Private Ownership of Grazing Land in Tropical Semi-Arid Tract Spurs Community Action for Sustainable Management of Grassland

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Introduction Community owned grasslands in tropical region , wherever they exist are mostly over grazed and the well known theory of *the tragedy of commons* (Hardin , 1968) is in full play . However , the grasslands of the Kangayam region under private ownership of thousands of farmers offer an alternate model in sustainable management of such grasslands .

Materials and methods The semi arid tropical grassland located in south India between 77° 17"E and 77° 55"E longitudes and 10° 44"N and 11° 03"N latitudes , was extensively surveyed during 2004-06 , to underline the factors that has helped in managing these grasslands over centuries without making them a barren waste . The study encompassed the historical ownership rights , the production potential of the grassland , the vegetation , the livestock rearing practices and the social issues .

Results The semi arid grassland spread over 3800 sq km in south India receives on an average 666 mm of annual rainfall . The *Cenchrus ciliaris* dominated grassland is conveniently organized into paddocks around which a live fence of *Balsmodendron berryi* is maintained . 77% of the paddocks is over 2 ha and the live fence helps secure the animals within the grassland paddock , thereby minimizing the labour input . Two flush of grass crop come up-the first after rain in May and the second in Oct-Nov . The animals are withheld for one month each during the two periods to let the grass come up well after which the animals graze day in and out . In each paddock about 25 Mecheri sheep and one or two cow/ buffalo are allowed and they are rotated between the paddocks .

An inquest into the historical development of such unique management practices followed revealed that the genesis lie in the land settlement policy of the erstwhile British rulers . Earlier the whole of the area were abandoned with cactus growing all around . During the British period , land was allotted rent free to whosoever cleared and used those unused lands . This encouraged the farmers to put in hard work to clear and use these barren strip of land . They identified and planted the thorny *B . berryi* along the field boundary , which helped secure the animals within the paddock . By 1936 , there was no community land in this region (Littlewood , 1936) . Absence of community land spurred community action in controlling the goat population which damages the live fence of *B . berryi* by feeding on its leaves and fruits . Over generations , the farmers have invested in digging wells to irrigate the land surrounding the homestead to enhance their income .

Conclusions Unlike community owned grassland which puts no obligation on individuals for their sustainable management , the private ownership of even fragile land stimulates the farmers to invest in the land , make them more productive by adopting innovative management skills , initiating community action in barring goats , thereby making the unproductive land into a sustainable production system .

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