

Fodder Strategy for Sustainable Animal Production in Arid Rajasthan

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Received: December 2012

Abstract: Forage and feeds are the major inputs in animal husbandry, which constitute nearly 70% of the total cost of production. Cultivated fodders, including dual purpose crops, residue of field crops, rangelands and pastures, fodder trees and shrubs, etc. are multiple sources of fodder for animals in arid Rajasthan. For sustainable animal production, the improved cultivation and management practices of all these fodder resources along with fodder conservation and utilization strategy need to be developed in arid Rajasthan.

Key words: Cultivated fodder crops, dual purpose crops, pasture grasses, trees and shrubs.

Crop production and animal husbandry go hand in hand for resource conservation and their utilization for sustainable agriculture in arid Rajasthan. Adverse climatic conditions like low and erratic rainfall, frequent droughts, high temperature, speedy winds, high evapo-transpiration and poor water resources are the major constraints for crop production in arid zone (Venkateshwarlu, 2004). Animal rearing matches the potential and limitations of natural resource base in these areas. Cattle, buffalo, sheep, goat and camel are indispensable and generate income and employment for livelihood support for rural families.

Animal husbandry in arid Rajasthan is mainly dependent on rangelands and pastures, fodder trees and shrubs, and crop residues. Presently, the grazing resources of arid Rajasthan are shrinking and their grazing capacity has also declined due to un-judicious utilization and high grazing pressure. However, the availability of nutritious fodder is essential for animal health and production. Now, there is an urgent need to augment fodder production planting high yielding fodder varieties and adopting improved crop management practices, pasture improvement adopting technological interventions and plantation of trees and shrubs to establish green fodder bank for sustainable livestock production (Sharma, 2001; 2006).

Cultivated Fodder Crops

High yielding varieties of cultivated fodder crops for arid Rajasthan

The fodder crop improvement program of ICAR, along with State Agricultural Universities, has developed many potential varieties of fodder crops for different agro-ecological situations of arid and semi-arid regions of India. The newly developed varieties are superior in yield under a particular situation. The fodder quality, including nutritive value, digestibility and palatability of these varieties is also better over obsolete varieties. Some high yielding varieties of cultivated fodder crops identified for arid Rajasthan are given in Table 1 (Sharma, 2012).

Important dual purpose crops and their suitable varieties

There are certain crops which are valued for grain as well as fodder and therefore categorized as dual purpose crops. In the present scenario of fragmented and small land holdings, breeding efforts are going on to develop high yielding varieties of dual purpose crops, so that farmer can get green fodder and food grain from the crops in the same season from the same piece of land. Pearl millet, sorghum and barley have excellent growth, biomass production and quick regeneration ability after cutting (Sharma, 2007; 2013 a & b). The potential of these crops has been recognized for dual purpose cultivation, where regenerated crop is managed for seed production after first fodder cut.

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