GAU Res. J. 1992. 18 (1) : 104-105

Response of Mustard (*Brassion juncea* (L) Czern & Coss) to Sulphur

C. K. Patel [1], B. A. Patel and D. M. Patel

AICARP, Gujarat Agricultural University, Sardar Krushinagar

A field experiment was conducted during rabi 1987-88 at the Instructional Farm of College of Agriculture, Sardar Krushinagar to study the response of mustard Cv. Varuna to sulphur. Treatment combinations having four levels of sulphur viz; 15, 30, 45 and 60 kg/ha and two sources of sulphur viz., gypsum and elemental sulphur were compared with no fertilizer (control) and 50 kg N + 50 kg P_2O_5/ha (recommended dose). The experiment was laid out in a randomized block design replicated four times having ten treatments. The soil was loamy sand in texture, low in organic carbon (0.15%), available nitrogen (129 kg/ha) and sulphur (8.2 ppm) while medium in available phosphorus (47 kg/ha) and potash (192 kg/ha) having soil PH 8.2. The crop was sown on October 26, 1987 and harvested on February 24, 1988.

Significant response of fertilizer application N_{50} P_2 O_5 was observed on seed yield of mustard. Treatment N_{50} P_2 O_5 50 gave 4.38 q/ha, higher seed yield over

TABLE 1

Yield attributes and seed yield of mustard as affected by fertilizers and source and levels of sulphur.

Treatment	*Plant height (cm)*	*No. of primary branches/ plant*	*No. of siliquae/ plant*	*Length of siliquae/ (cm)*	*Weight of siliquae/ plant (g).*	*Seed yield (q/ha)*	*Oil content (%)*
Fertilizers (kg/ha)							
Control	101.7	5.1	172.0	5.07	15.53	7.65	37.13
$N_{50} + P_2O_5$ 50	117.2	6.6	354.8	5.27	29.24	12.03	37.39
C. D. at 5%	5.41	0.67	50.80	0.06	2.98	3.15	0.17
Sources of Sulphur							
Gypsum	119.5	6.3	389.0	5.38	38.02	13.56	38.52
Elemental sulphur	123.5	7.2	405.0	5.45	40.87	15.74	38.62
C. D. at 5%	2.70	0.34	NS	0.03	1.51	1.58	0.09
Levels of sulphur (kg/ha)							
15	116.8	6.6	332.4	5.36	33.09	12.55	37.65
30	122.2	6.8	412.6	5.39	41.06	13.22	38.28
45	127.8	6.6	426.7	5.50	42.67	17.58	38.50
60	119.3	7.0	418.6	5.43	40.93	15.26	38.89
C.D. at 5%	3.80	NS	35.80	0.05	2.13	2.22	0.12

1. M. Sc. Student., GAU, Sardar Krushinagar.

control. Similar effect was observed on plant height, yield attributing characters and oil content also. Application of 50 kg N + 50 kg $P_2 O_5$/ha was found optimum for mustard crop (Anon. 1976).

Elemental sulphur was found superior over gypsum which gave 16.08 per cent higher seed yield. It also increased oil content of mustard seed. Similar results were also obtained by Tandon (1984).

Significant response of different sulphur levels on yield attributes, oil content and seed yield of mustard was observed. Seed yield of mustrad was increased with each successive increase in sulphur level only up to 45 kg/ha. Further increase in sulphur level i.e. 60 kg/ha had adversely affected seed yield. Similar trend was observed in plant height, number of siliquaqe per plant, length of siliquae and weight of siliquae per plant also. On the contrary to this significant increase in oil content of mustard seed was observed with each successive increase in sulphur level. Similar results are also reported by Sawarkar *et al.* (1987).

(Received on 13th Aug. 1990)

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