

# GRAIN PRODCUTION AS CONTRIBUTION TO ANIMAL FEED in ETHIOPIA

Paper presented to

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# Basic facts about the Livestock Sector

- Supports 80% of the rural population and 37 to 87 % of the household income,
- Contributes 15 to 17 % of overall GDP and 35 to 49 % of agricultural GDP,
- 3<sup>rd</sup> major Export Items: Live animals and livestock products such as meat, hides, and skins accounting for 11% of the export revenue,
- Average yields per animal slaughtered about 110 kg of beef and 10 kg of mutton,
- Average milk production performance of cows is about 270 liters per lactation (1.5 liters/cow/day over 6 months),
- Average/capita consumption of milk and meat is estimated at 19 and 12 kg, respectively.
- **Feed cost accounts for 60 to 70% of the total cost of livestock production.**
- **In smallholder livestock production system, 85% of the feed intake is used to meet maintenance requirement of the animal and only 15% is used for production.**

# Major Feed Sources for Livestock

- 1. Natural pastures:** grasses, legumes, herbs, shrubs and tree foliage
- 2. Crop residues:** cereal straws like tef, wheat, barley, maize, and sorghum, grain legume haulms, such as haricot beans, field peas, chickpeas, lentils, and groundnut
- 3. Agro-Industrial by-products:** flour mill by-products, oil seed cakes, brewery by-products and molasses
- 4. Milling by-products:** wheat short, wheat middling, rice bran and screening
- 5. Oilseed cakes:** noug cake, cottonseed cake, groundnut cake, linseed cake, sesame cake, sunflower cake

# Crop Production as Related to Animal Feed

	Area in hectare	Production in Tons	Yield (ton/ hectare	% PHL	% export	Amount used for feed Tons)	Sources
<b>Crops</b>	2012/13 (2005 E.C.)	2012/13 (2005 E.C.)	2012/13 (2005 E.C.)				
<b>Cereals</b>	9,601,035	19,651,152	0.19	9.5- 14.1	None	336,548	Teff, <b>Barley, Wheat</b> <b>Maize, Sorghum</b> Finger millet, Oats, <b>Rice</b>
<b>Pulses</b>	1,863,445	27,510,31	N.A	9.7- 13.7	N.A	N.A	Faba beans, Field peas, <b>Haricot beans</b> Chick-pea, Lentils Grass peas, <b>Soya beans</b>
<b>Oilseeds</b>	818,449	7,266,644	N.A	N.A	> 22	141,362	<b>Nug</b> , Linseed, <b>Cotton seed</b> , <b>Groundnuts, Flux</b> , Safflower, Sesame, Rape seed
<b>Crop residues</b>		29933.8		-----	-----	N.A	<b>Cereals &amp; Grains</b>
<b>Sugar cane</b>	22,388	5,121,208		-----		N.A	<b>Molasses</b> and cane tops

# Other Sources of Livestock

## Feed

Feed sources	Quantity (ton DM)
<b>Cereal straws/stovers</b>	33,530,774
<b>Pulse crop haulms</b>	2,343,832
Oilseed straws	1,127,499
Vegetable wastes	101,735
Root crop by-products	465,059
Fruit crop by-products	2,164,572
<i>Chat</i> & coffee by-products	172,096
<b>Sugar cane tops</b> (not widely used)	356,332
<i>Enset</i>	5,558,482
<b>Aftermath grazing*</b>	8,121,471
<b>Pasture grazing*</b>	10,436,493
<b>Fallow land grazing*</b>	6,556,682
Woodland grazing*	1,486,960
<b>Oilseed cakes</b>	141,362
<b>Wheat milling by-products</b>	336,548
Others (5% of total)	3,644,995
<b>Total</b>	<b>76,544,892</b>

# Production Capacity of Major Commercial Feed Companies

Name of feed mill	Facility/Installed Capacity					
	Feed mill (t/h)	Mixer (t/h)	Pelleting (t/h)	Liquid mixing facility	Ingredient storage capacity (t)	Processed feed storage capacity (t)
<b>Alema Koudijs P.L.C (1)</b>	12.5	15	-	1.5	50 00	1000
<b>Ashraf (2)</b>	6.25	6.25			500	300
<b>Akaki Animal Feed P.L.C (2)</b>	5.2	8	-	-	1000	500
<b>Kality Animal Feed Enterprise (3)</b>	4	6	-	-	1500	-
<b>Addis Alem Ag. Development PLC (3)</b>	2	4	2	-	3000	1000
<b>BSLF Animal Feed Processing Plant</b>	0.5	0.5	-	-	-	-
<b>Fantu and Family</b>	0.5	0.5	-	-	100	-
<b>H.B.A General Business</b>	2	1.5	-	-	50	20
<b>Ada'aa Dairy Cooperative</b>	1.5	1	-	-	100	60
<b>Almaz Poultry and Feed Processing Enterprise</b>	0.5	0.5	-	-	40	-
<b>Ethio-Feed PLC</b>	2.0	1.0	-	-	300	20

## Price trends for agro-industry by-products in Birr/100Kg (2004/05 - 2010/11)

Byproduct	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	% change
Maize 1 <sup>st</sup> grade	117	140	158	560	350	300	400	242
Wheat bran	56	63	96	220	130	125	280	400
Wheat middling	70	76	109	230	170	170	300	329
Noug Cake	63	88	170	250	220	220	300	376
Rapeseed Cake	45	50	65	70	75	75	130	189
Soybean meal	ND	ND	450	480	590	600	750	67
Cotton seed Cake	170	175	180	200	214	220	455	168
Molasses	5	4	7	7	26	47	47	840

# What aggravates the livestock feed crisis?

- **Mismanagement and degradation of grazing lands**
  - **Recurrent drought**
  - Encroachment of invasive species
- **Availability, quality, and cost of feed ingredients**
- **Excessive multiple taxation on feed product(eg VAT) and imported feed ingredients ( eg Premixes etc)**
- **Land lease problem for forage development, dairy farms etc**
- Low market demand for commercial feed products

# Focused Areas of Interventions to Stimulate Grain and Livestock Production

- Encourage **forage production** and **utilization of agri-by-products** (conservation and quality feed production)
  - Increase **efficiency of utilization of available feed resources** (Innovative feed solutions)
    - **Establishment of dairy board and initiate School milk programme** (stimulate supply & demand in dairy value chain)
      - Policy dialogue with key government institutions (VAT, Multiple taxation, Land Lease, Export of value added feed products)
  - Encourage **private commercial feed and livestock production**
- Introduction of **bio-technology in grain and feed Industry** (eg **feed additives, growth promoters, Premixes**, to increase animal production)