'SWAT KULAT-1' A HIGH YIELDING AND SEMI ERECT COWPEA VARIETY FOR IRRIGATED AREAS OF MALAKAND DIVISION

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ABSTRACT
Studies were carried out on cowpea variety Swat Kulat-1 (SK-1) at the Agriculture Research Institute (N) Mingora, Swat during the year 2002-03 to record variety registration data on cowpea variety "Swat Kulat-1" which is an early maturing, well-adapted, high and stable yielding variety. This variety has later on been approved by the Provincial Seed Council and released for general cultivation of the farmers of Malakand Division. Based on yield and yield components data, it was concluded that Swat Kulat-1 is a high yielding variety than the existing local varieties grown in Malakand division, with a seed yield of 1840.3 kg ha^{-1} as compared to local check variety with a total seed yield of 1090.2 kg ha^{-1}. The grain size is medium with brownish colour. The variety is short statured with plant height of 40-60 cm (Table-1). The variety grows well and gives good return on irrigated tracts. The variety is early maturing with semi erect growth habit. The yield and yield components data recorded on Swat Kulat-1 in the present study also justify that it is a high yielding variety in this area.

INTRODUCTION

Cowpea is of major importance to the livelihoods of relatively poor people. From this crop, rural families derive food, animal feed, and cash, together with spillover benefits to their farmlands through in situ decay of root residues, use of animal manures, and ground cover. All the plant parts that are used for food are nutritious, providing protein, vitamins, and minerals. Because of its high protein content (20-25%), cowpea has been referred to as poor man's meat (Rachie, 1985). Cowpea young leaves, pods and peas contain vitamins and minerals, which have fuelled its usage for human consumption and animal feeding (Nielsen *et al*., 1997).

Malakand Division is deficient in the production of pulses. Local production is about 15% of the total pulses consumption, and, the rest is imported from other areas or abroad to meet the total requirements (Agri. Stat. 2004). It is therefore very important to develop pulses varieties that are high and stable yielding, early maturing and insect pest resistant. Sawant (1994) analyzed 10 varieties of cowpea and reported that seed yield was significantly and positively correlated with pods $plant^{-1}$, 100 seed weight, seed pod^{-1} and pod length. Damarany (1994) tested 36 genotypes of cowpea and reported that TVU21 produced the longest pods (23.5 cm) and 100 seed weight (26.0 g) in both seasons. IT82D812 had the highest number of seeds pod^{-1} (16.9) and IT82D975 had the greatest seed filling in both seasons. Blackeye Crowder produced the highest seed yield $plant^{-1}$ (60.8 g). Tarseem *et al*., (1993) released cowpea 263, which was a selection from Banglaore Local, evaluated for three seasons, including testing in farmers' fields and reported that yield was 50 % superior to that of Pusa Dofasli and was suitable for both spring and rainy seasons. Pods were ready for harvesting 45-50 days after sowing. Ehlers *et al*., (2000) registered a new semi-dwarf variety 'California Blackeye 27,' developed by transferring heat tolerance traits found in African lines into blackeye bean lines adapted to California. This variety produces greater dry bean yields when it is hot during flowering and has resistance to several pests and plant diseases.

The low yield is the result of poor soil fertility levels and the high cost of chemical fertilizers. However, cowpea establishes symbiotic association with Bradyrhizobium bacteria enabling it to fix atmospheric nitrogen. Therefore breeders and agronomists have to give high priority to development of cowpea varieties with high