Comparative Efficiency of Different Weed Management Practices on Yield and Economic in Summer Maize in Dang

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The particular weed management practice is still know that describes the exact solution for weed control and maximizes the yield and profitability of maize production and weed severs to more than 40% loss in production. So, the field experiment was conducted in Farmer's field to compare the effects of different weed management practices on weed growth and dynamics, yield, and economic performance in Summer Maize under humid sub-tropical condition at Aswara-5, Tulsipur, and Dang in 2017. The experiment was conducted in Randomized Complete Block Design with seven treatments and three replications. The treatments consisted of (i) Framer practices, (ii) control, (iii) weed free broadcasting (iv) Weed free line sowing (v) power weeded (vi) Manually weeded (vii) herbicides (Temboterine and Atrazine). The different weed managements practice showed significant effect in Yield, test weight, Harvest index, stover yield, shelling percent and sterility percent and cob length. The higher grain yield was obtained in herbicide treated plot (7.620 t/ha) and least in control plot (3.54 t/ha) and farmer practice plot (4.32 t/ha) where other treatment were statistically at par with each other. The highest shelling and cob length was 78.33 and 21.76 cm found highest that leads to highest yield and lower yield in control and farmer plot. The cost of cultivation was higher in weed free line sowing (NRs 89102) and broadcasting (NRs 89106) condition but the production per unit cost was highest in herbicides (109.27 g/Rs) plot and followed by manual (69.73 g/Rs) and power weeded plot(78.11 g/Rs). Similarly, the highest Net revenue, Gross revenue and Benefit cost ratio was obtained in Herbicide treated plot among all the treatment, which is followed by power weeded plot. So, we can conclude that, herbicide treated plot is economically and profitability important in terms of production where there is human labour crisis.

Weed; Herbicides; Weed free line; Weed free broadcasting; Manual weeded; Power weeded

Introduction

Maize is an important cereal crop, e forts are being made to narrow the yield gap between potential yield and actual farm yield. T e ultimate yields of maize are controlled by a number of genetic and external factors [1]. T e yield of maize is greatly a fected by weeds in the feld. Weeds are a constant source of concern for the successful growth and development of economic crop.

T ey compete with crops for light, moisture, space and nutrients and consequently interfere with the normal growth of crops. Weed control therefore, is very essential in maize cultivation. T e critical period of weed interference in maize is in fuenced by the competing weed species, the cultivars, plant density and environmental factors such as light, water, nutrient and allelopathy [2]. Yield loss of up to about 39.8% has been reported in maize [3].

Maize is very susceptible to competition from weeds especially in the early stages of growth; therefore, e f cient control at the pre- and early post-emergence stages is essential. Once maize reaches approximately 0.5 m in height, weed control no longer a fects yield [4]. Weed interference not only results in crop losses but also increases insect pest damage, harvesting di f culties and crop contamination [5]. It is generally conceded that the recurrent economic damage to

Materials and Methods

A farmer's feld experiment was conducted to see the

P-value	<0.001	0.009	0.025	<0.001	<0.001	0.004	<0.001

Table 1: E f ect of

plot gives the very least gross return as compared to other treatment. The highest yield was found in herbicides treated plot which finally leads to the high gross return. Similarly, the net return is also related to the gross revenue and cost of cultivation. The herbicides plot (NRs