

Workout the Economics of Different Treatments of Mustard (*Brassica juncea*) variety ‘Varuna’ in mandhna region of District Kanpur

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Abstract

Oilseed crop play an important role in India’s agricultural Economy and it is third largest edible oil economy of the world after USA and China. Oilseeds are the rich source of edible oil. It gives us energy and fulfills the deficiency of essential fatty acids. Due to increasing population, the requirement and use of vegetable oil is increasing day by day. To fulfil the increasing demand of Oilseeds, we require stepping up average productivity of oilseeds crop from present level of population. The estimated area, production and yield of Rapeseed-Mustard in the World are 37.19 Million Hectares, 69.09 Metric Ton and 190 Kg/Hectares respectively. Indian Rapeseed mustard occupy an area of 6.142 Million Hectares with the production of 8.03 Million Tones having, average yield 11.09 Quintal per Hectare. In U.P Oilseed crop occupy an area of 0.9 million Hectare with Production of 0.95 Million Hectares, average yield being 1055 Kilograms per Hectare during 2019-20. India would needed 58 Millions tones oilseeds by 2021 to full the minimum edible oil requirements of 12 Kilograms per Capita per Annum from the present level of 10.2 Kilograms...

Introduction

To fulfil the increasing demand of Oilseeds, we require stepping up average productivity of oilseeds crop from present level of population. The estimated area, production and yield of Rapeseed-Mustard in the World are 37.19 Million Hectares, 69.09 Metric Ton and 190 Kg/Hectares respectively. Indian Rapeseed mustard occupy an area of 6.142 Million Hectares with the production of 8.03 Million Tones having, average yield 11.09 Quintal per Hectare. In U.P Oilseed crop occupy an area of 0.9 million Hectare with Production of 0.95 Million Hectares, average yield being 1055 Kilograms per Hectare during 2019-20. India would needed 58 Millions tones oilseeds by 2021 to full the minimum edible oil requirements of 12 Kilograms per Capita per Annum from the present level of 10.2 Kilograms.

The research was conducted in Agriculture Research Farm, Faculty of Agricultural Sciences and Allied Industries, Rama University, Kanpur, Uttar Pradesh during Rabi season of 2018-19. The experimental farm falls under the indo-gangetic alluvial tract of Central Uttar Pradesh... For Investigation ‘Varuna’ variety was selected. The experiment was laid out in Randomized Block Design, which comprised of eight treatments combination along with three replications. Each replication was divided to eight equal plots and treatment was randomly allocated with them. Detail of treatment is given below in table 1.

Table 1: Detail of treatments

| S.R | Treatment | Symbol |
|-----|---|----------------|
| 1 | Fluchloralin @0.70a.i (PPI/Hac.) | T ₁ |
| 2 | Isoproturon @ 1.0 a.i ha (PI) | T ₂ |
| 3 | Pendimethaline @ 1.00 a.i ha (PI) | T ₃ |
| 4 | Fluchloraline @ 0.70 a.i. hac (PPI)fb 1 hand weeding at 30 day | T ₄ |
| 5 | Isoproturon @ 1.00 a.i. hac (PI) fb 1 hand weeding at 30 day | T ₅ |
| 6 | Pendimethaline @ 1.00 a.i. hac (PI)fb 1 hand weeding at 30 day | T ₆ |
| 7 | Weed Check | T ₇ |
| 8 | Weedy free check | T ₈ |

After proper levelling and field preparation the sowing of seed was done. The seed of variety ‘Varuna’ were sown @ 4 Kg/hac. At a row distance of 30 cm. The sowing was done on 25 October 2018 in the fertilized row, opened with help of Kudal and covered after sowing.

Result and Discussion

Table 2: Detail of treatments

| Treatment Symbol | Treatment | Dose Kg./ Hac | Time of Application | Cost of Cultivation | Gross Income | Net Income | B:C |
|------------------|--|---------------|---------------------|---------------------|--------------|------------|------|
| T ₁ | Fluchloralin @0.70a.i (PPI/Hac.) | 0.70 | PPI | 44315 | 106798 | 62483 | 1.40 |
| T ₂ | Isoproturon @ 1.0 a.i ha (PI) | 1.00 | PE | 45360 | 110262 | 64902 | 1.43 |
| T ₃ | Pendimethaline @ 1.00 a.i ha (PI) | 1.00 | PE | 45460 | 108346 | 62886 | 1.38 |
| T ₄ | Fluchloraline @ 0.70 a.i. hac (PPI) fb 1 hand weeding at 30 day | 0.70 | PPI | 47310 | 111268 | 63958 | 1.35 |
| T ₅ | Isoproturon @ 1.00 a.i. hac (PI) fb 1 hand weeding at 30 day | 1.0 | PE | 47985 | 113950 | 65665 | 1.37 |
| T ₆ | Pendimethaline @ 1.00 a.i. hac (PI) fb 1 hand weeding at 30 day | 1.0 | PE | 46560 | 120066 | 73506 | 1.57 |
| T ₇ | Weed Check | - | - | 40195 | 81963 | 41768 | 1.03 |
| T ₈ | Weedy free check | - | - | 54250 | 121172 | 66922 | 1.22 |

The cost of cultivation varies the various weed control methods and the (T₈) calculated more (Rs. 61250/Hac.) as compared to weedy check. The gross income vary to the various herbicides weed control methods and (T₆) Pendimethaline @ 1.00 a.i. hac (PI) fb 1 hand weeding at 30 day found highest (Rs. 120066/ Hac.) calculated and lowest gross income (T₇) Weedy check (Rs. 81936/Hac.). The net income vary to the various herbicide weed control methods and the (T₆) Pendimethaline @ 1.00 a.i. hac (PI) fb 1 hand weeding at 30 days calculated more (Rs. 73506/Hac.) as compared to Weedy check (Rs. 41768/Hac.). The benefit cost ratio vary to the herbicide weed control methods and the (T₆) Pendimethaline @ 1.00 a.i. hac (PI) fb 1 hand weeding at 30 day (1.57) and (T₇) calculated lowest (1.03).

Conclusion

Pendimethaline @ 1.00 a.i. hac (PI) fb 1 hand weeding at 30 day (T₆) observed higher gross income Rs/Ha and Net income Rs/ha.

References

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