



**Biotica
Research
Today**
Vol 3:5 330
2021 331

Prospects of Sesame Cultivation in North Eastern India

Harendra Verma¹, Sakuonuo Theunuo¹,
Amit Kumar², L. K. Baishya¹, Manoj
Kumar^{3*} and D. J. Rajkhowa¹

¹ICAR Research Complex for NEH Region, Nagaland Centre, Medziphema, Nagaland (797 106), India

²ICAR Research Complex for NEH Region, Umiam, Meghalaya (793 103), India

³ICAR Research Complex for Eastern Region, RCM, Darbhanga, Bihar (846 005), India



Open Access

Corresponding Author

Manoj Kumar

e-mail: mkumar_iari@yahoo.co.in

Keywords

Medicinal values, Oilseed crop, Organic cultivation, *Sesamum indicum* L.

Article History

Received in 16th May 2021

Received in revised form 17th May 2021

Accepted in final form 18th May 2021

E-mail: bioticapublications@gmail.com

How to cite this article?

Verma *et al.*, 2021. Prospects of Sesame Cultivation in North Eastern India. *Biotica Research Today* 3(5): 330-331.

Abstract

Sesame (*Sesamum indicum* L.), usually considered to be the oldest indigenous oilseed crop, is an important oilseed crop of India, including northeastern region of the country. Because of its high oil content, aroma and flavor, the crop is also known as 'the queen of oilseeds'. Sesame is amongst the culturally most important crops of India, which has also got huge nutritional and medicinal values. It contains antioxidants such as sesamin, sesamol and sesamol. Due to the presence of these antioxidants and other health benefits, sesame seeds are also known as 'the seeds of immortality'. Grown with proper management strategies, the crop has potential to improve income and livelihood of farmers in northeastern region of India. Present article discusses the status and opportunities of sesame production in North Eastern India.

Introduction

Sesame (*Sesamum indicum* L.) is considered to be the oldest indigenous oilseed crop, with the longest history of cultivation in India. India is the largest producer of sesame in the world with a production of 746 MT, contributing 12.4% of the world's production. India exported 312.6 lakh tonnes of sesame seed and oil, amounting to Rs. 3,920 crores in the year 2018-19 (Directorate General of Commercial Intelligence and Statistics, Kolkata). It is extensively grown in Gujarat, West Bengal, Karnataka, Rajasthan, Madhya Pradesh, Tamil Nadu, Andhra Pradesh and Maharashtra. Sesame is commonly known as *Til* (in Hindi, Assamese), *Ellu* (in Malayalam, Tamil), *Tal* (in Gujarati), and *Rasi* (in Odia). Sesame is known for its high oil content, aroma and flavor thereby, earning its name as the queen of oilseeds.

Sesame in Northeastern India

Sesame is one of the most important oilseed crops not only in mainland India but also in North Eastern India, comprising of eight states. It is mainly cultivated in marginal lands and *jhum* cultivated area either as mixed or sole crop. It is mainly of two distinct types, the black and the white. Colour can also vary from red to rose or from brown or grey. The crop is of multifaceted utility and tremendous commercial importance. It is used in the preparation of many cuisines and snacks. In Assam, it is an integral part of '*pitha*' which is a sweet, prepared with rice batter. In Nagaland, it is consumed in roasted form as snack and also in the preparation of pork and chutneys. '*Daineiiong*', a dal curry with sesame as the key ingredient, is a part of the Garo Khasi cuisine. '*Til ladoos*', which is basically sesame balls made with jiggery, is savored in all parts of NE India and outside. It is used as toppings in cakes and cookies and also for garnishing salads and curries.

Sesame seeds are used in a wide array of food and also for industrial uses such as cosmetics, lubricants and pharmaceutical purposes. Seeds are composed of 36-63% oil, 18-25% protein, 14-16% carbohydrates and 5-7% minerals (Anastasi et al., 2017). In an era where synthetic antioxidants are used extensively, there is an increasing demand for more natural products in the global market. Sesame fulfils that criteria as it contains antioxidants such as sesamin, sesamol and thus in that, it is more stable than vegetable oil. Due to presence of antioxidants, sesame seeds are also known as ‘the seeds of immortality’.

Sesame is a short duration crop, requiring low input of resources and can be grown under rainfed, irrigated, dryland or residual moisture conditions. It grows well on stored soil moisture with minimal irrigation and can produce good yields under high temperature. With the current change in climate and drought conditions, there is a need to grow drought resistant crops, which includes sesame. Nutrient management strategies also need to be evolved for this important oilseed crop. Sulfur application has been shown to improve the yield and quality of oilseed crop in acidic soils of northeastern India (Longkumer, 2017). Critically important role of micronutrients in improving crop yield and quality in acidic soils of northeastern India is also well established (Kumar et al., 2016). Utility of these secondary and micronutrients application in sesame cultivation needs to be established through adequate experimentations.

With increasing health awareness and its use in a plethora of food products as well as for cosmetics and pharmaceutical purposes, there is a demand for organically produced sesame. The increase in consumption of organic sesame along with healthy eating trend has led to an increase of demand in the global market. Organic sesame gets more recognition and premium in the market. In addition to this, it also maintains soil health and environmental quality.

The climate of the North East region is well suited for the crop to flourish. Some of the improved varieties of sesame such as Cums-17, Prachi, Amrit, Nagaland Local, Bahubeti, Nagaon T-1 Nagaland Local, are promoted by ICAR RC for NEH Region, Nagaland centre in Nagaland to enhance the productivity as well as area covered under sesame cultivation (Figure 1 and 2). Moreover, the crop is covered under Minimum Support Price (MSP) scheme of the Government. The study conducted at various research institutes, including ICAR-RC for NEHR Nagaland centre, clearly shows that there is ample scope to enhance the productivity of sesame following appropriate package of practices. Provisioning quality seeds and other inputs along with capacity building of the farmers will definitely enhance the production and productivity of this crop, thereby enhancing farmers’ income in northeastern India.



Figure 1: Evaluation of sesame varieties at research farm of ICAR Nagaland Centre, Medziphema



Figure 2: Promotion of sesame varieties in Nagaland by ICAR Nagaland Centre, Medziphema

Conclusion

Given the significance of sesame cultivation, farmers in North East India should be given knowledge through workshops and field visits on ‘Know-how’ of organic sesame cultivation which includes use of bio-agents, FYM, vermicompost, resistant varieties, intercropping of sesame with green gram or cluster bean etc. to combat issues relating to pest and diseases, soil fertility and weed management. The farmers should be encouraged for adopting organic production technologies whilst ensuring a good stable yield in order to improve the income and livelihood of farmers in northeastern region of India.

References

- Anastasi, U., Sortino, O., Tuttobene, R., Gresta, F., Giuffre, A. M., Santonoceto, C., 2017. Agronomic performance and grain quality of sesame (*Sesamum indicum* L.) landraces and improved varieties grown in a Mediterranean environment. *Genetic Resources and Crop Evolution* 64, 127–137.
- Kumar, M., Jha, A.K., Hazarika, S., Verma, B.C., Choudhury, B.U., Ramesh, T., Moirangthem, P., Kumar, R., Brajendra, Rajkhowa, D.J., Kumar A., Devi, M.H., 2016. Micronutrients (B, Zn, Mo) for improving crop production on acidic soils of northeast India. *National Academy Science Letters* 39(2), 85-89.
- Longkumer, L.T., Singh, A.K., Jamir, Z., Kumar, M., 2017. Effect of sulfur and boron nutrition on yield and quality of soybean (*Glycine max* L.) grown in an acid soil. *Communications in Soil Science and Plant Analysis* 48(4), 405-411.