil loss and to know the yield loss by the farmers. It was observed that 21 % of the crop land was saved from the erosion with a 5 ton/ha of soil loss can be checked and also 10% of maize yield can be obtained by construction of contour bund. So it can be recommended to construct contour bund with 10m H.I. to check soil erosion and higher crop yield in North Eastern Ghat Zones of Orissa.

INTRODUCTION

As Kandhamal district was effected mostly by heavy rainfall during rain season, the crop lands were mostly damaged by the heavy rain and top fertile soil was eroded, so the poor tribal farmers they face a heavy loss. Many authors they define the effect of contour bund to check soil erosion (Subudhi et.al., 2004)

OBJECTIVE

To assess the crop damaged area, soil loss and yield

RESULT AND DISCUSSION

Table 1. Seed yield of maize and B:C ratio in different treatments

Treatments	Soil saved t/ha	Seed yield of Maize, q/ha	Cost of cultivation, Rs/ha	Gross return Rs/ha	B:C, ratio	% of area damaged by heavy rainfall
T ₁ -Contour bund with 10m HI	5	46.9	21,295	39,396	1.85	nil
T ₂ -Control	0	42.5	20,400	35,700	1.75	21%
Mean		44.7	20848	37,548	1.80	

Effect of contour bunding at 10m horizontal interval on yield of maize was studied in farmers' field under on-farm programme. The treatment with Contour bund at 10m horizontal interval saved 5 tones of soil per ha and recorded maize seed yield of 46.9 q/ha with net

MATERIALS AND METHODS

An on farm trial was conducted during the year 2008-09 to know the effect of contour bund in farmers' field at Rajikakhhol village of Khajuripada block of Kandhamal district, Orissa. treatments. were

- T1-Contour bund in 10 m horizontal interval and
- T2-control.
- Two soil conservation treatments were evaluated in maize crop with 8-10% slope

return of Rs 18101.00 and B:C ratio of 1.85. In control plot maize yield of 42.5q/ha was realized with net return of Rs 15300.00 and B:C ratio of 1.75. Fig.1 & 2 shows the details about area damaged without contour bund and maize crop with contour bund respectively



Fig.1 Area damaged due to heavy rain in control plot



Fig.2 Contour bund at an interval of 10 m HI

CONCLUSION

So it can be recommended to construct contour bund with 10m H.I. to check soil erosion and higher crop yield in North Eastern Ghat Zones of Orissa.

REVIEW OF LITERATURE

- [1] Subudhi, C.R.; Behera, B.; Sethi, P.K.; Sharma, K.N. & Swain, S.N. (2004) Creation of temporary structures across drainage line in degraded watershed. *Indian Journal of Power and River Valley Development*. Vol-July-Aug: 164-167.
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