

Corn DDGS Quality & its impact on Dairy cows

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Corn DDGS – Nutrient profile



- Excellent source of Protein, Energy, & Phosphorus
- High variation in nutrient profile (even between batches of same plants) & color
- Watch out for Aflatoxin, Sulfur & Protein (Amino Acid) digestibility

Parameter	Average	MIN	MAX
Moisture	10.4	8.0	15.4
Crude Protein	28.9	23.5	34.8
Crude Fat	9.8	6.0	13.4
Ash	4.6	2.5	8.8
ADF	9.0	5.6	13.3
NDF	27.0	20.6	46.1
Phosphorus	0.8	0.5	1.1
Sulfur	0.6	0.3	1.0
Glycerol	7.7	4.0	11.3
ivPD	2.5	1.8	3.3
Aflatoxin	108	4	825



#2600 samples for Moisture to ivPD, as such basis

1600 samples for Aflatoxin analysis



Corn DDGS – 2024 & 2025



- Aflatoxin 2024 vs 2025
- As industry we need to evaluate the reason for rise in Aflatoxin & what can we do to control it at 50 ppb
- BIS hurdle – Corn DDGS at 50 ppb; 53% of samples accepted in 2024 vs 36% in 2025
- Experience with soaking??

	2025 (1659 for CP & Fat, 1070 for Aflatoxin)			2024 (970 samples for Protein & Fat; 548 for Aflatoxin)		
Parameter	Average	MIN	MAX	Average	MIN	MAX
Crude Protein	29.3	23.9	34.8	28.3	23.6	34.7
Crude Fat	9.5	6.0	13.0	10.3	6.3	13.4
Aflatoxin	115	7	825	97	4	551

Aflatoxin level, ppb	2024	2025
less than 50	291	384
50 to 99	102	216
100 to 199	62	290
200 to 299	47	114
300 to 399	29	39
400 to 499	16	16
500+	1	12
	548	1071





Beyond Proximate analysis: ivpd, nutrient focus



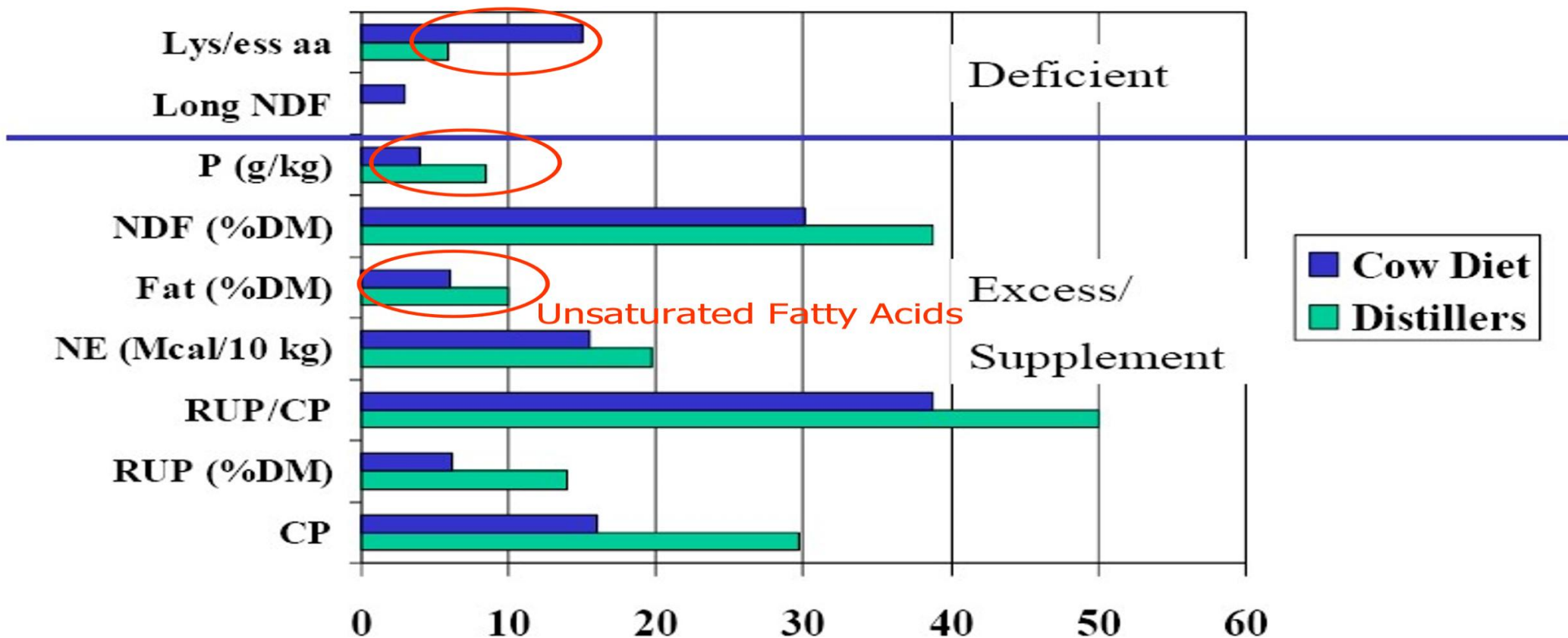
Parameter	Average	MIN	MAX	Standard
ivPD	2.5	1.8	3.3	4.06
AAD IDX	4.9	3.5	6.4	7.9
% AAD ↓	38	55	19	

- Compare to ivPD of 8 & AAD IDX of 9.6 in SBM; and Rapeseed Meal with ivpD of 6.5 & AAD IDX of 9.5
- It's not about corn DDGS, RSM and soybean meal...
 - Its about digestibility of protein & amino acids





Distillers Grains vs. Lactating Cow Diet



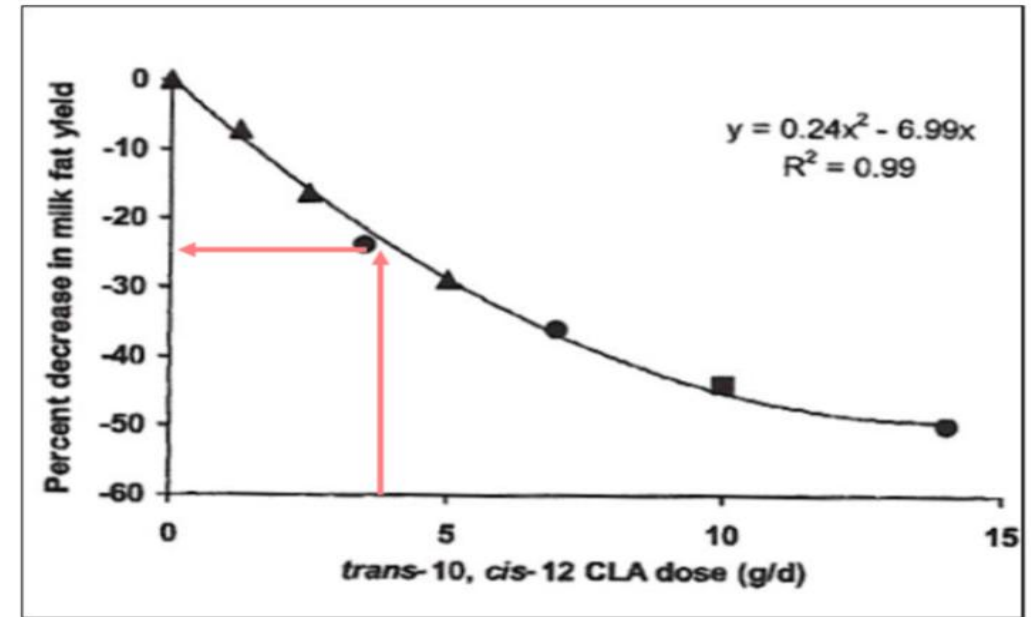
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Fat in Corn DDGS



TOTAL FAT	%	9.8
UNSAT FAT	%	8.3
SAT FAT	%	1.5
OLEIC, C18:1	%	2.5
LINOLEIC, C18:2	%	5.3
LINOLENIC, C18:3	%	0.2
RUFAL	g/kg	80.0
BARAL	g/kg	55.5



- Impact of high levels of UNSAT fat (BARAL) – resulting in milk fat depression in dairy animals
- Reduced fiber digestion in rumen
- Lower farmgate milk price realization for farmer
- Opportunities for corn distillers to extract oil post distillation process



No issues with inclusion levels of 10 to 12%, beyond this following issues notices:

- soft pellets, easily broken down (lower PDI)
- increase in fines
- reduced through-put of pellet machine by 20 to 35%
- pellet mill die slipping





Way Forward



- **Stakeholders – sustainable corn supply chain (productivity & quality) focused on less than 20 ppb aflatoxin in corn, translating in 40 to 60 ppb in corn DDGS**
- **Corn Distillers focus optimizing drying temperature & time; corn DDGS with low fat**
- **Research on impact on pellet quality & production issues**
- **Safety of Corn DDGS during storage**



Thank you