



Full Length Review Article

KALA MATAR: AN INDIGENOUS LEGUME CROP OF SPITI VALLEY IN THE TRANS-HIMALAYAN COLD DESERT OF INDIA FACING THREAT OF EXTINCTION

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ABSTRACT

Kala Matar or so called black pea is a traditional legume crop grown by the tribal community of snow bound spitivalley in Himachal Pradesh, India. But with the transition of the Spitian economy from a subsistence based to cash based one; this traditional crop has gradually been replaced by market friendly crops. Due to lack of any economic value attached to the black pea it has now been replaced by the more acceptable garden pea which also has a ready market. As a result of this the black pea now faces the threat of extinction. The present study focuses on the need of conservation of this highly nutritious crop which has now become underutilized in spite of having very good source of cholesterol-lowering fiber and excellent amounts of five important minerals, three B-vitamins, and protein—all with virtually no fat. There is need of more research on conservation of such a nutritive crop before its extinction.

Key words: Kala Matar, Black Pea, Traditional, Underutilized Crop, Spiti Valley

INTRODUCTION

Spiti valley is located in the Trans-Himalayan belt of Himachal Pradesh, India and is called cold desert. There is great diversity of climate in this zone due to variation in altitude, topography and geographical location. In general, the climate is extremely cold and heavy snowfall occurs during winter; the temperature at some places remains several degrees below zero level. The winter season spans from November to March and most parts of this zone remain cut off from rest of the world during this period. There are 113 villages in the valley out of which 81 are inhabited. The total geographic area is 7591 sq. KM which accounts for 6.4 per cent of the total area inhabited by the tribal population in the state. Agriculture is limited to one crop a year (monocropping) and is solely dependent on the winter snow melt. There is only one cropping season starting from April to September or early October when the mean minimum and maximum temperatures range approximately between 12 to 24° C; though occasionally it ranges from as low as 5° C to 30° C. The soils of Spiti are low in available nitrogen, high in available phosphorus and low to medium in available potassium. The agriculture in this region has exhibited higher degree of transformation as compared to other area of the state and has passed to many stages of this transformation process over the years.

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Main crop farmers grow in their farms is garden pea followed by Barley (Table 1). Along with this they also grow another species of pea which is locally called Kala Matar or Black pea. Black Pea or Kala Matar is traditional crop grown in Spiti. This crop is well suited to the regions peculiar geo-climatic conditions since it requires minimum irrigation and is fairly drought resistant and hardy (Fig 1). Being a legume with high nutritive content, it can also be consumed as a pulse (similar to Kidney Beans/ Rajmah). The Black Pea also makes delicious sprouts and is very good source of cholesterol-lowering fiber. Not only can these peas help lower cholesterol, they are also of special benefit in managing blood-sugar disorders since their high fibre content prevents blood sugar levels from rising rapidly after a meal.

These peas also provide good to excellent amounts of five important minerals, three B-vitamins, and protein—all with virtually no fat. Its proteins help with maintaining healthy muscles, bones and cartilage. Black peas also contain zinc, an essential trace mineral that has significant health benefits. Zinc is good for your eyes and can help reduce your risk for macular degeneration and protect against night blindness. It's also a major immune system booster and can help fight influenza and heal wounds. This crop also has a high fodder content and were an important source of fodder for this pastoralist community. Moreover, it is well known for its high nutritional content and capability to increase soil fertility. The seeds of black pea phenotypically differ from garden pea (Fig 2).



Fig.1 Black Pea seeds



Fig. 2. Phenotypic comparison between Garden Pea and Black Pea seeds

Table 1. Cropping Pattern in Spiti Valley (Per Cent)

Crops	Spiti
Cereal	41.87
Wheat	2.87
Barley	38.99
Pulses	0.64
Rajmash	0.53
Kala matar	0.11
Oilseeds (Sarson)	0.16
Vegetables	41.03
Potato	8.38
Peas	32.62
Cabbage	0.00
Radish	0.03
Fruits	16.31
Apple	16.14
Apricot	0.11
Dry fruits	0.05
Total cropped area	100.00 (1220.20)

Note: Figures in parentheses show cropped area Source: Field Survey, 2007-08

The seeds of garden pea are larger size and light in colour as compared to kalamatar/black pea which are dark brown or black and smaller in size. However, over the years with the transition of the Spitian economy from a subsistence based to a cash based one, this traditional crops gradually been replaced by market friendly crops.

Due to lack of any economic value attached to the black pea it has now been replaced by the more acceptable green pea which also has a ready market. As a result of this the black pea now faces the threat of extinction. However, the green pea is both a water intensive plant and extremely sensitive to geo-

climatic variations. The introduction of the green pea has also brought pesticides and fertilizers in the valley which were unheard of till a decade ago, thus drastically altering the traditional agricultural practices.

It is rather unfortunate that a fully organic region is gradually transforming itself into an inorganic one in a world where people are paying hefty sums to convert to organic. This change in agricultural practices has also triggered off a number of subtle ramifications such as fodder shortages, change in dietary habits and reduction in livestock especially horses.

Though with emergence of new agro techniques, better transportation facilities and trend of farmers towards other cash crops, there is a shift from this local indigenous crop, but still there is need of more research and conservation of this rare germplasm otherwise in near future we will lose a crop with such a nutritional and medicinal importance.

REFERENCES

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