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To assess the effect of hybrid napier (Phule Gunwant) feeding on milk yield in indigenous cattle

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Abstract

The field assessment of Hybrid Napier Phule Gunwant trial conducted in three (2019-20, 2020-21, 2021-22) consecutive years in three contacted villages, which is in same cluster of the Krishi Vigyan Kendra, Dhule district of Maharashtra, to observe the effect of feeding Hybrid Napier Phule Gunwant on milk yield in indigenous cattle. Accordingly, we planned the same assessment in two-treatment group i.e T₁: farmer practice, which is grazing in that particular area. Second treatment group T₂ to avoid grazing and fed with standard quantity feed as per thumb rule, accordingly we fed green fodder i.e. Hybrid Napier Phule Gunwant daily for 90 days of lactation. During assessment, period 13 farmers selected in each year for the same with 26 cows (13 cows in each treatment) comparable age group and stage of lactation of the cows. Moreover, the outcome of milk yield during assessment period the milk yield of (T₂) indigenous cow was observed increasing trend, which is 27.61 per cent as compare with the rest of the treatment T₁.

Keywords: Fodder, cattle, milk, Phule Gunwant etc

Introduction

In Maharashtra, more than three-fourth of the agriculture is rain-fed. Moreover, uneven distribution of rainfall across various regions of the state and with erratic pattern, dairying is gaining importance as a source of livelihood for the small and marginal farmers of the state. According to 20th census, Maharashtra state stands 7th position (approx.33 million) in livestock population, among those 13.9 million livestock population belongs to cattle group. The Dhule district has a major contribution in indigenous cattle population which is near about 289020 with an average productivity of milk 2.88kg/day which is less as compare with the cross breed cattle, for this balanced nutrition in particular green fodder is one of the important factor, but most of the farmer managing their livestock in particular indigenous cattle on grazing, feeding crop residue this is one of the reason which affect the productivity and production of the animal.

Unfortunately, the shrinking landmass that could be used for cattle feed production is a considerable problem facing dairy farmers and their livestock. However, there is solution for growing perennial green fodder Hybrid Napier for sustainability in production of milk in particular small and marginal farmer who kept their units running efficiently, profitable. Accordingly, we planned to assess the Hybrid Napier Phule Gunwant variety on farmers filed. The Hybrid Napier (Napier- Bajra Hybrid (*Pennisetum pedicellatum* x *P. americanum*) variety Phule Gunwant for fodder is highly valued for its abundant herbage yield, palatability and good herbage quality. It contains 8.7-10.2% CP, 28- 30.5% crude fiber and 10-11.5% ash on dry matter basis. It provides nutritious and palatable fodder all the year round. It grows faster and produces more herbage and the stems are hard. The grass is ideal for green fodder, silage and hay. It grow well at high temperatures, can withstand to drought conditions for long spell. It grows in areas with rainfall of over 1000 mm but it cannot tolerate the flooding /water logging. (Grass Breeding Scheme, MPKV, Rahuri, 2016) [2]

Methodology

Assessment trial of Hybrid Napier Phule Gunwant conducted in three (2019-20, 2020-21, 2021-22) consecutive years in three contacted villages under same cluster of the Krishi Vigyan Kendra, Dhule. Thirteen farmers selected from each village with 26 cows during three consecutive years. For this assessment First treatment, group T₁: farmer practice, which is grazing in that particular area.

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Second treatment group T₂: to avoid grazing and fed with standard quantity feed as per thumb rule, accordingly we fed green fodder i.e. Hybrid Napier Phule Gunwant daily for 90 days of lactation during assessment period. All the cows selected at a comparable age group and stage of lactation i.e. within first month of lactation and maintained under similar management conditions throughout the trial. Milk yield (lit) noted regularly in whole experiment period of 3 months. The data recorded on milk yield and analyzed by statistically method that is RBD as per Snedecor and Cochran (1967)^[5].

Result

Data regarding influence of feeding Hy. Napier (Phule Gunwant) on milk yield in Indigenous Cattle during the experimental period presented in Table 1.

Table 1: Effect of Feeding Hybrid Napier (Phule Gunwant) on milk yield in Indigenous Cattle

Treatment	Av. Initial milk yield (liter/day)	Av. Final milk yield (liter/day)	Av. Total milk yield increase (liter)	Av. % increase in milk yield
T ₁	4.00	4.38	0.38	9.50
T ₂	4.20	5.36	1.16	27.61
SE(M)	SE(M)	0.08		
C.D.	C.D. at 5%	0.26 Sig		

From the Table values, it is noticed that the, average initial milk yield of indigenous cow in treatment T₁ and T₂ was 4.0 and 4.20 Liters /day, respectively. During feeding trial the milk yield in treatment T₂ (5.36 lit/day) was significantly increased over control treatment T₁ (4.38 lit/day). Moreover, the during assessment period the milk production of (T₂) indigenous cow was increased by 27.61 per cent by cows fed with the Hybrid Napier Phule Gunwant as a source of palatable green fodder. The findings were in agreement with those of Sharma *et al.* (2019)^[4] and Muia, (2000)^[3]. Hence, it is looked-for to aware the farmers to grow and fed Hybrid Napier Phule Gunwant as a source of palatable green fodder with animals in their feed to accelerate the yield of milk.

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