



# National Symposium on Agroforestry Knowledge for Sustainability, Climate Moderation and Challenges Ahead (15-17 December, 2008)



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yield. There is a room to reduce the negative effect of several factors that disturb the crop by providing the timely expert information. It is necessary to improve the method of dissemination of advanced scientific advice to the needy farmers in a timely manner. Indian farmers need timely expert advice to make them more productive and competitive. So the research problem here is, with the available resources and technology, to investigate methods to disseminate expert advice to the farming community in a cost effective manner. The source of power on farmers field was in the range of 18% used tractor power, 4% used bullock carts and rest 78% used the other source of power for their day to day work. The traditional ways of advice dissemination through radio, news papers, magazines, television are not meeting the expectations of the farmers due to the lack of coverage, accountability and personalized advice. The study was conducted in rice-wheat fields of smallholder farmers in Etawah and Agra districts of Uttar Pradesh State. The source of power on farmers field was in the range of 18% used tractor power, 4% used bullock carts and rest 78% used the other source of power for their day to day work. majority of the respondents were used to the source of information as Agril. Officers (86% in their villages that followed by V. D. O. (85%) and B.D.O. (42%) among Govt. agencies.

### PRODUCTION POTENTIAL OF GRASSES UNDER SILVIPASTORAL SYSTEM IN KACHCHH REGION OF ARID GUJARAT

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The Kachchh region of Gujarat, the largest district of the state, is characterized by deficient and erratic rainfall (average rainfall of 326 mm in 8 rainy days), less ground water with poor quality and sandy to sandy loam soil having low organic carbon. In this fragile ecosystem, animal based farming system is more sustainable and economical than arable cropping. However, deficiency of feed and fodder, both in quantity and quality is a major bottleneck in improving productivity of animal husbandry. Adoption of improved silvi-pasture system would result in increased forage productivity in the region. Therefore, the field experiments were conducted on silvipastoral system involving two perennial trees (*Azadirachta indica* and *Acacia tortilis*) and two prominent grasses identified for the region, namely, *Cenchrus ciliaris* and *Cenchrus setigerus* at Central Arid Zone Research Institute, Regional Research Station, Bhuj. The sole treatment of both the components was also maintained for comparison. The tree component was established in 1988-89 by adopting spacing of 5x5m. Grasses were planted at 50 cm row to row spacing. The data on growth and yield of grasses recorded in 2008 are presented and discussed. Growth parameters of grasses like height and number of effective tillers/pl were significantly affected by silvi-pasture system. While height was significantly increased by 22.1%, the number of effective tillers reduced by 26.5% in association with trees compared with the sole treatment. Total number of tiller/pl and dry fodder yield did not differ significantly due to silvi-pasture system. However, the adverse effect of *A. tortilis* was more pronounced on growth as well as yield parameters of grasses and dry fodder yield reduced by 12.4% compared with that recorded under sole treatment, where as no such reduction was observed in association with *A. indica*. Out of the two grasses studied, *C. ciliaris* was taller, had more number of total and effective tillers and produced higher dry fodder yield (3695 kg/ha) than that recorded by *C. setigerus* (2950 kg/ha). *Cenchrus ciliaris* was more productive than *C. setigerus* under silvi-pasture system grown in association with *Azadirachta indica* and *Acacia tortilis*. Growing of grasses with *A. indica* was more compatible than with *A. tortilis* as later showed pronounced adverse effect on growth and yield of the grasses under arid conditions of Kachchh.