RESEARCH PAPER

Front line demonstration-An effective tool for increasing productivity of Niger in Thane district of Maharashtra

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ABSTRACT

Niger is an important oilseed crops of tribal farmers of Maharashtra, which plays a major role in supplementing the income and also fulfill requirement of cooking oil of small tribal farmers of Thane district (M.S.). The Front Line Demonstration were conducted by the Krishi Vigyan Kendra, Kosbad Hill, dist- Thane(M.S.) with improved package of practices of niger cultivation for four years (2003-04 to 2006-07) and achieved the expected yield as compare to district productivity. The yield of niger can be increased by demonstrating their cultivation technologies at the farmer's field under the supervision of scientists working in operational area. During the period under study, it was observed that yield of demonstration was significantly higher (473kg/ha) than the farmers practices *i.e.* local check (250kg/ha). In all the years front line demonstration showed a significant increase in yield *i.e.* 61.42% over farmer's practices.

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Key words : Niger, Front line demonstration, Yield, C:B ratio

INTRODUCTION

Niger (Guizotia abyssinica) is an important oilseed crop of tribal farmers of Maharashtra, India. Niger seed is an oilseed crop produced principally in Ethiopia, India, Myanmar and Nepal. Thirty per cent of the seed is used as oil. When extracted the oil is used in foods, for paint and soap making and for lighting. In Ethiopia this is the main edible oil in use. In India about 75 per cent of the harvested seeds are used for oil extraction while the rest is exported for bird food. Roasted or fried seeds are eaten as a snack or used as a condiment. The press-cake from oil extraction contains 31 to 40 per cent protein and is used for feeding cattle. In the United States of America, niger seed is considered a high value crop for the bird food industry, and initiatives have been underway to introduce it as a cash crop alternate. The main production areas of Niger seed are Ethiopia and India. The crop is also grown in Nepal, Myanmar, Bangladesh and several countries in eastern and central Africa.

Oilseed in India account for 1.4% of GDP and 7% of value of all agricultural products. About 14 million farmers are involved in oilseeds production and a million in processing. India ranks first in production and area of Niger in world. India has produced 27.719 million tonnes of oilseeds during 2008-09 from an area of 27.558 million ha and productivity of 10.10 quintal/ha .In Maharashtra area under total oilseed crop is 3.98 million ha having production 3.41 million tonnes and productivity 8.6 quintal/

ha during 2008-09 (Anonymous, 2011).But, the niger production in India is 110,000t during 2007-08.(Hegde and Venkattakumar 2009). In Maharashtra area and production of niger is 0.825 Lakh ha and 0.20 Lakh tonne having productivity 242 kg/ha (M.S. Aril. Deptt. 1988-89)

Now a day's oilseeds are more beneficial to the tribal farmers in terms of money as compared to cereals. The niger crop grown by tribal farmers of Thane district mainly for fulfillment of daily requirement of cooking oil. Keeping in view of above facts, FLD was introduced by ICAR, New Delhi, with the inception of technology mission of pulse and oilseed crops during mid eighties. The basic objectives of FLD are to speedy spread of the newly introduced high yielding variety of niger and get acquaint extension functionaries and local farmers with front line varieties and management technologies.

MATERIALS AND METHODS

Front line demonstration on niger was conducted by Krishi Vigyan Kendra, Kosbad Hill, Dist- Thane(M.S.) during the period from 2003-04,2004-05,2005-06 and 2006-07 in *Kharif* season, in two villages (Nyahale and Nagarmoda) of Jawahar tehsil. The total 112 number of farmers were associated under this programme. The demonstration of improved technology was taken in an area 0.4 ha of each farmers. The area covered in 4 years was 45 ha for demonstration of recommended improved practices of niger. In the demonstration, one control plot

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