To obtain a vigorous plant growth from seed it is necessary to:

(1) SCARIFY the seeds.

E.g. immerse in hot water.

NOTE: without scarification germination will normally be lower than 10%

(2) INOCULATION of seeds

Use a species specific Rhizobium inoculum (natural or artificial)

NOTE: non inoculated plants are weak and slow growing

(3) RIGHT CONDITIONS

E.g. Soil (neutral pH), moisture, light, temperature, weed control

(4) FERTILIZER

Phosphorous is necessary for strong growth

(5) CULTIVATION

Legume growth is slow- Plants are very delicate

- they need protection from animals, insects, and weeds.

TO ENCOURAGE GROWTH AND DEVELOPMENT

(A) Avoid excessive shade

Reduced light

Insufficient carbohydrate production

Poor growth

(B) Avoid excessive defoliation

Weakens the plant resulting in death

(C) 30-40% of the pasture should be composed of legumes for good animal production.

To obtain a vigorous plant growth from seed it is necessary to:

Example of tropical legumes growing in Jamaica

ESRRESSS

TREES

- Prosopis chilensis
- Leucaena leucocephala
- Gliricidia sepium
- Semanea saman
- Erythrina poepigpiana
- Calliandra calothyrsus

SHRUBS

- Codariocalix giroides

PASTURE LEGUMES

- Neonotonia wightii
- Macroptilium axillare
- Arachis pintoi
- Pueraria phaseoloides

For more information visit: http://www.jddb.gov.jm


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TROPICAL LEGUMES

ADVANTAGES OF LEGUMES

- Cheap source of Fertilizer!
  Increase soil nitrogen content
- Improves Soil Fertility
- Deep Roots Drought tolerance
- A diet containing legumes
  Reduces the quantity of protein concentrates needed to increase milk production.
- Legumes do not lose their high protein content with increasing maturity (unlike grasses).
- Legumes have a higher calcium and phosphorous content than grasses.

VALUE OF LEGUMES IN ANIMAL PRODUCTION

- Cheap source of high quality protein
  (Average = 16.00% crude protein)
- Good digestibility
  (60-65%)
- High Palatability
- Aids digestion
- Increases feed intake

NOTE: Legumes with a high %TANNIN are UNPALATABLE to cattle.

MAIN CHARACTERISTICS

A) The seeds are in PODS
( B ) Plants have ROOT NODULES where RHIZOBIUM bacterial colonies live in symbiosis with the plant.

Shade
Wind breaks
Increased soil fertility
Increased feed protein

LEGUMINOUS TREES

From the air
Maintains Soil Fertility

FARMING SYSTEMS WITH LEGUMES

( A ) SILVI–PASTORAL
Leguminous trees + pastures
- Protein Banks
- Living Fences
- Trees planted at random in pastures
- Alley cropping

( B ) AGRO–FORESTRY
Leguminous Trees + crops

( C ) GRASS LEGUME MIXTURES
Pasture legumes + Grasses