



Genotype X Environmental interaction for yield and quality parameters in Grasspea (*Lathyrus sativus* L.)

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Grass pea (*Lathyrus sativus* L.) is a food, feed and fodder crop. Qualities of this grain legume are its sturdiness, drought tolerance, and adaptability to a wide range of agro-climatic conditions suitable for growing as marginal crop, high protein content, as a popular leafy vegetable and its ability to fix atmospheric nitrogen. However, it has a major constraint in the form of an anti-nutritional factor called ODAP (oxalyldiamino-propionic acid) which is a neurotoxin causing lathyrism. The average productivity of grasspea is higher compared to other rabi pulses. Still, availability of limited variety to farmers is an hindrance in its widespread cultivation. Safe limit of ODAP is hard to maintain (<0.2%) (Rao et al., 1978) (El-Moneim et al., 1999). The released varieties available are also notwithstanding own shortcomings. Most of them perform poorly in different environments. Combining yield and low-ODAP posed a break-neck situation to the researchers for all these years. Moreover, banning of the crop in some states worsened the scenario. An issue was how to find high yielding genotypes to be released with, high protein, low-ODAP content, low trypsin but stable over environments. To address the quest, a two year field experiment was conducted on rabi (winter) season. Among a germplasm pool of 198 genotypes, 25 genotypes were selected on the basis of performance in yield, ODAP content and other yield and quality parameters by clustering with a combination of advanced lines, local cultivars and released varieties.



Biography:

Nilima Karmakar is currently working at Department of Agricultural chemistry and soil science, NM College of Agriculture, India.

Recent Publications:

1. Eberhart, S. A. and Russel, W. A. (1966). Stability parameters for comparing varieties. *Crop Science*. 6: 36-40.
2. El-Moneim, A. M. A., Van Dorrestein, B., Baum, M., Mulugeta, W., Center, P. O., and Debre Berhan, E. (1999). Role of ICARDA in improving the nutritional quality and yield potential of grasspea (*Lathyrus sativus* L.) for subsistence farmers in developing countries..