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Estimating forage seed requirements to close ruminant feed gaps in Africa

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Abstract

Governments aspirations for ruminant production and contributions to countries' development goals are often not met primarily owing to inadequate livestock feeds and feeding. While ruminant process roughages to desirable products including meat, milk and manure, good quality roughages underpin the performance of the animals. As human population in the continent continues to grow, contributions from ruminant agriculture to nutritious foods and household incomes will intensify. To match the demand, the cultivation of good quality forages will become more inevitable, and one of the major bottlenecks is accessing good quality forage seeds by forage producers. In ten selected African countries including Malawi, South Sudan, Sudan, Zambia, Zimbabwe, Somali, Mozambique, Mali, Senegal, and Nigeria we synthesized national livestock development strategies, reviewing feed demand and supply in these countries and estimated forage seed required to bridge dry matter deficit through cultivated forage. we selected two grasses and two legumes with potential to provide the desired ruminant nutrients when cultivated and fed. These include *Megathyrsus maximus* and *Urochloa* spp (grasses) and *Vigna unguiculata* and *Lablab purpureus* (legumes). To address feed constraints, each country has developed targeted livestock development plans. Despite varied national contexts, common strategic goals emerge enhancing productivity, expanding veterinary, feed services, improving market access, and strengthening sector resilience. Dry matter feed deficits range from 1.6 million tonnes in Mozambique to over 23 million tonnes in Nigeria. Relative to national demand, feed gaps range from 15 % in Somalia to 33 % in South Sudan. As ruminants require both forage grasses and legumes to provide energy and crude protein, Estimations indicate the countries will require 13,698 tonnes of forage seeds to bridge the forage cultivation that meets dry matter deficit. Therefore, it will be prudent for the countries to actively seek forage cultivation to sustain ruminant productivity for human food and development.

Keywords: Forage seed, grasses, legumes, ruminants