



Department of Agriculture
NATIONAL DAIRY AUTHORITY

Setaria (Setaria sphacelata)

A tufted perennial up to 150 cm high. It is persistent palatable, productive and drought resistant. It has a long vegetative cycle and is established through seeds or cuttings.



Signal Grass (Brachiara decumbens)

A creeping, stoloniferous grass with short leaves and short dark green leaf blades. It is fairly tolerant to drought and low fertility soils.



Recommended Forage Legume Species

Siratro (Macroptilium atropurpureum)

A perennial with deeply penetrating roots and twining vines which may root anywhere along its length. Leaves are very hairy on the upper surface; lateral leaflets indented. It is very tolerant to drought and low fertility soils.



Centrosema (Centrosema pubescens)

Trailing, twining and climbing. Leaves are shiny bright-green with sparse hairs and ovate, elliptical leaflets. It is fairly tolerant to drought and low fertility soils.



Kudzu (Pueraria phaseoloides)

A prostrate, stoloniferous trailing perennial. Forms a good pasture in association with other grasses but slow to establish adapted to high rainfall areas with a not-too-prolonged dry season. Does not withstand close grazing.



Stylo (Stylosanthes guianensis)

A vigorous, bushy perennial growing from 0.5 to 1.5 m high which may become trailing under grazing pressure. Leaves are trifoliate, with elliptical leaflets and long hair on the mid vein of the lower surface. It is very tolerant to low fertility soils and drought.



Madre de Cacao (Gliricidia sepium)

It reaches 10 meters in height and 30 cm in diameter. The deciduous leaves are alternate, pinnately compound, 15 to 30 cm long. The 8 or more pairs of leaflets are usually of the same size. Thrives in saline soils.



Ipil-Ipil (Leucaena diversifolia)

A straight boled tree reaching 20m in height and 20-30 cm in diameter. Leaves are alternate with bi-pinnately compound tiny feather leaflets. It is tolerant to drought and low fertility soils. It thrives in elevations up to 1,000m.



Flemingia (Flemingia congesta)

An erect, deep rooted shrub up to 3 m in height. It tends to have many basal sprouts. Leaves are trifoliate. The shrub grows in brushwoods and waterways. It is drought resistant and tolerates light shading.



Reference:
Central Visayas Technology Guide on Forage Production in the Hillylands

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WHY
PLANT
FORAGE?



Improved grasses and legumes are the cheapest sources of feeds for cattle, goats and carabaos. Aside from providing nutritious livestock feed, these are also utilized in stabilizing contour bunds, planted as hedgerows and cover crops and used for other soil conservation measures. The establishment of forage production areas will enable the farmers to raise their productivity and income, finally effecting an improvement in their standard of living.

Planting Forage Grasses and Legumes

1. Provides a year round supply of feeds for livestock
2. Promotes soil conservation
3. Promotes soil fertility regeneration

Functions of Grasses

1. The root system binds soil particles
2. Improves soil structure and increases porosity
3. Reduces water and soil run-off
4. Reduces impact of rain on soil

Functions of Legumes

1. Fixes atmospheric nitrogen in symbiosis with Rhizobia into available form for plants
2. Supplies protein for plants
3. Supplies nitrogen to crops
4. Promotes better utilization of soil moisture

Characteristics of Good Forage Species

1. High biomass yield or large volume of herbage production
2. Aggressive growth to cover the ground quickly and survive when in competition with other associated species
3. Persistence or ability to survive and multiply / reproduce by vegetative methods
4. Tolerance to drought
5. Adaptable to the local soil and climatic conditions
6. Can be established easily by means of seeds or other vegetative planting materials
7. High coppicing ability or tolerance to continuous cutting

It is recommended to combine forage grasses with legumes to effect strong establishment.

Legume species that are found adaptable are siratro, centrosema, kudzu and stylo while tree legumes include madre de cacao and ipil-ipil. Adaptable grass species are napier, guinea grass, hamil, gamba, setaria, signal and stargrass. Grass and legume species with high potential for local production are vetiver, flemingia, acacia, calliandra and ipil-ipil.

Integration of signal grass and gamba grasses with forage legumes in contour bunds effected healthy growth and strong establishment. Planting forage species in idle lands and contour strips under improved fallow, using the cut and carry system ensures sustainable supply of forage.

Recommended Forage Grass Species

Napier (*Pennisetum purpureum*)

A robust cane like species reaching a height of 2 to 5m with short and stout underground stems. Leaves are broad and tapering with a strong mid-rib. It is tolerant to drought but not to low fertility soils.



Guinea/Hamil (*Panicum maximum*)

A coarse, leafy and deeply rooted perennial with a typical stool forming habit. Leaves are long, broad and well distributed along the stems. It is very tolerant to drought but not to low fertility soils.



Stargrass (*Cynodon plectostachyus*)

A perennial, with rapidly growing stolons that quickly covers bare ground forming a dense turf up to 120 cm which is essential for the maintenance of a good pasture. Palatable and aggressive, it is generally propagated by vegetative means. Withstands close grazing.



Gamba (*Andropogon gayanus*)

A tufted perennial up to 3 m high. It is drought-resistant and exhibits an abundance of new shoots after burning; can be propagated by slips or seeds.

