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“Solidarity in a competing world —
fair use of resources”

Closing the Feed Gap in Drylands for Enhanced Livestock Productivity and Efficient Resource Use

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Abstract

Livestock is the world's fastest-growing highest-value agricultural sub-sector already accounting for about 40 % of agricultural GDP globally. By 2050 massive increases over 2005/7 amounts of cereals, dairy and meat will be needed: an extra of 2–3 Gt cereals, 0.66–1 Gt dairy products and 258–460 Mt meat. To meet this demand, large productivity increases are required as expansion of animal numbers and croplands is no longer an option. Hence, food and feed production will compete for land and water resources, particular in the drylands. These trends have to be seen against the background of widespread and growing land degradation and the additional challenge of climate change and variability. As one of the most extensive agents of land degradation, grazing pressure has already resulted in a significantly reduced contribution of rangelands to feed supply. E.g. in Near East — North Africa region this is only 10 to 25 % of livestock needs. This scenario clearly calls for research on resource-efficient feed production optimally integrated with food production. The International Center for Agricultural Research in the Dry Areas (ICARDA) and its partners have been exploring resource-efficient options to increase feed quantity and quality, among others addressing inefficiencies in feeding systems through balanced rations and smart supplementation; replacing expensive food grains in animal diets by agro-industrial by-products without jeopardising product quality; breeding for full purpose crops which includes selecting for food-feed cultivars in grain legumes and barley, and harvesting green forage from winter cereals in early growth stages; and intensifying cropping systems by replacing summer fallows with short duration legume crops which contribute to feed supply and soil health. This presentation will give examples of these research areas in dryland countries.

Keywords: Feed supply, livestock