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Problem affecting pasture and rangeland management in the Himalayan region of Nepal

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Key words : carrying capacity , stocking rate , controlled and systematic grazing , indigenous pasture species

Abstract Nepal is landlocked mountainous country with an area of 147 ,181 sq . km . The elevation varies from 67m above sea level at Kechana Kalan , Jhapa , in southeastern Terai to 8848 m at Mt . Sagarmatha , the highest peak in the world . Ecologically the country is divided into three regions east to west . The Mountains (4877 to 8848 masl) , the hills (610 to 4877 masl) and the Terai (flat low land of Indo Gangetic plains) ; they occupy 35 , 42 , and 23 percent of the total country land areas , respectively . Nepalese economy is dominated by agriculture and currently the contribution of the agriculture sector to National Gross Domestic Product (NGDP) is 36 .5 per cent and that of livestock to agriculture Gross Domestic Product (AGDP) is 27 .66 per cent (MOAC , 2005/06) . At present , about 1 .74 m ha , (about 12% of the area of the country) , constitutes pasture land . Approximately 78 per cent of the rangelands are located at high altitude regions in the northern belt of Nepal bordering Tibet (LRMP , 1986) . The grazing lands except the alpine meadows are under heavy grazing pressure (Pariyar , 1995) . The mid-hills and the open grazing lands are stocked by about 13 times more than its carrying capacity and the steppe grazing lands by about 19 times , where as the alpine meadows is under-stocked by just 45% . However , the carrying capacity of the above rangelands could be significantly improved by adopting improved management practices and introduction of some exotic species .

Attempts have been made to improve the productivity of pastureland by reseeding of indigenous species , introducing exotic pasture species and/ or improving the existing management practices for decades . These attempts are characterized broadly by research , training and extension through many government and semi-government institutions . However , due to several problems in pasture improvement program in Nepal , it has resulted in only a sporadic success in this field . The problem is compounded by lack of applicability of new technology to existing pastureland , difficult terrain , harsh cool windy dry climate , limited soil moisture level , wind erosion , lack of trained manpower at field level , lack of incentives to the trained field workers , improper placement of trained manpower , lack of national directives on pasture research work , lack of rangeland policy in the country , unplanned and uncontrolled grazing , lack of institutional coordination , lack of community participation in Pastureland management , enormous increase in population pressure(human and Cattle) , unproductive due to un-wise use of land , man made destruction of natural vegetation and land tenure system of the country . Paper reviews the existing situation of pasture / rangeland development , traditional and current/prevalent rangeland management system . Establishment of network for regional cooperation to rectify to imbalance in human and natural resources , development of a core of professional cadre on the basis of ecological belts , studies on native/indigenous rangeland species in their natural habits , silvipasture system , controlled and systematic grazing , rehabilitation , reseeding of overgrazed pastures , introducing forages with low water and mineral requirement , watershed management , improving of existing grazing areas by scientific inputs such as technical , managerial , education and other assistance program (with holistic packages) for range owners and other users , rangeland management based on private ownership etc are some key recommendations for speedy program for its development .

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