

**CONCLUSION:**

The present study is concerned with four weeds of Paschim Medinipur district, of which one is perennial and woody, while other three are annual non-woody vegetative species. This research work has been based on the data obtained from four forest Beats located within the territories of four Forest Divisions of this district. Mostly all these weeds are seen on forest fringe areas, barren deforested areas, barren rayati or vested land areas and also on permanent fallow areas of all the four selected beats. Since there is not much differences in the latitudes of four Beats, the differences in temperature among these beats are also insignificant. It is also seen that period, intensity and average amount of annual rainfall among the beats are not much varying.

Phenological characteristics revealed through this study have confirmed that the peak flowering period does not differ much for a species only because of a change of the site of their growing, but most naturally it varies for different species. The germination time and sprouting time of the seeds of all the weeds could not be found very much critical as that varies with the change of edaphic and climatic variations, very much so with the change of humidity and soil moisture. Thus, the rate of propagation and growth are mostly influenced by the characteristics of edaphic, climatic and biotic factors. Since all these factors are changing adversely over time with natural processes and human interventions. it is obvious that ultimately the entire process of germination, sprouting, growth, propagation, invasiveness and finally biomass output are feared to decline upto the most unsatisfactory level.

The flowering of *Lantana camara* Linn. was found to be highly responsive to temperature change. Preponderance of a lower temperature leads to less flowering culminating in a series of changes like, less germination and sprouting and finally to a lesser growth of the species with an ultimate decline in gross productivity. Difference in the amount of

precipitation seemingly did not have much bearing on the productivity. The reason may be that in every year the amount of rainfall was quite higher than that necessary for an annual weed.

The response of *Tephrosia purpurea* to temperature is similar to that of *Lantana camara* and it is more favorable in this case since *Tephrosia purpurea* is an annual weed. In this case also the rainfall in all the four forest Beat areas is sufficient for raising higher output of this weed. For *Crotalaria pallida* and *Ocimum canum*, unlike the previous two weeds, temperature has little impact on flowering, growth, fruiting and output. On the other hand, rainfall has significant direct impact on germination, sprouting, growth, fruiting and overall output from both of the weeds. In spite of having almost a negligible biomass of individual plants in comparison to tree species, due to their gregarious growth *en mass*, they can contribute considerably in restoring and maintaining the ecological richness by supplementing with moisture to the surroundings, nutrient to the soil and habitat to many life forms. Thus, these so far overlooked features add merit to such wild growing weeds and emphasize on the need of paying heed for their sustainable growth.

There is a voluminous stock of information on the multifarious use of these weed species, to which the survey of the localities under study regarding the nature of use of the plants adduce with the economic significance of them. The purpose of including a local survey on the use of the concerned weedy species under the perview of the present study was not merely to gather knowledge on the nature and extent of use of them by the local people but also to be conversant with the gross nature of dependence of forest based local people on these plants. While quite a fair use of these plants was witnessed in the localities studied, no awareness about the need of restoring these plants by the users or to take any measure for their sustainable growth came to sight. The present study has worked out a list of use of all four plants, either the local people are practically practicing or are

aware of their use. This information, in other words, speak of the pertinence of the concerned species in the localities under the perview of the study and so also entailing the adoption of right strategies for the long-term sustenance of these plants to harness the best benefit out of them.

Diversity amongst individuals of the same species extends facility to practice selection natural or artificial, to identify the best or at least, the better ones. In the present study such intraspecific level of variations was delved into for all four species in terms of morphological traits and biochemical ones with DNA, RNA and protein contents.

Existence of variation, subtle though in many cases, amongst individuals of the species showed prospect of selection to yield better results for them. So, the performance of the species can excel in comparison to the present state.

Threats from pests for any of four species of present study were found to be negligible here. The wild plants might be having a sound genetic base to resist pest instinctively. The only serious threats were either anthropogenic or grazing or browsing by cattle. These latter kinds of threat are rather easily manageable with the adoption of right strategies, dependent on consensus approaches and as such pose no serious threat.

Annual or at least short span of life of the concerned species provides an added advantage in regard of reaping maximum benefit out of them. The rotation of generation being very short the chance of gain or profit is quite high. The other advantages are their spontaneous growth in wild asks no intense care or additional supplement of nutrients.

When the benefit of such a natural replenishable wealth can be obtained only with the presence of an awareness about their sustenance, but without any investment for it, a meticulously outlined strategy to be adopted nationwide at least to facilitate the economically marginalized people to exploit these plants in a sustainable manner.