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Effects of Organic, Inorganic and Biofertilisers of Yield and Net Income of Wheat (*Triticum aestivum*)

D. S. Gadhia and P. M. Mane

Aga Khan Rural Support Programme (India),
Sherbaug Gadu, Junagadh

The rising cost of chemical fertilisers and changing pattern of productivity and fertilisers response in wheat have lead to the promotion in use of organic manures and biofertilisers. Keeping this in view, a field experiment was conducted on cultivators field in Junagadh district of Gujarat during *Rabi* season of 1992-93 to evaluate effectiveness of organic, inorganic and biofertilisers on yield and net income of wheat. The soil was sandy loam, moderate in nitrogen (0.078% O.C.), high in phosphorus (60 kg/ha) and potassium (180 kg/ha). The experiment compromised 5 treatments viz., FYM @ 10 t/ha, slurry compost @ 10 t/ha, chemical fertiliser (120-60-0 kg/ha), wet slurry @ 8000 lit/ha and slurry compost + biofertilisers (Azotobacter and phosphate culture 250 g/10 kg seeds). The treatments were replicated 4 times in Randomized Block Design. The wheat crop was sown on 13th November, 1992 and harvested on 15th February, 1993. The nutrients content of the slurry compost were 1.2 % N, 1.3% P_2O_5 and 1.3% K_2O.

TABLE 1

Effects of different treatment on yield and net income of wheat.

Treatments	*Yield (kg/ha)*	*Net income (Rs./ha)*
FYM @ 10 t/ha	2766	2329
Slurry compost @ 10 t/ha	3133	3368
Chemical fertiliser (120-60-0 kg/ha)	3783	4474
Wet slurry @ 8000 lit/ha	2649	3104
Slurry compost + biofertiliser	3283	3599
C. D. at 5%	81.06	—

The grain yield was significantly affected by different treatments. The significant increase was observed by application of chemical fertiliser (3783 kg/ha) followed by slurry compost + biofertiliser (3283 kg/ha). Such variation might be observed due to high nutritional requirement of wheat crop but bio-fertiliser helped in conversion of unavailable fixed nutrients to available form which leads to increase in production. The similar results were noticed by Reddy *et al.* (1977) in maize. The wet slurry produced significantly less yield and this may be due to low dose applied. The chemical fertiliser gave highest net income of Rs. 4474/ha followed by slurry compost + biofertiliser (Rs. 3599/ha).

The present study therefore suggests that chemical fertiliser was superior from yield and net income point of view however, increase in grain yield with combined use of organic and biofertiliser suggests that complimentary use of both these sources is advantageous and substantial amount of inorganic fertiliser may be saved (Gill and Meelu, 1982).

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