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Black gram [*Vignamungo* (L.) Hepper]: Origin And Domestication In Historical Perspective

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Abstract

Black gram, also called 'Urad' or 'Masa' or 'Mash' is indigenous to India and have been domesticated in Indian territory. Different species of the genus *Vigna* are proposed as its progenitor. Apart from traditional thinking to consider origin and domestication based on limited criteria such as archaeological findings, presence of wild relatives of a species in a region and botanical documentation, it also appears worth to have data from other disciplines to arrive at better conclusions. The present author projected result of all-pervasive examination of historical and literary evidences, whether hard or soft. These led to consider Black gram certainly native of Indian subcontinent. However, it is essential to extend more studies while deciphering its progenitor.

Key Words: Black gram, *Vignamungo*, Origin, Domestication.

Introduction

The Rigvedic Aryans were initially pastoral people and reared cattle as their main occupation. Eventually, they settled permanently in North India and began to practice agriculture. The Rigveda refers to the practice of ploughing, sowing of seeds, harvesting and threshing. The four Vedas mentioned some crop species. Black gram [*Vignamungo* (L.) Hepper] is clearly mentioned as 'Masa'. This is the earliest record for Black gram. India has been accepted as the original home of Black gram (Nene, 2006). It is generally known as 'Urad', 'Mash' and thought domesticated first in India. It is very rich in proteins and consumed throughout India by all classes of Indian people. It has spread in adjacent countries. It find places in ancient literary sources. These sources reflect its antiquity, period of domestication and even spread. The present author, therefore, intended to review its history of origin and domestication in India, the results of which are presented in this communication.

Methodology:

Black gram is ingrained in Indiancivilization since ancient times being indigenous to India itself. The Sanskrit ancient scriptures and treatises of rulers of the past, etc. are consulted, apart from hard evidence like archaeobotanical ones. The literary sources are mentioned in the text limelighting the subject matter under this analysis.

Systematic Enumeration:

(1) India is the original home of Black gram. It has been restricted to south Asia. The progenitor of Black gram is considered to *Vignatrilobata*(L.) Verdc., which is found in wild in India (Nene, 2006).

(2) 'Masha' (Black gram) finds place in 'Brahadarunyaka' (C.5500 BC.) and also in the 'KrishiParasara' (400 BC.) and in the epic Mahabharata (C.2000 BC.) (Sadhale, 1999).

(3) Method for preserving seeds by exposure to day and sunlight for 3-5 days is mentioned by Kautilya (321-296 BC.) in his Arthashastra (Shamasastry, 1961; Nene, 1999, 2002).

(4) Seeds should be mixed with cow-dung for rapid seedling growth and better yield is mentioned in the medieval Sultanic or Mughal period (1206-1650 AD.) (Naqvi, 1984).

(5) A 14th century practice of soaking in bird droppings prior to sowing to ensure faster growth is reported Majumdar (1984).

(6) Kashyapa (800 AD.) recommended some practices in his 'Kashyapikrishisukt' about period for weeding, manuring and crop harvesting (Ayachit, 2002).

(7) In the 'Ain-i-Akbari' by Abdul FazlAllani (1590 AD.) recorded Black gram to be 58% that of wheat (Blochmann, 1873).

(8) Storing of pulses in large pots with their borders smeared with oil and ash applied on all sides of it is mentioned in the 'Risala-Dar-Falahat' (C.1450 AD.) (Majumdar, 1984).

(9) 'Vatakas' (Vadas of present period) prepared after fermentation of Black gram seeds were consumed during the Sutra period (800-300 BC.) (Acharya, 1998).

(10) Kashyapa (800 AD.) recorded soup prepared from Black gram (Ayachit, 2002).

(11) Liquor prepared from Black gram seeds after fermentation was in vogue in ancient period (Acharya, 1994).

(12) In the 'BhavaprakashNighantu' (16th Century AD.) Black gram is described as sticky, tasty and nutritious. It is also said to be enhancing sperm, good for lactating mothers and beneficial against facial paralysis and arthritis (Chunekar and Pandey, 1998).

(13) Surpala (C. 1000 AD.) in his 'Vrikshyurveda' used seeds of Black gram to enrich 'Kunapa' (liquid manure prepared from animal flesh) and applied particularly for coconut trees (Sadhale, 1996).

(14) Tomooka*et al.* (2002) and Fuller and Harvey (2006) reported Black gram domestication during 2500-2000 BC. and considered India (including Western Ghats) to be the centre of origin based on their archeological studies.

(15) Texts of Yajurvedic period (L.)Hepper show the presence of leguminous food crop *viz.*, Masa[*Vignamungo*(L.) Hepper] (Roy, 2009).

(16) Black gram[*Vignamungo* (L.) Hepper] was introduced to Africa and America in recent times by Indian immigrants to grow as food and manure crop (Jain and Mehra, 1980). India has been considered the centre of domestication of Black gram (Jain and Mehra, *loc. cit*.)

(17) Cultivation of Black Gram may be as long as 3500-4500 years ago, an archaeological evidence put forth by Fuller and Harvey (2006).

(18) Cultivated Black gram *viz*., *V.mungo* var. *mungo* (L.) Hepper is believed to have been domesticated in India from its wild progenitor *viz*., *V.mungo* var. *sylvestris*Lukoki, Marechal&Otoul (Chandel*et al.*, 1984).

Results & Discussion:

Black gram[*Vignamungo* (L.) Hepper] has definitely originated and domesticated in the Indian subcontinent (Nene, 2006). Such conclusions are generally drawn based on occurrence of wild relatives of a species, available documentation (floristic studies) and archaeobotanical investigations. In recent times, cytological and genetical studies also helped in determining phylogenetic relationships. Many-a-times, evidences from ancient literature are ignored, which also aid in our understanding antiquity and spread of certain plant species. Historical culinary or dietary records may also lend support in such inferences. The present author, therefore,tapped information from different compartments of knowledge, apart from botanical ones. It is to be noted that Black gram was thought originated from the wild progenitor *Vignatrilobata*(L.) Verdc. (Nene, 2006). The studies by Chandel*et al.* (1984) proposed *Vignamungo*var.*sylvestris*Lukoki, Marechal&Otul to be progenitor of cultivated *Vignamungo* (L.) Hepper. In such circumstances in-depth investigations on cytological and genetical ground may resolve the problem on more scientific basis. Moreover, other soft evidences such as ancient literature, historical annals, travelogues should be considered seeking additional support and explanation. Black gram is undoubtedly indigenous to India but its progenitor should be decided on more firm scientific ground.

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