

Feed Supplement and Fattening Practices of Sheep

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Abstract

The review summarizes and document the common feed supplements and fattening practices of sheep. The primary interest in fattening system is the access of supplemental feed nearby the area. Though recently some scholars generate either protein or energy or both concentrate supplements. The bottle neck problem for small scale fattener is availability of quality and quantity feed to achieve their goal. Most of the time they used stale feeding with natural grazing pasture while others feed concentrates from agro industrial by products which are not easily accessible due to the lack of transportation and finance source for the fluctuations in price. In other hand disease problems occurred due to the lack of veterinary stations nearby the area. Therefore, this implies that the sector generate turn over with low initial investment cost if the feed is easily accessible and veterinarian looks nearby. This need the engagements of government policy makers and lower management level by ordering functional research excursions and extension workers by filling the gap of requirements.

Keywords: Supplement; Fattening; Sheep; Natural grazing pasture

Introduction

Fattening practices is the common year round activities for sheep in the paddock country like Ethiopia. The recent scholars undertake some research activities on locally available feed materials which show merit to improve those traditional fattening practices. It is geared towards the major income a question for household in rural community. The highest sheep demand required during the annual festive [1].

Fattening of lambs return after long working season is enables farmers to generate income from the sale of live animals after fattening above six months, most commonly before holidays and also for their own home consumption [2]. The fattening practices however, constrained by lack of protein source supplements due to unavailability and high costs of commercial feed. In order to alleviate problems associated with protein supplements, there is a need to look for alternative protein source feeds which are preferably locally available and easily accessible by farmers [3]. It is a common practice and one of the livestock development platform, suitable feeding compendium that outfit a short old-fashioned of fattening cycle is not made available to small scale and large scale producers [4].

Supplementation of the basal diets like grass hay with protein concentrates is remarkable to satisfy maintenance and production requirements for critical nutrient like protein to enhance the rumen microbes which facilitate the degradation of fibrous feeds. In reality, protein concentrates are not easily available and affordable for small scale living farmers. Thus looking other alternative protein sources from multipurpose fodder trees, herbs and bushes those are available especially during the dry season is vital and highly admirable. Common feeding observes that need to be study is the share of roughage to concentrate ratio that can advance the performance of the animal and is lest cost [5]. The feeding system and proportions of feed for livestock vary in type and statues of animals and other environmental and management factors. Therefore, the review summarizes the fattening practices of sheep and the feed used in supplementation and substitutions of commercial and locally available feed.

Feed As Supplement

Supplementation is the addition of ingredients something which enhance strength, production, heath conditions and other physical status that also help to complete deficiency of nutrients in the ration

[6]. Feed supplement for fattening of sheep is common practices in most countries. Thus resulted to attain the required production and productivity as well as minimizing the period of fattening paddocks [7, 3]. The common known and commercially available feed supplements are brewery by-products, wheat bran and noug seed cake. However, the availability and the way of transportation that makes complexity in production and productivity of the livestock sectors [4].

The main feed resources for sheep were natural pasture and stubble grazing. The compensations for expense due to the high cost of commercial concentrate feed small scale farmers need other alternatives. Most farmers supplement common salt and Atella (a local beer (TELA) residue) to during the dry and rainy seasons when feed shortage occurred, the primary interest for supplement if cost effective the higher protein supplement may have lower in cost and vis-versa, this would likely need to work cost benefit or availability of the feed [8, 6] (Table 1).

Protein supplement are not easily accessible and affordable for the unfortunate living standards in Ethiopia [5]. Recent findings indicated that multipurpose locally available shrub fodder like mulberry (*Morus Indica*), GRAWA (*Vernonia Amygdalina*) leaf meal and ATELLA (local behave rage bi-products) improve the whole nutritional quality of the diet and reach in attainable feeding standard [9, 3] (Table 1). The amount and feed type supplemented for sheep were vary across location due to the agro climatic condition where the forage materials dominated as well as the list cost exists in the local market, the pre-condition for feed like the composition of required nutrient and the price incurred [6].

According to [10] the amount of concentrat mix in the ration

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Table 1: Locally available feed used as supplement with nutritional CP composition and daily weight gain on different sheep breed.

Supplement	Ad libitum	DM (%)	CP (%)	EME (MJ/kg DM)	Sheep breed	Daily weight gain (g/d/head)	Reference
25% NSC+75% (DVLM+DMLM)	Grass hay	90.1	16.7	10.2	Bonga	75.2	[3]
Natural hay	Grazing	NA	Oct-45	NA	NA	NA	[6]
25% ATELA+75% concentrate mix	Grass Hay	91	6.9	NA	Dorper × Menz	73.2	[12]
76% Concentrate mix + 24% fish meal	Grazing	96.1	19.2	9.98	Wolayita area	111.9	[7]
75% Ficus thanningii + 25% CM	Grass hay	90	12.6	7.3	Washera	55.3	[8]
60 roughage : 40 concentrate	Grass hay	91.9	15.5	NA	Horro	44.4	[4]
					Washera	47.1	
47% wheat bran+35% sesame cake+16% molasses	Grass hay	90.5	20.8	NA	Begait	158.6	[11]
66% wheat bran+13% cotton seed cake+10% urea	Grazing	97.8	19.1	NA	Abera	48.8	[13]
Concentrate mix at 1.75% of body weight	Grass hay	88.8	19.2	8.2	Black head ogaden	49.2	[10]
					Horro		
					Washera	59.8	
				9.5		43.3	
				8.3			
67% lentil hull+33% NSC	Grass hay	91	5.3	8.7	Farta	64.4	[14]
67% Wheat bran and noug cake at 2:1 ratio	Grass hay	82.83	90.68	6.94	Wolayita area	130	[15]
Alfalfa at 2% body weight	Grass hay	91.5	5.7	6.02	Farta	64.1	[16]

Table 2: Selection criteria of sheep for fattening.

Criteria	Description	Examination	References
Health statuses	Looks alert, aggressive, bathing and normal movement	Check nose discharge	[1]
		Moth bad breath salivation	
		Skin for spot and swelling	
Body condition	Use body condition	Better to use body condition score at 3 to 4	[6]
Breed	Breed with high feed conversion efficiency	Check by body color and location originated	[8]
Age	Early age better for fattening (6-12 months)	By dentation	[1]
Color	White grey or two coated color	Observation and market preference	[18, 1]
sex	Male	Observation and market preference	[18, 1]
Deworming	For round, lung and tap worm	Albendazol and triclabendazol	[18, 1]
Vaccine	Against common disease for the area like pasteuriosis, anthrax and pleuropneumonia	Multivitamin injection	[18]
Disease pretensions	Regular check up	Treat based on treatment calendar	[18, 1]
Managements	Housing, feeding, watering, ducking, dehorning and others	Regular follow up	[6; 18]

would likely directly proportional to the daily weight gain in sheep (Table 1). The feed type and amount mixes also directly influences in meat quality characteristics [11].

Sheep Fattening

Sheep fattening is the feeding of feed ingredient in appropriate type and amounts in order to gain quality and better quantity carcass characteristics. Most literature indicated that the paddock of sheep were should be limited in time (75-120 days) and amount of feed which allows to take lowest cost for the fattening work [1]. The fattening work follows sequences of activities in order to meet the appropriate result of attainable goals. Prior to fattening adjust healthy ram with appropriate age (8 to 12 months) followed quatrain for 15 days and vaccination is advisable for frequently occurred disease in the area like vaccine for ovine pasteurellosis, sheep box etc. After checking up for sign of disease animals allowed to get albendazole for internal parasite and to enhance feed intakes [3, 11].

Fattening system in small holder farmers are using traditional fattening practices that uses natural grazing, while some are used agro industrial bi-products like wheat bran and nuge seed cake in addition to home left over like banana peel, *Ensete Ventricosum* and home

consumptions with used dewormed (albendazol). Disease problems, parasites as well as feed poisoning are the common problems in small scale farmers however, the resistances of disease vary among sheep breed for example Horro sheep have resistance than Washera sheep for unknown reason [17, 8].

Small scale sheep fattening in Ethiopia followed a periodic process with a highest during Easter, Christmas, New Year and Muslim festivities. Most fattener separate to feedlot during fattening to offer crop resides, home left over and stall feeding with grazing. Select sheep on age through dentition, body condition, coat color and sex in some extent. The most selected colors in market were gray and white where as black sheep were badly preferred. Sheep with poor body condition were not selected for fattening and select with age of 1-2 years [18, 17] and (Table 2).

Conclusion and Recommendations

Ethiopia has the potentials of sheep that reach above nine well characterized and documented breed. However, constrained by feed supplement and disease occurrences are the interest. The feed supplement allowed enhancing the daily weight gain all most for all breed types and this reach 43.3 to 158.6 g/d/head. However, the uses

of such mechanisms were limited in research areas and as paper value. Therefore, locally available feed thus used as supplement were identified and documented in some extent. Further development and extension systems still limit to address in to small scale fattener and cooperatives and the uses of opportunities improved forages technologies can also substituted which need addressing through the system.

Data Availability

The revised papers used during the current review paper are available from the author on reasonable request.

Conflicts of Interest

The author declared there is no conflict of interest.

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