

General Feed Supplements are used to increase nutrients in livestock diets, with the aim of maintaining or improving livestock health through adequate animal nutritional balance and therefore productivity of milk or meat. These supplements include vitamins, amino acids, minerals, and other nutrients. Supplementary feeding can become either a regular part of the production cycle to help match feed demand to feed supply, assisting livestock farmers meet production requirements as defined by market specifications, or reserved for times of shortage during dry spells and/or droughts. The extent to which supplementary feeding is applied depends on the farm/business objectives and seasonal conditions. This is especially true in areas of low-quality crop residues and low quality pasture land.

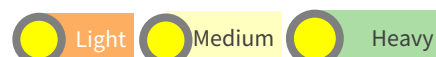
Feed supplements are presented in granular, powder or block form and used during milk production and fattening stages for meat production. However, if consumed in excess feed supplements can be harmful to animals causing toxicity and if persistent, death.

MOST SUITABLE AGRO-ECOLOGICAL CONDITIONS

Value chain



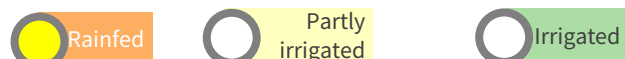
Soil texture



Climatic zone



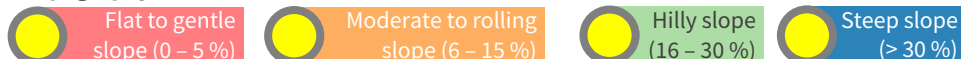
Water source



Annual average rainfall (mm)



Topography



MOST APPROPRIATE CONDITIONS AND REQUIRED INPUTS

Farming system

Does it require collective action



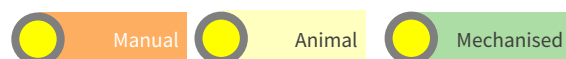
Characteristics



Farm size (ha)

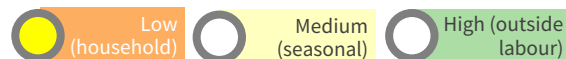


Mechanisation



Human resources

Labour intensity - level of effort

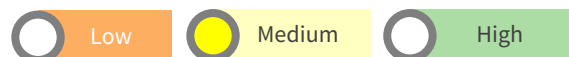


Gender/youth smart (low investment/low labour requirements)

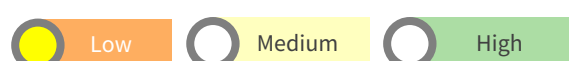


Financial resources

Initial investment



Maintenance Costs



Access to finance capital or credit required



Enabling Environment

Extension support



Access to inputs



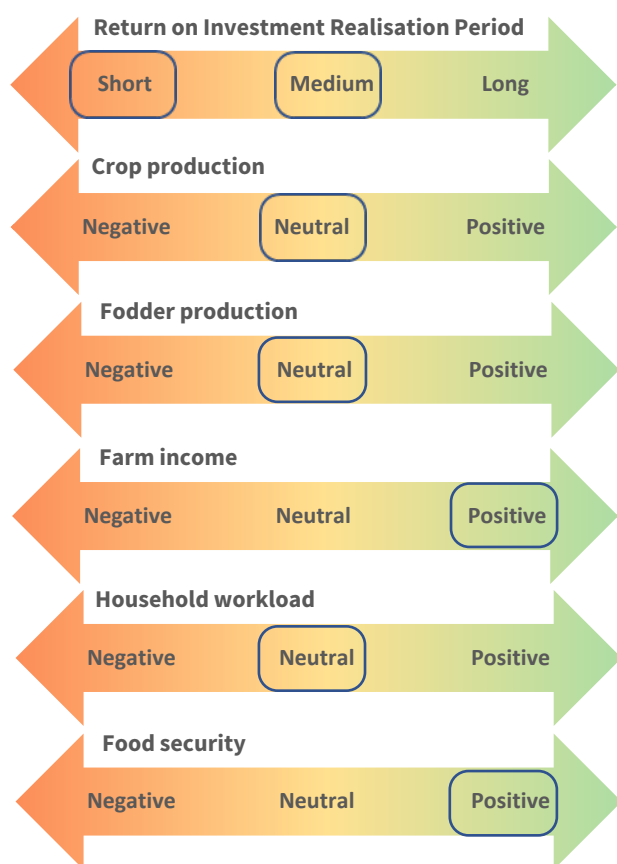
Market access



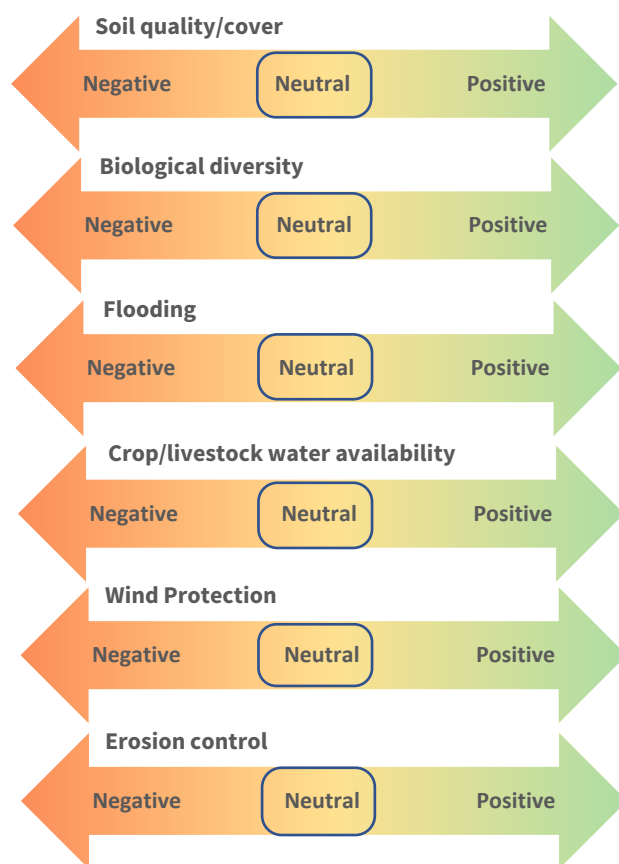
The purpose of this technical brief is to guide where this **practice, technology or strategy** could be applied. It may be applicable in other circumstances, but this brief focuses on where it is possibly **most suitable**. Content is general, and should be contextualised depending upon locality. The brief provides an overview, details of appropriate agroecological characteristics, appropriate conditions and inputs, possible outcomes and impacts, how the **practice, technology or strategy** should be applied, potential benefits and drawbacks, and provides suggestions for further reading in terms of CCARDESA materials and other sources, including those used to develop this technical brief.

POSSIBLE IMPACT/OUTCOMES

Socio-Economic Impacts Positive or Negative



Ecological Impacts Positive or Negative



These descriptors indicate whether the practice, technology or strategy has a positive, neutral, or negative impact or outcome. Those with no box are deemed not-applicable.

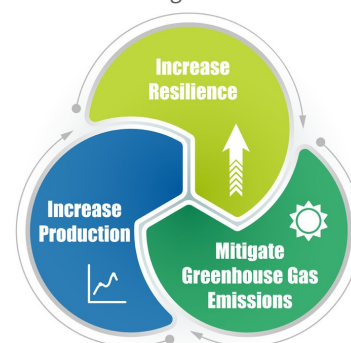
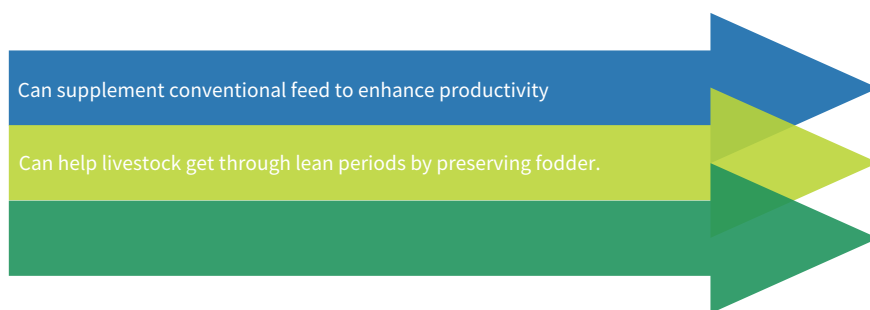
TECHNICAL APPLICATION

To effectively implement Improved digestibility, Improved protein content:

- **Step 1:** Inform farmers of the possible benefits of increased dietary protein in their livestock in order to implement dietary supplements.
- **Step 2:** Identify a supplement contain the key amino acids - Methionine, Lysine, Threonine, and Tryptophan, in consultation with suppliers and veterinarians.
- **Step 3:** Added supplements to green plant residue (silage) as guided on packaging or by supplier to increase the efficiency of protein in livestock. Ensure that supplement amounts are suitable for animals and the type of feed being supplemented.
- **Step 4:** Ensure that supplements sourced will be consistently available from suppliers in the region. These supplements can be purchased at most agricultural shops, including rural areas.
- **Step 5:** As a low-cost option, farmers can formulate rations specific to their livestock. These rations are only for domestic use and not commercial.

CLIMATE SMART AGRICULTURE OUTCOME(S)

Reflecting how this **practice, technology or strategy** contributes to Climate Smart Agriculture outcomes



SUMMARY/KEY ISSUES

Benefits

- Feed supplements are used to balance animal nutrition, resulting in high market value and quality of livestock.
- They help improve animal productivity and nutrition.
- Beneficial in areas of poor pasture or during drought seasons where animal feeds are scarce.

Drawbacks

- Excessive consumption of supplements can be toxic to animals and can lead to death if over consumption persists.

REFERENCE MATERIAL

CCARDESA Related Content

- CCARDESA, 2019. Technical Brief 14, Climate Smart Diet Management Options for Livestock in the SADC region.

Additional Information

- Food and Agriculture Organisation (FAO), 2007. [Feed Supplementation Blocks](#). Rome, Italy.
- Food and Agriculture Organisation (FAO), 2002. [Protein Sources for the Animal Feed Industry](#). Rome, Italy.