



**Biotica
Research
Today**

**Vol 2:7 663
2020 665**

Green Fodder Production Technologies

Ayyadurai P.^{1*} and R. Thangadurai²

¹Dept. of Crop Management, Agricultural College and Research Institute, Tamil Nadu Agricultural University, Vazhavachanur, Thiruvannamalai, Tamil Nadu (606 753), India

²Dept. of Veterinary and Animal Science, ICAR-Krishi Vigyan Kendra, Tamil Nadu Agricultural University, Pappaparatty, Dharmapuri, Tamil Nadu (636 809), India

 Open Access

Corresponding Author

Ayyadurai P

e-mail: ayyaagridurai@gmail.com

 **Keywords**

Cereals, Green Fodder, Legumes, Tree fodder

Article History

Received in 25th July 2020

Received in revised form 28th July 2020

Accepted in final form 29th July 2020

E-mail: bioticapublications@gmail.com

How to cite this article?

Ayyadurai and Thangadurai, 2020. Green Fodder Production Technologies. Research Today 2(7): 663-665.

Abstract

Green fodder plays major role in nature feed of animals, thereby providing required nutrients for milk production and health of the dairy animals. Green fodder is actually any type of feed that is made from green crops like legume crops, cereal crops, grass crops and tree based crops. Green fodder contains 60-90% moisture. The mineral and vitamin content of green fodders are highly variable. Legume fodders may have 20% or more crude protein content. Cumbu Napier grass can be chopped into small pieces using local chop cutting machine and make silage which can be stored for years and used as fodder in dry or drought season.

Introduction

Green fodder plays major role in nature feed of milch animals, thereby providing required nutrients for milk production and health of the dairy animals. It provides better option of feed buying alternative for farmers who are planning to go for sheep farming, goat farming or dairy farming (Prakashkumar and Sreenath, 2019). Some farmers even depend on the cultivation of green fodder just like any other crop and sell in the market. Some types of green manures can be chopped into small pieces using local chop cutting machine and make silage which can be stored for years and used as fodder in dry or drought season. Green fodders contain 60-90% moisture. The mineral and vitamin content of green fodders are highly variable. Legume fodders may have 20% or more crude protein content (NDDB, 2012).

What is Green Fodder?

Green fodder is actually any type of feed that is made from green crops like legume crops, cereal crops, grass crops or even tree based crops.

Objectives of Green Fodder

- To reduce the feeding cost.
- To make silage from the green fodder and feed your animals later.
- It provides natural way of nutrients for the animals and plays major role in livestock health and overall growth.
- Green fodder production and maintenance costs are relatively low.
- Less time for producing green fodder, because most of the varieties are perennial and you can get fodder for years.

Types of Green Fodder

There are several types of green fodder available and generally four types of green fodders are mentioned below;

- A. Cereal based green fodder
- B. Grass based green fodder
- C. Legume based green fodder

D. Tree based green fodder

A. Cereal Based Green Fodder

Certain cereal crops are used for green fodder production for feeding the animals. E.g. Maize and Sorghum.

Maize

It is an annual crop and it can be cultivated in different types of soils. Seed rate is 40-45 kg/ha required. Row to row spacing 30 cm and plant to plant spacing is 15 cm. Average green fodder production is 45 to 50 tons/ha and the dry matter production is 10-15 tons/ha. Harvest the green fodder maize when the cob is in the milky stage. Suitable variety is African tall, Ganga-5 etc.



Figure 1: Cumbu Napier grass intercropped with Desmanthus (3:1)



Figure 2: Fodder maize

Sorghum

Sorghum is cultivated for both grain and green fodder. It is a drought resistant annual crop and grows well in tropical areas with a temperature range between 25 °C and 36 °C and it requires an annual rainfall of 300 to 400 mm. It can be cultivated on all types of soils (but avoid too much

sandy soils for growing sorghum). Seed rate is 40 to 45 kg/ha. Harvest should be done on after flowering stage for green fodder. Suitable variety is CO (FS) 29 and CO (FS) 31.

B. Grass Based Green Fodder

Hybrid Napier

It is actually a perennial grass fodder and it produce more tillers and leaves than Napier grass and it is more vigorous and yielding and quality is much higher. Hybrid Napier grass crop contains crude protein from 8-10%. Hybrid Napier crop is grown from slips, 40,000 to 45,000 slips/ha required. First cutting should be done on 70 to 80 days after planting and subsequent cuttings at intervals of 40 to 45 days. Suitable variety is CO (CN) 4 and CO (BN) 5.



Figure 3: Guinea grass intercropped with Desmanthus (3:1)



Figure 4: Desmanthus

Guinea Grass

It contains 4-15% crude protein and it reaches about 5 meter tall. 2 to 2.5 kg seeds or 65,000 slips are required for planting in one hectare land. Average yield is 150 tons/ha from 8 cuts. Suitable variety is CO (Gg) 3.

Blue-Buffer Grass

It is a perennial grass and suitable for pasture land. This grass requires very well-drained soil with high calcium content. 5 to 7 kg seeds are required per hectare. First cut should be done on 70-75 days after planting and average yield is up to 35 tons/ha/year.

Para Grass

It is a perennial grass and it is ideal for growing in humid climatic conditions. It can be cultivated in seasonally flooded valleys and lowlands, and it can withstand water stagnation and long term flooding as well. Para grass is generally grown from stem cuttings, 900-1000 kg of stem cuttings per hectare. First harvest should be done on 70-80 days after planting. Average yield is 90 to 100 tons /ha/year.

C. Legume Based Green Fodder

Cowpea

It is an annual crop and it can be grown in tropics, sub-tropics and warm temperature regions. It is very useful feeding in green form, for hay making or for making silage. It can be cultivable throughout the year. Seed rate is 40-45 kg/ha. Harvest should be done on 45 to 50 days after sowing (40-50% flowering). Suitable variety is CO5.

Desmanthus

It is also a perennial crop and it can be cultivable throughout the year under irrigated and rainfed conditions. Seed rate is 18-20 kg/ha. Harvest should be done on three months after sowing.

Stylo

It is an erect growing perennial forage legume crop. The plants generally reach around 2 meters height. It is very drought resistant and considered as a very good pasture legume. Average crude protein content is 16-18%. Seed rate is 6-7 kg/ha. Harvest should be done on 70-75 DAS. Average yield is 25-40 tons /ha/year.

Lucerne

It is very good for the animals and it is known as the queen of forages. It is a deep rooted perennial forage that can be grown on a wide variety of climatic conditions. Seed rate

is 18-20 kg/ha. Harvest should be done on 70-80 DAS. Crude protein content is 15-20%. Suitable variety is CO 1.

Advantages of Green Fodder

- Five kilogram of green fodder provides nutritive value equivalent to 1 kilogram of good quality concentrate feed.
- Reduces the cost of milk production.
- The milch animals get natural feed.
- Animals remains healthy.
- Growth rate and production reaches to optimum level.
- Helps in increasing fertility.
- Early Maturity is achieved.
- Inter calving period reduced.
- Improves the quality and taste of milk.
- Increased productivity.
- Higher profitability.

Conclusion

Cereal, legume, grass and tree based green fodder provides better option of feed buying alternative for farmers who are planning to go for sheep farming, goat farming or dairy farming. It contains high percentage of crude protein, crude fibre and minerals. It reduces feed cost of milk production and maintenance of healthy animals. Finally increase productivity and profitability of livestock farmers and improve the socio economic status of the farmers.

References

- Rathod, P., Dixit, S., 2019. Green fodder production: *A manual for field functionaries*. Patancheru 502 324, Telangana, India: International Crops Research Institute for the Semi-Arid Tropics, 56.
- National Dairy Development Board. 2012. Nutritive value of commonly available feeds and fodder in India. Animal Nutrition Group, National Dairy Development Board, Anand-388 001, 36-60.