

*The Value of Distiller's Dried
Grains with Solubles in Pig Diets*



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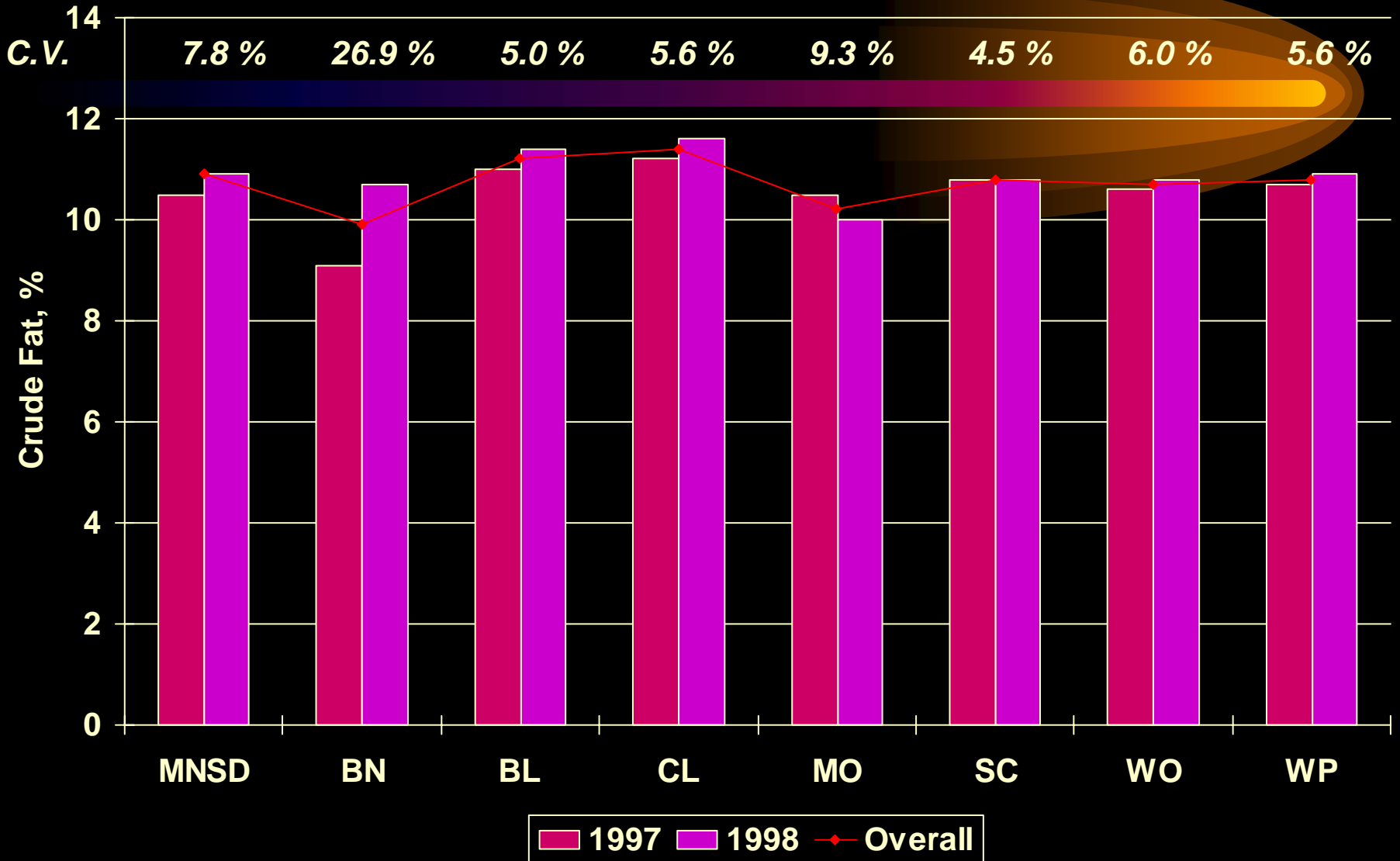
University of Minnesota

Concerns of Using DDGS in Swine Diets

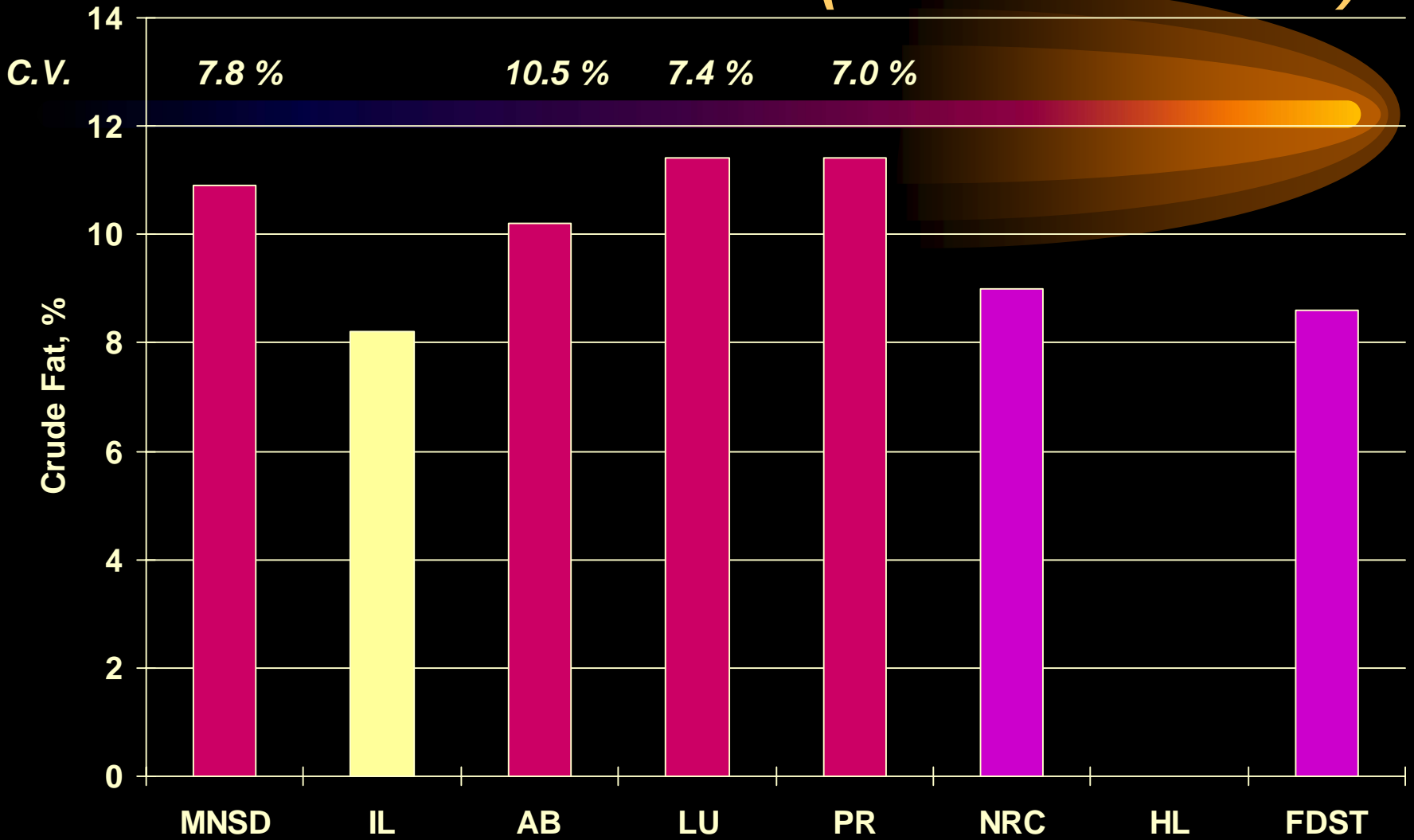


- Variability of nutrient content and digestibility.
- Poor amino acid balance
- High fiber content

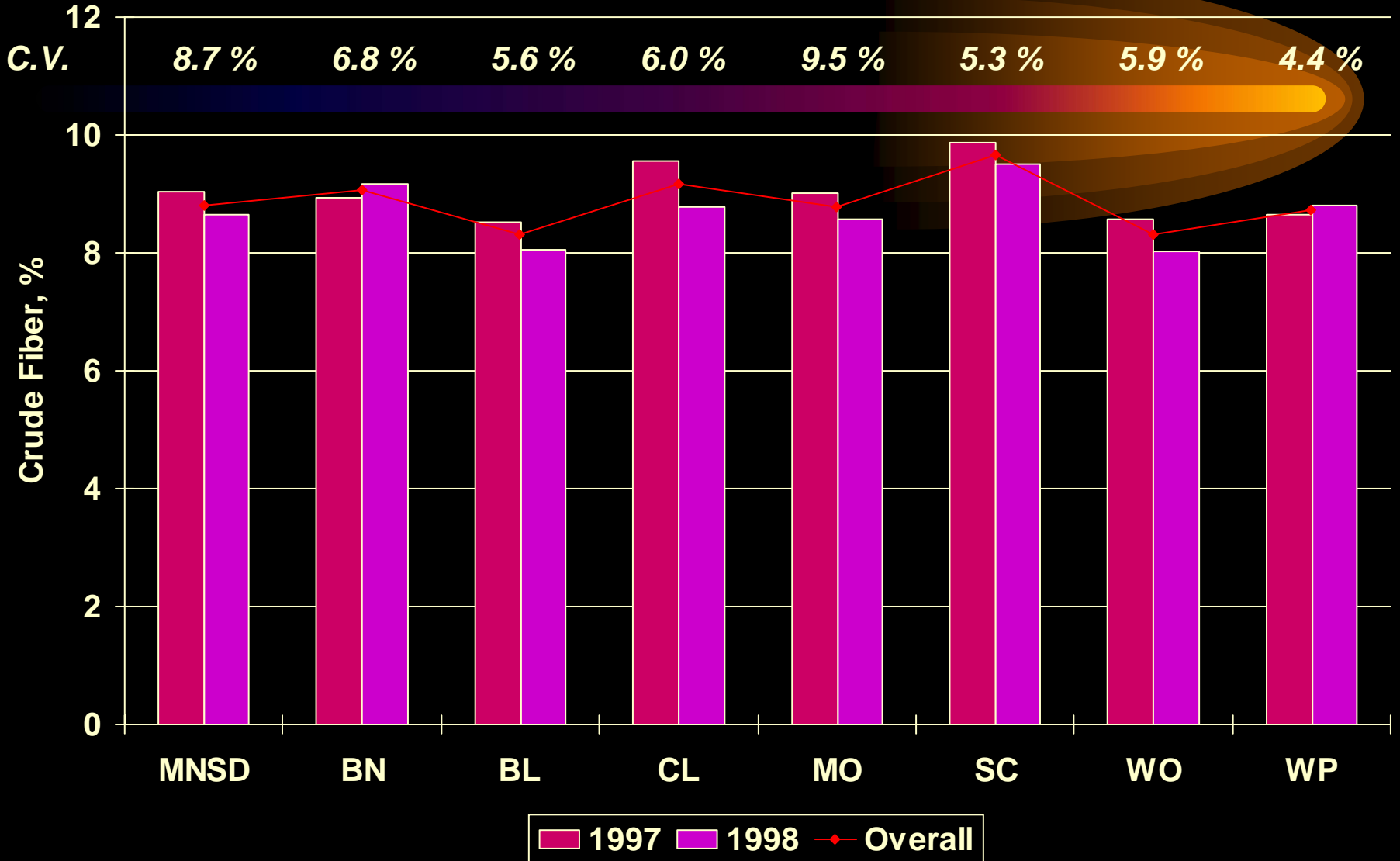
Crude Fat Level (100% DM Basis)



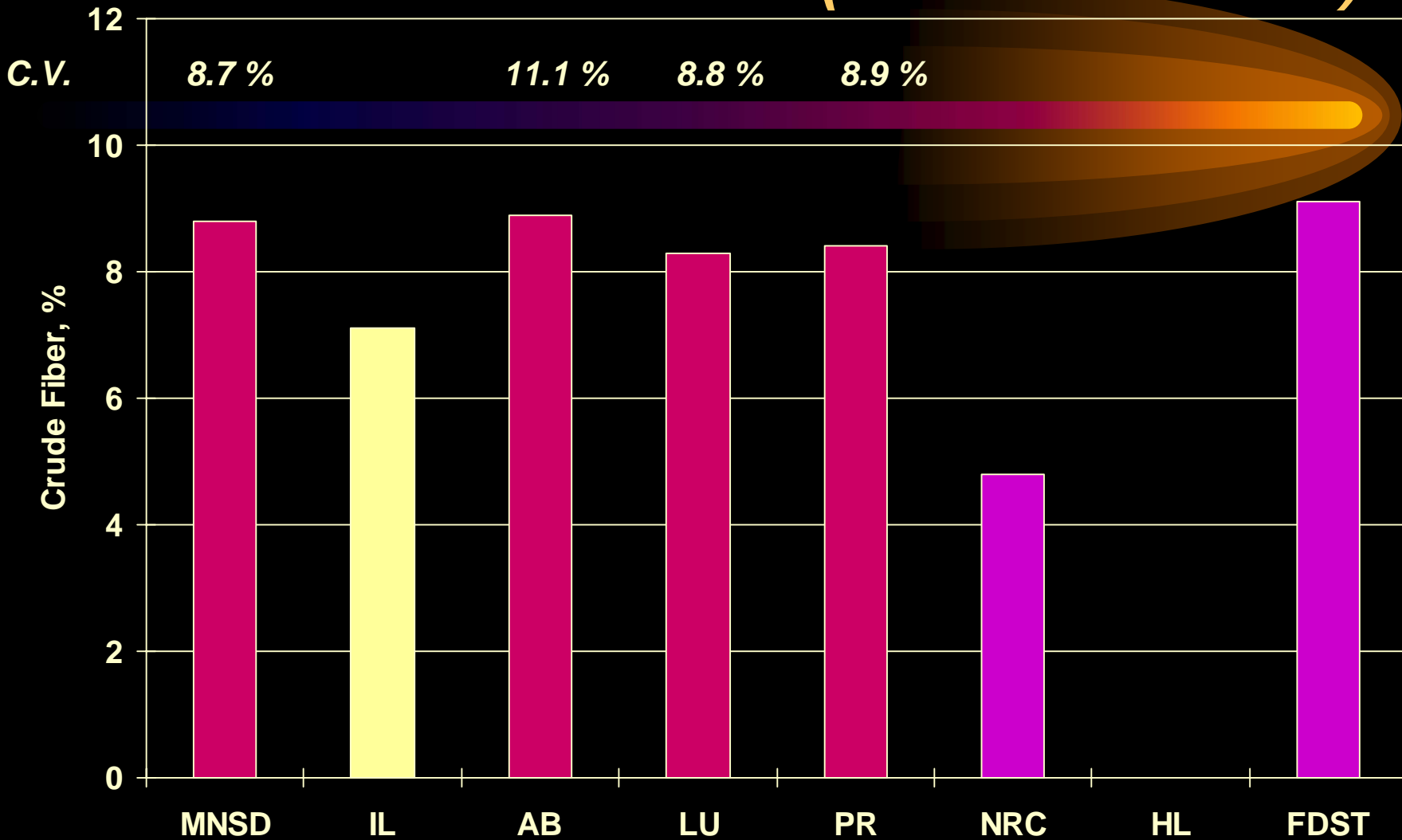
Crude Fat Level (100% DM Basis)



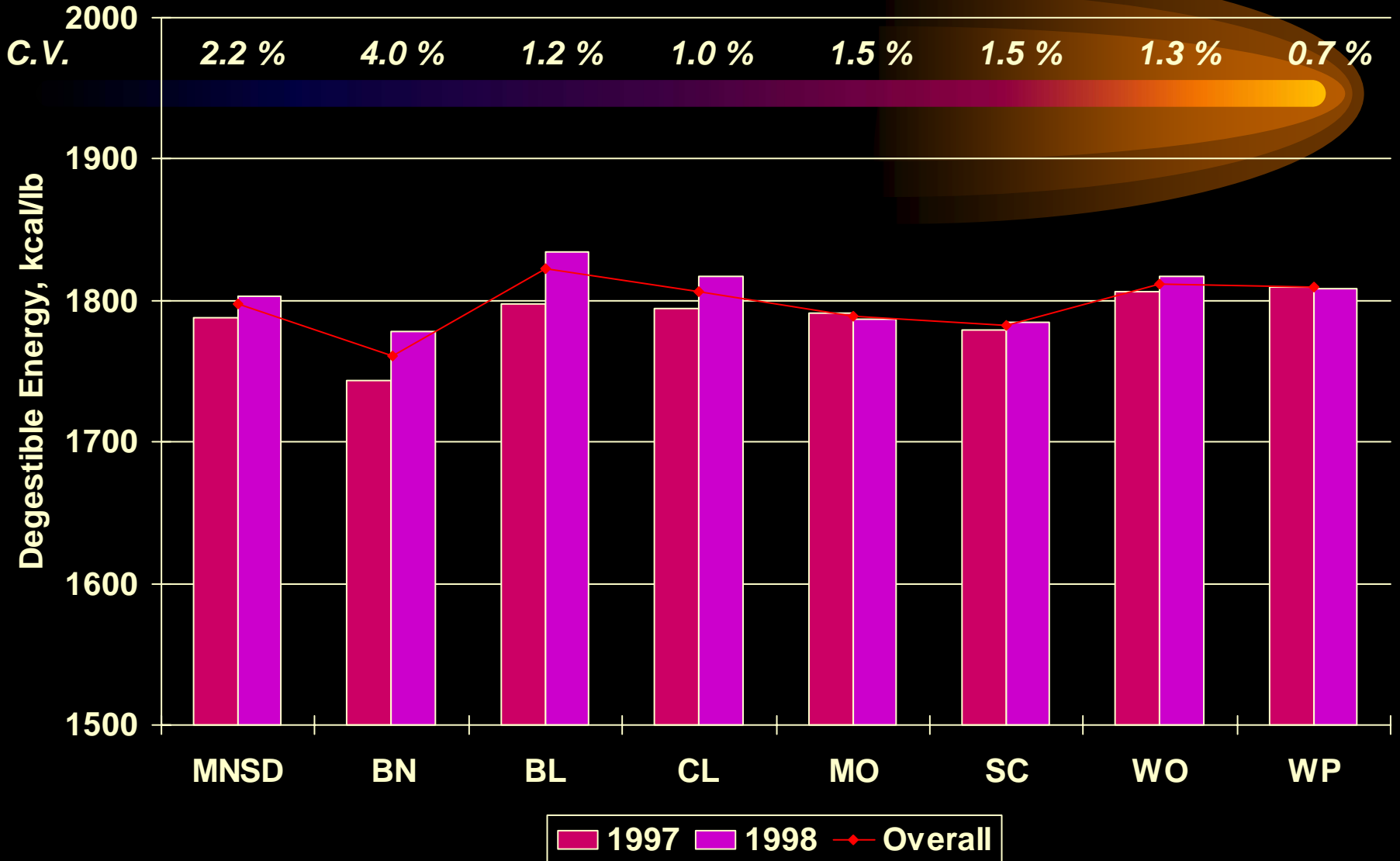
Crude Fiber Level (100% DM Basis)



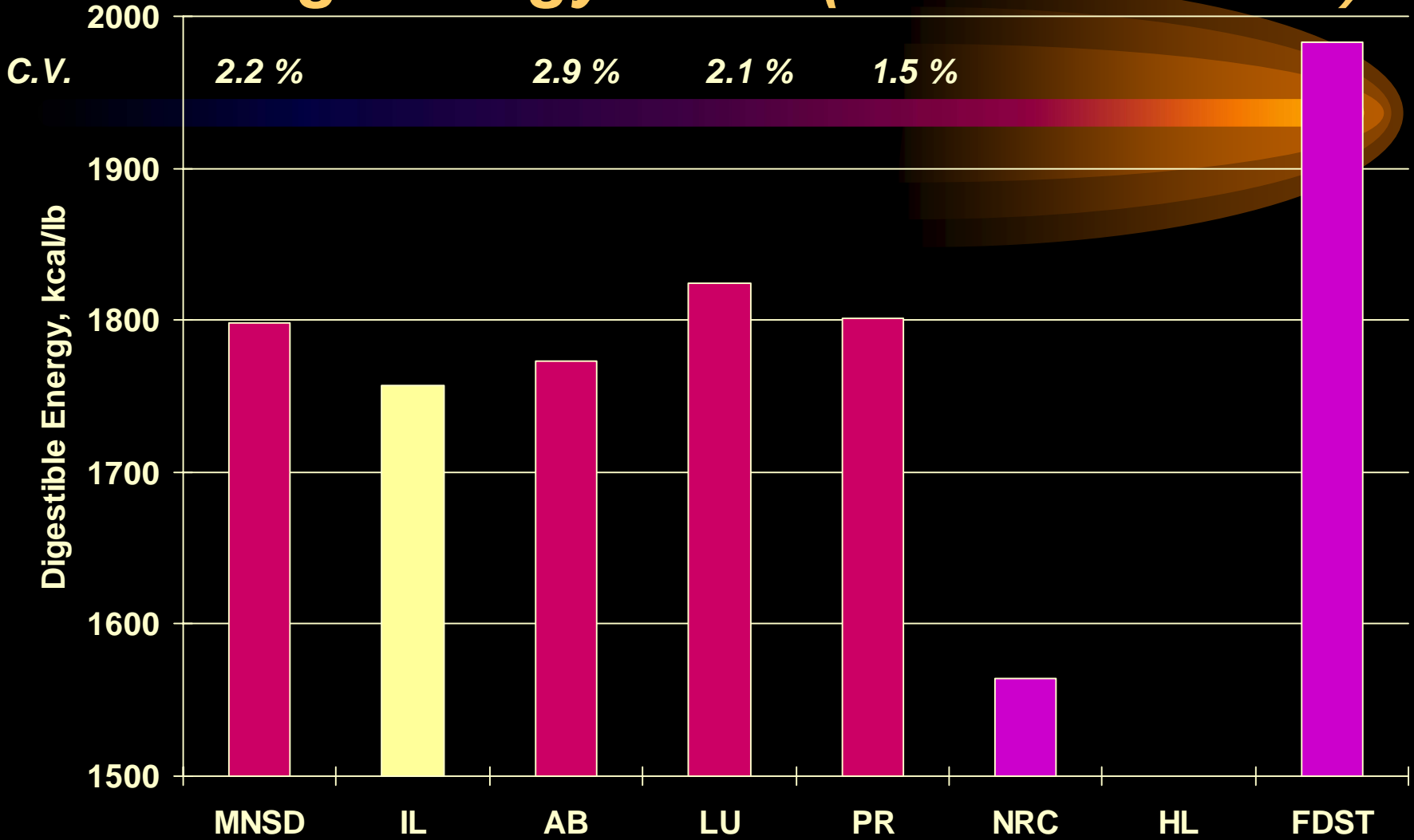
Crude Fiber Level (100% DM Basis)



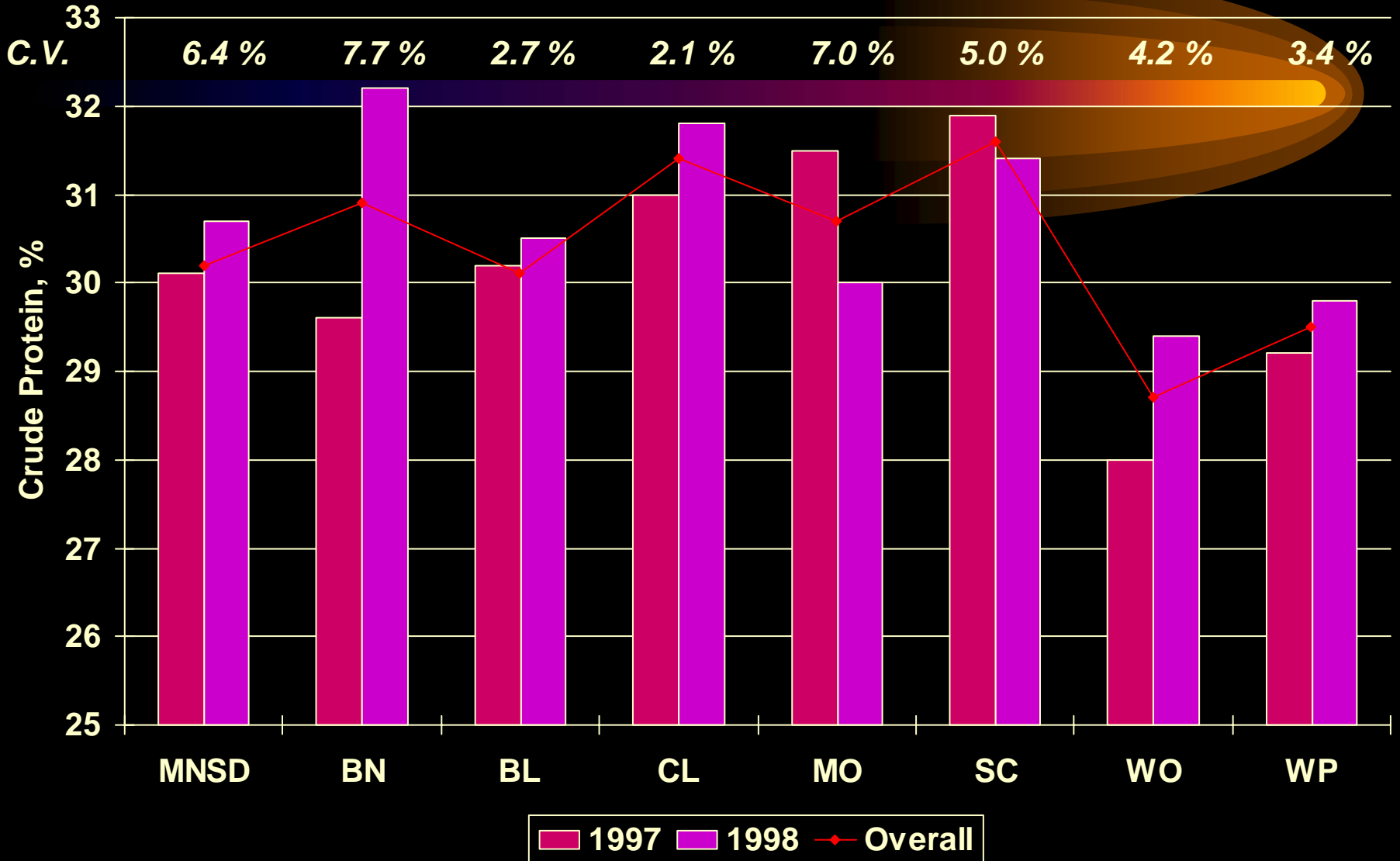
Dig. Energy Level (100% DM Basis)



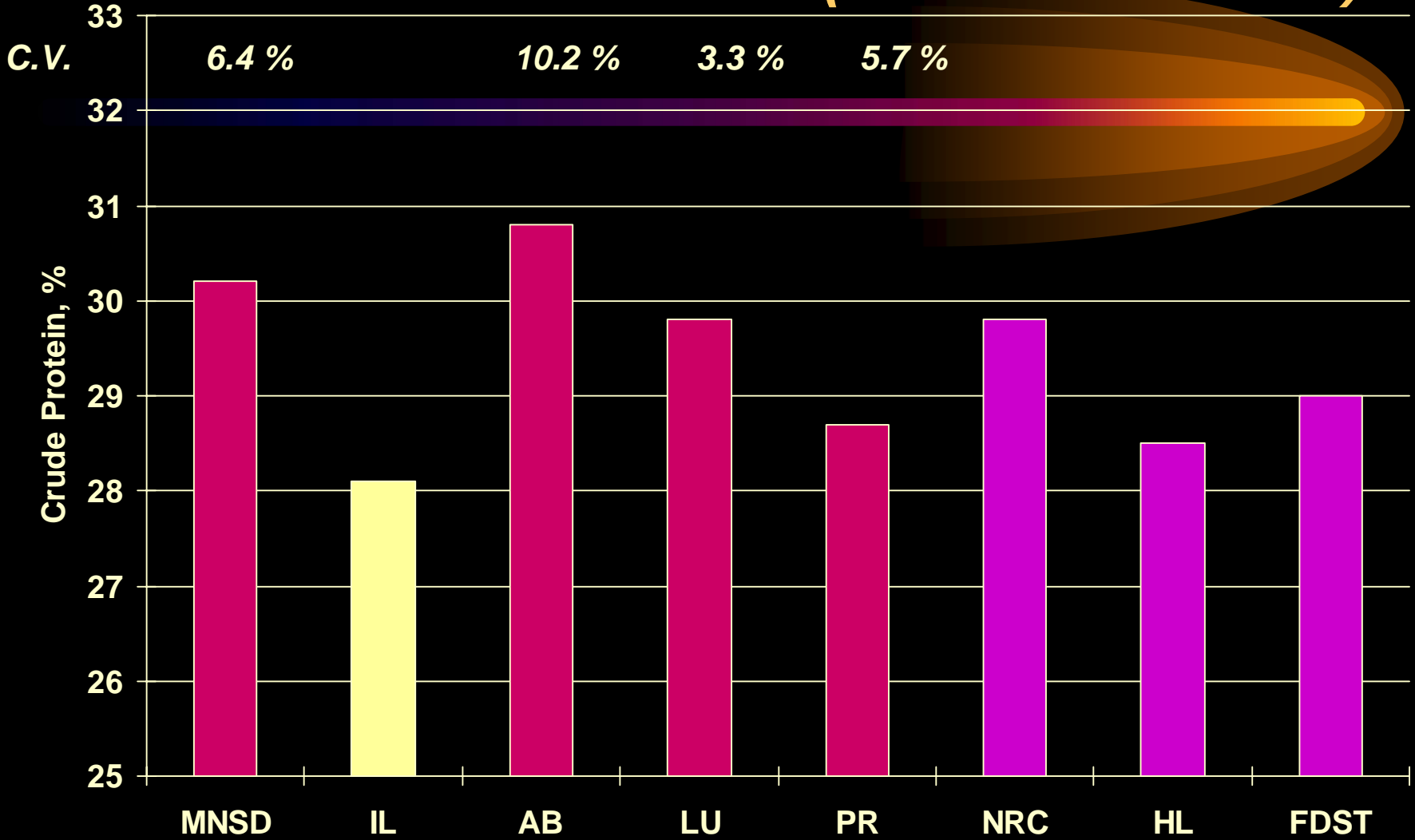
Dig. Energy Level (100% DM Basis)



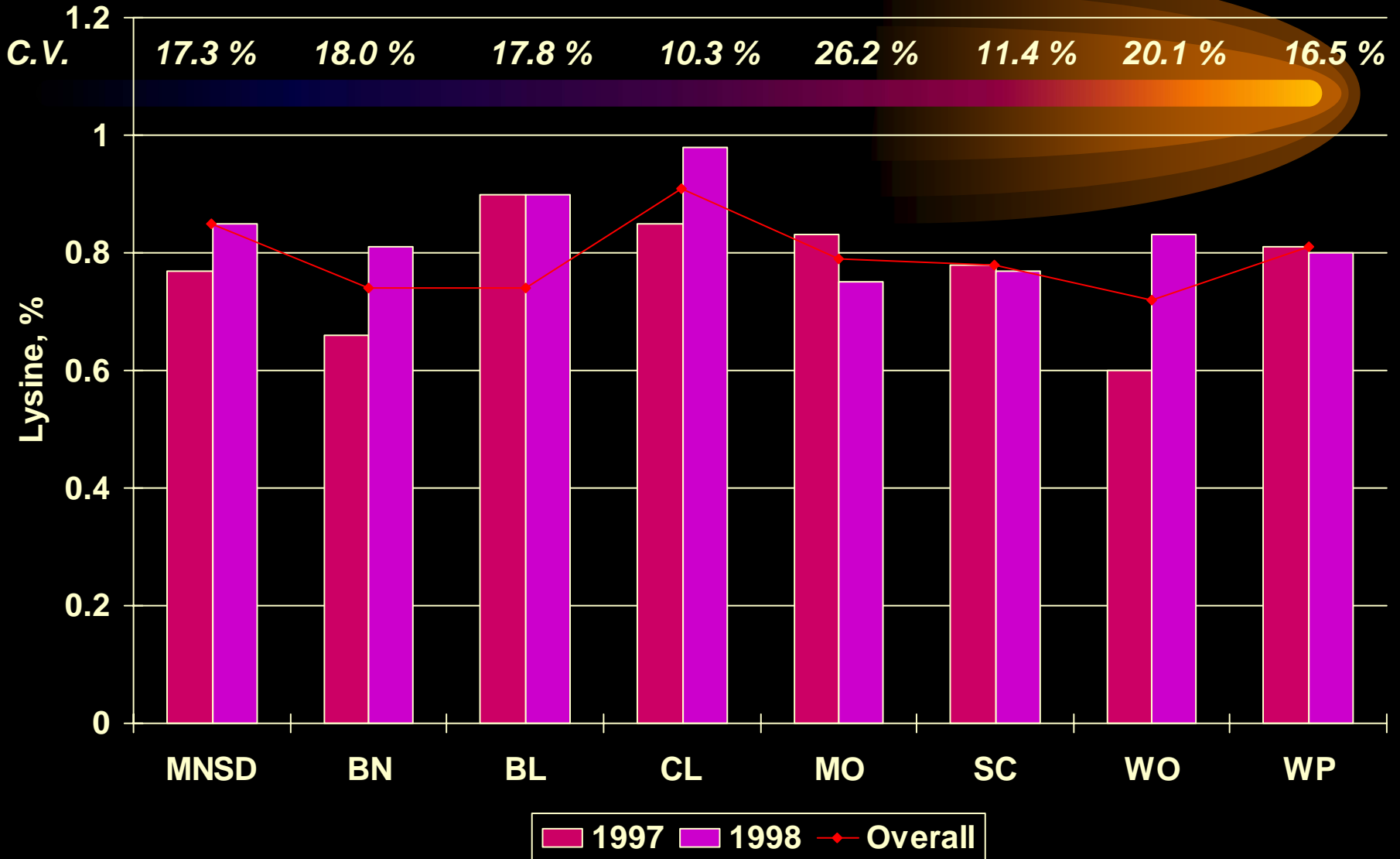
Crude Protein Level (100% DM Basis)



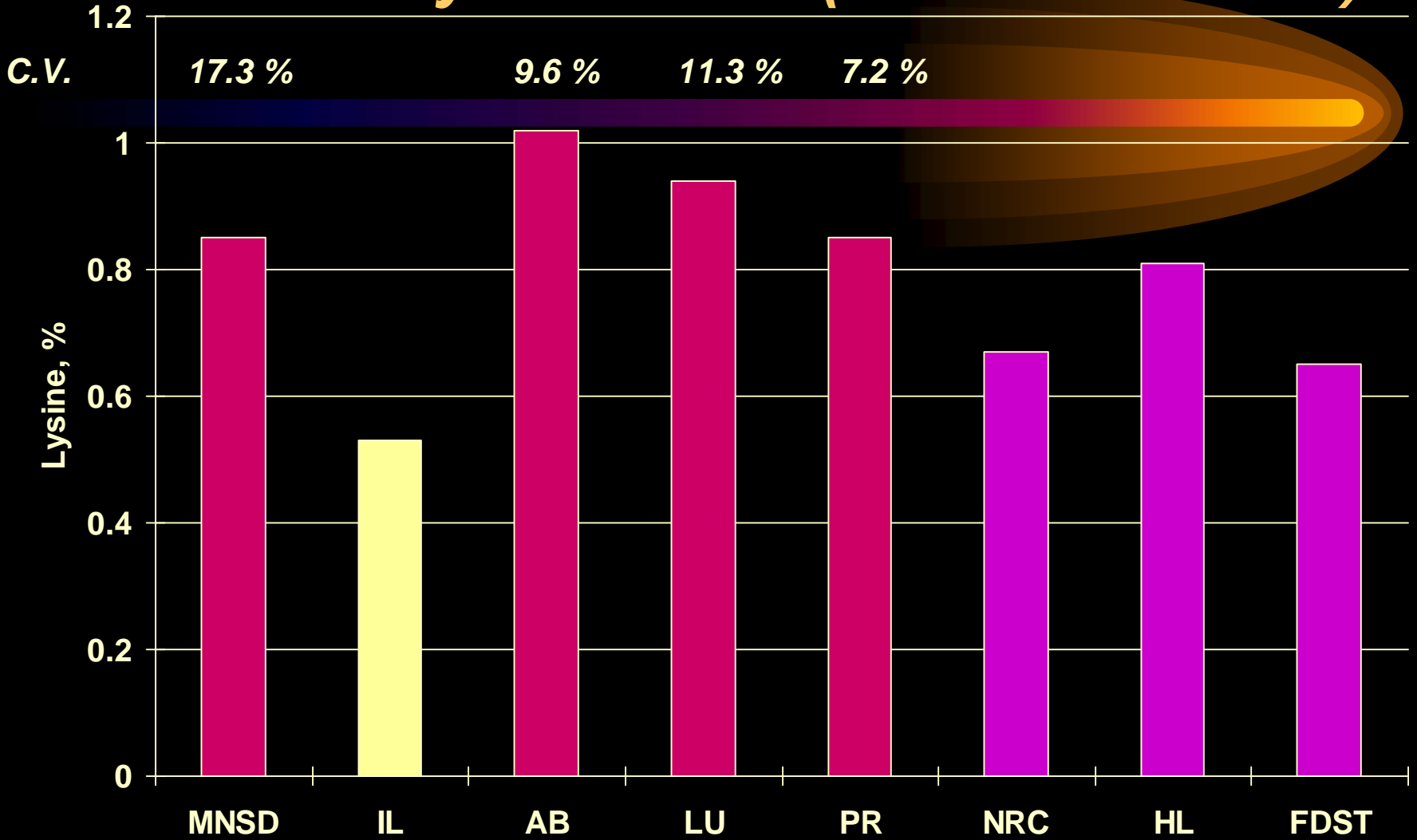
Crude Protein Level (100% DM Basis)



Lysine Level (100% DM Basis)



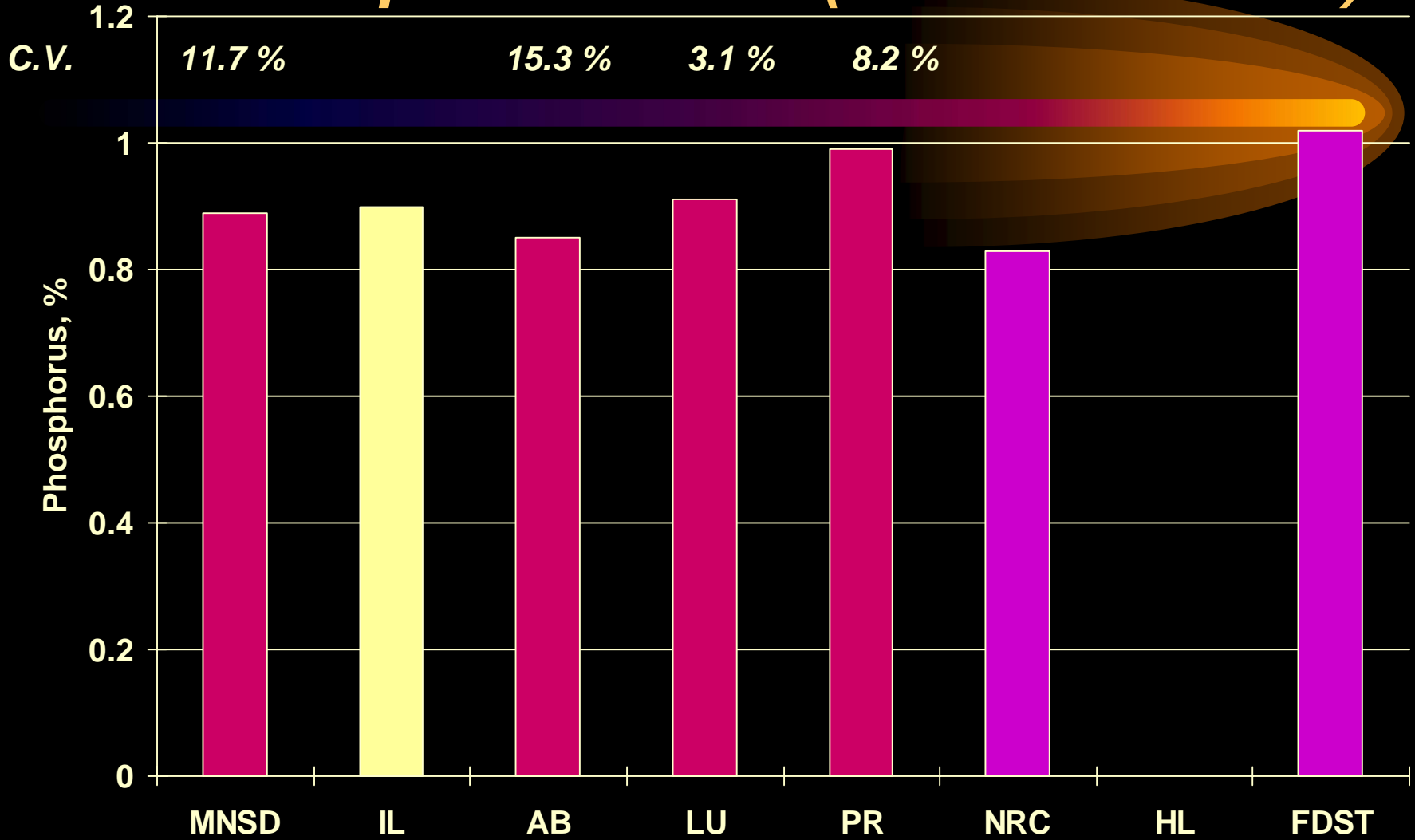
Lysine Level (100% DM Basis)



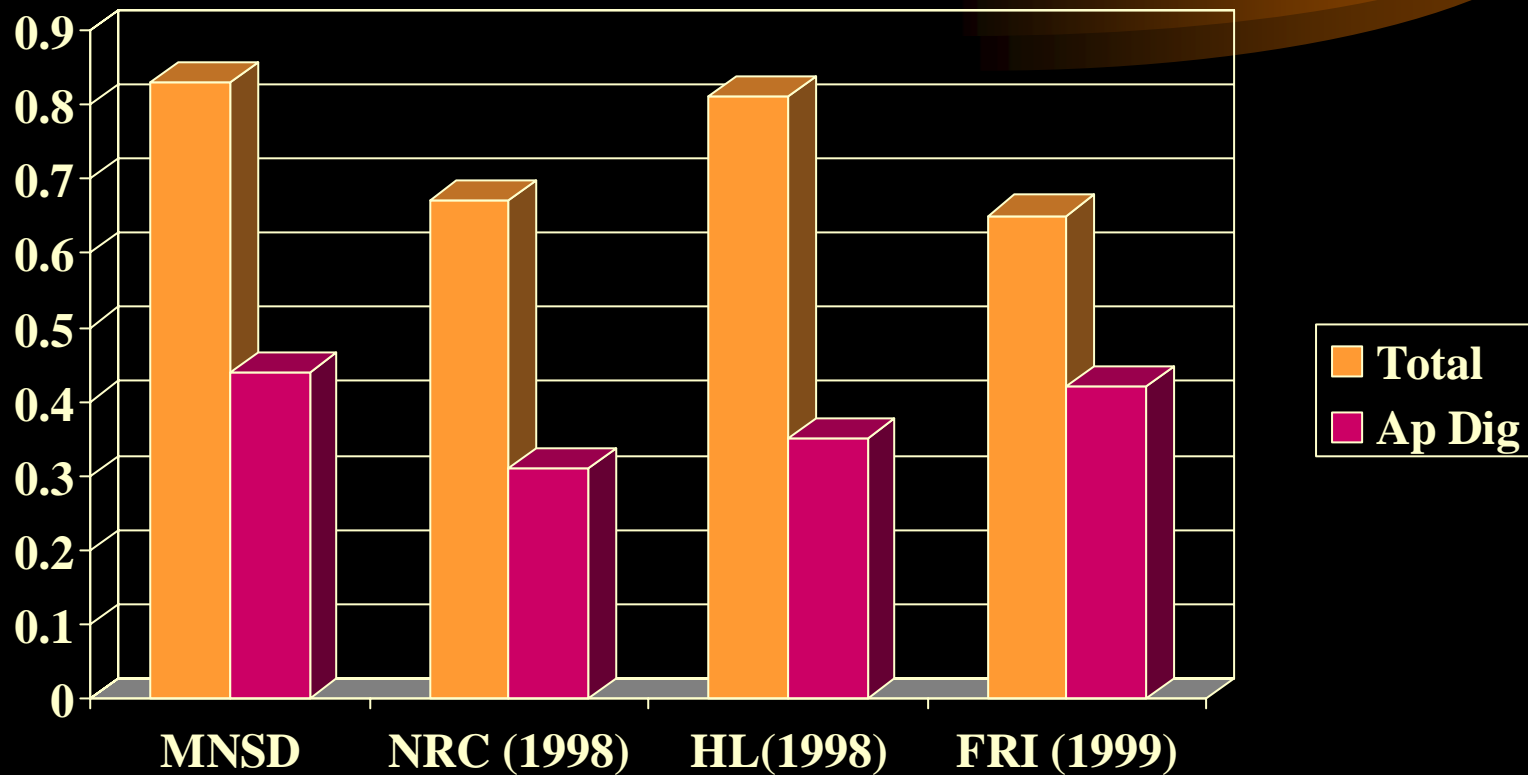
Phosphorus Level (100% DM Basis)



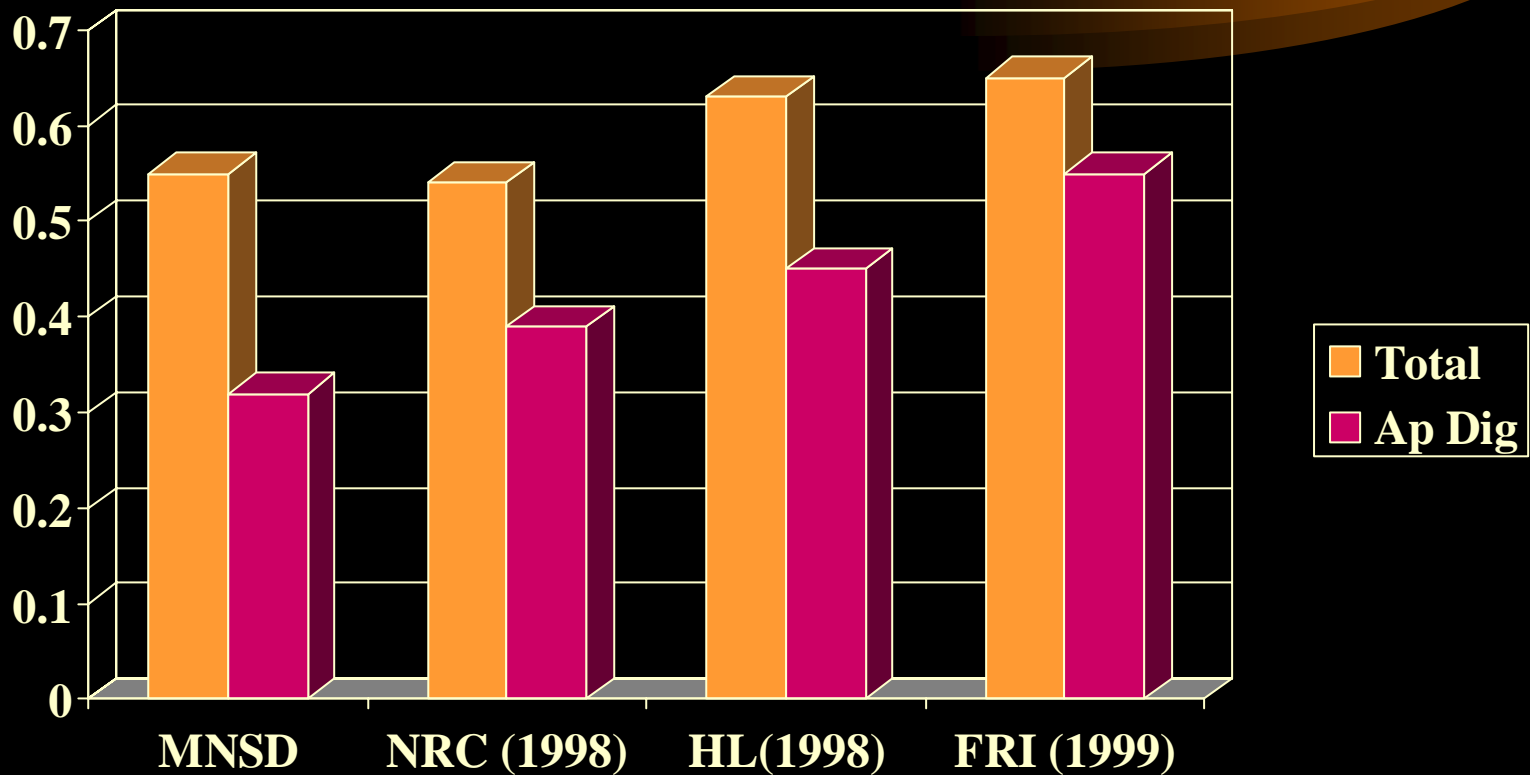
Phosphorus Level (100% DM Basis)



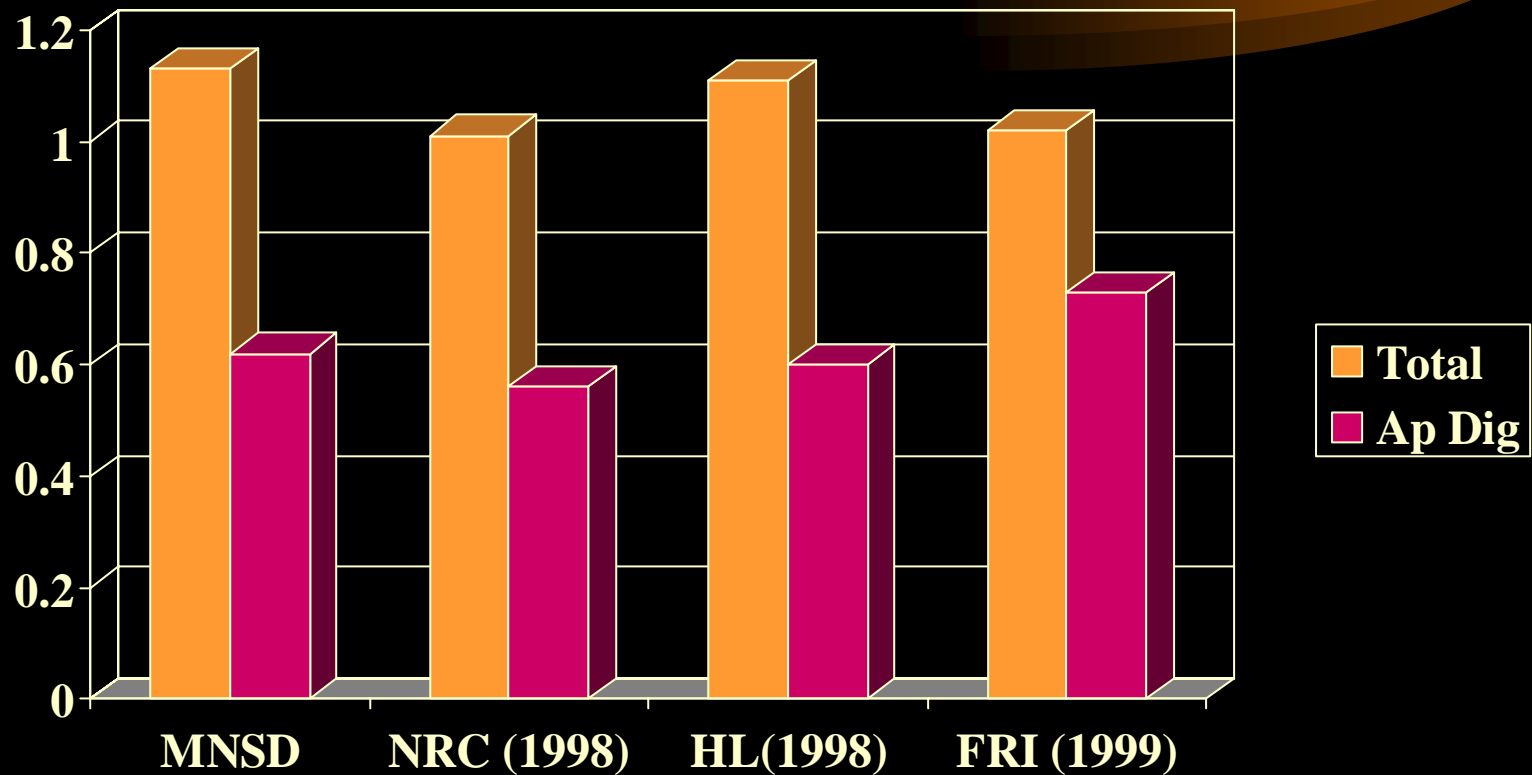
Total and Apparent Digestible Lysine Levels (%)



Total and Apparent Digestible Methionine Levels (%)



Total and Apparent Digestible Threonine Levels (%)

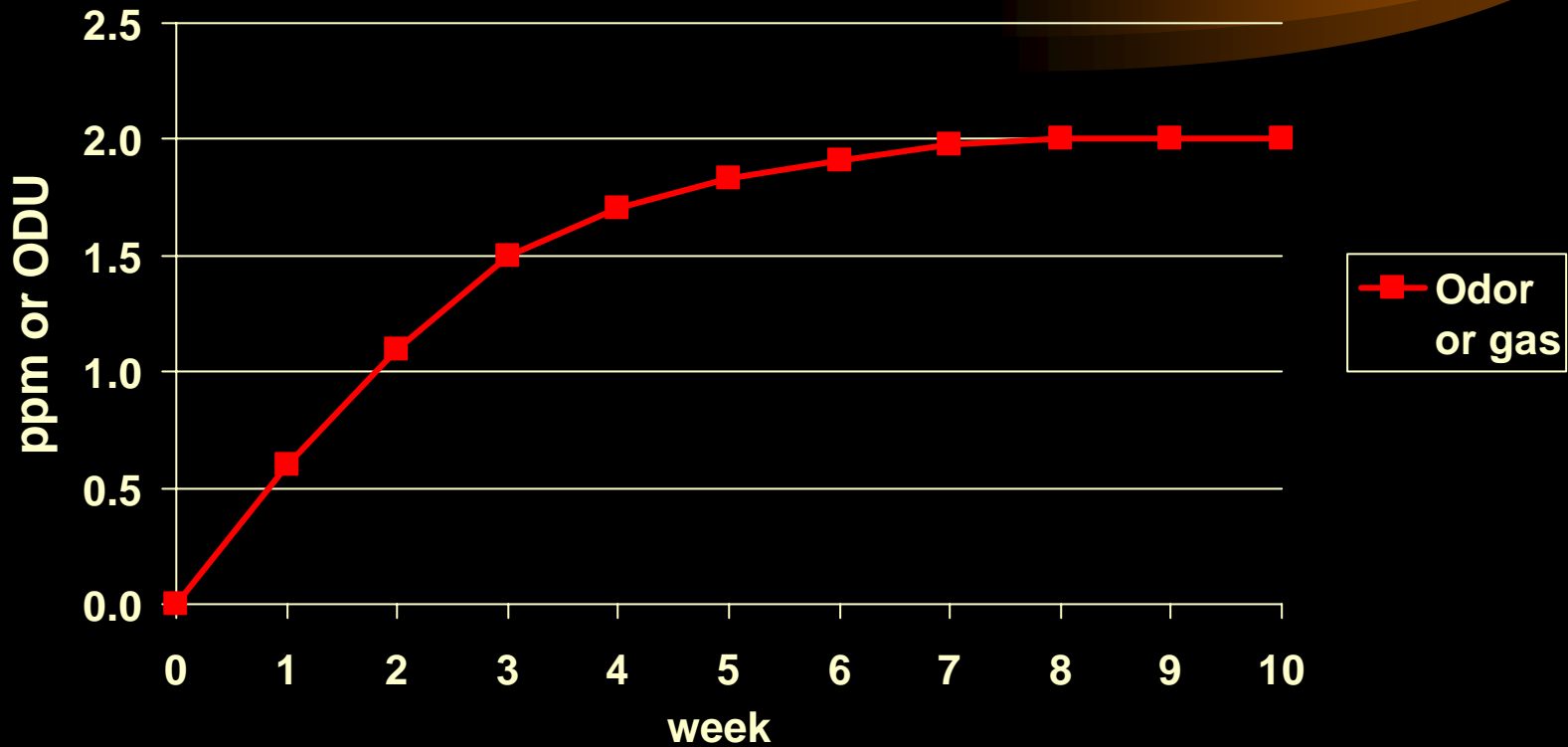


Summary - Dig AA Levels

App. Dig. AA	MNSD	OMP	NRC (1998)
Lysine, %	.44	.00	.31
Methionine, %	.32	.24	.39
Threonine, %	.62	.36	.56
Tryptophan, %	.15	.15	.14
Valine, %	.92	.51	.88



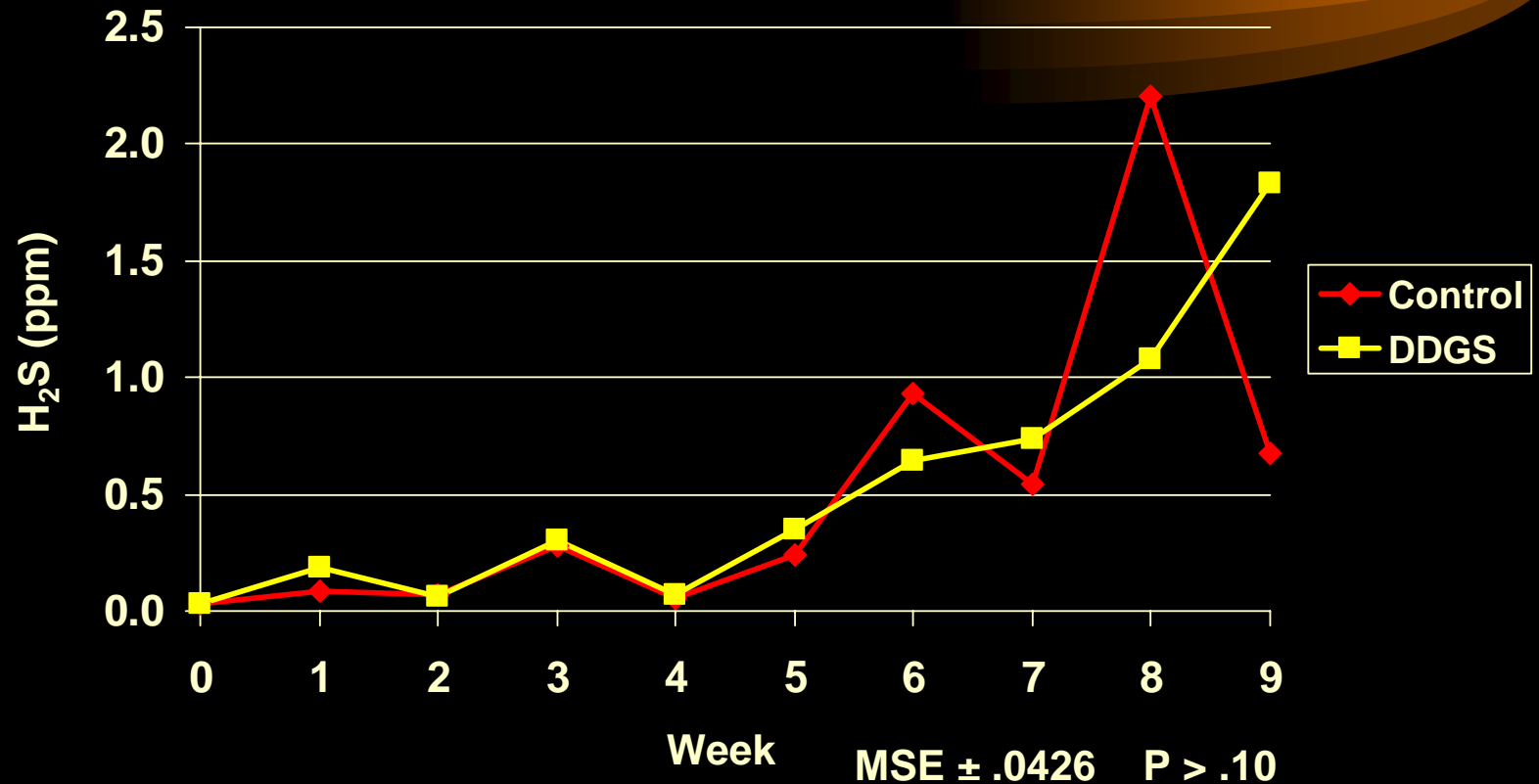
Expected curve of odor and gas emissions



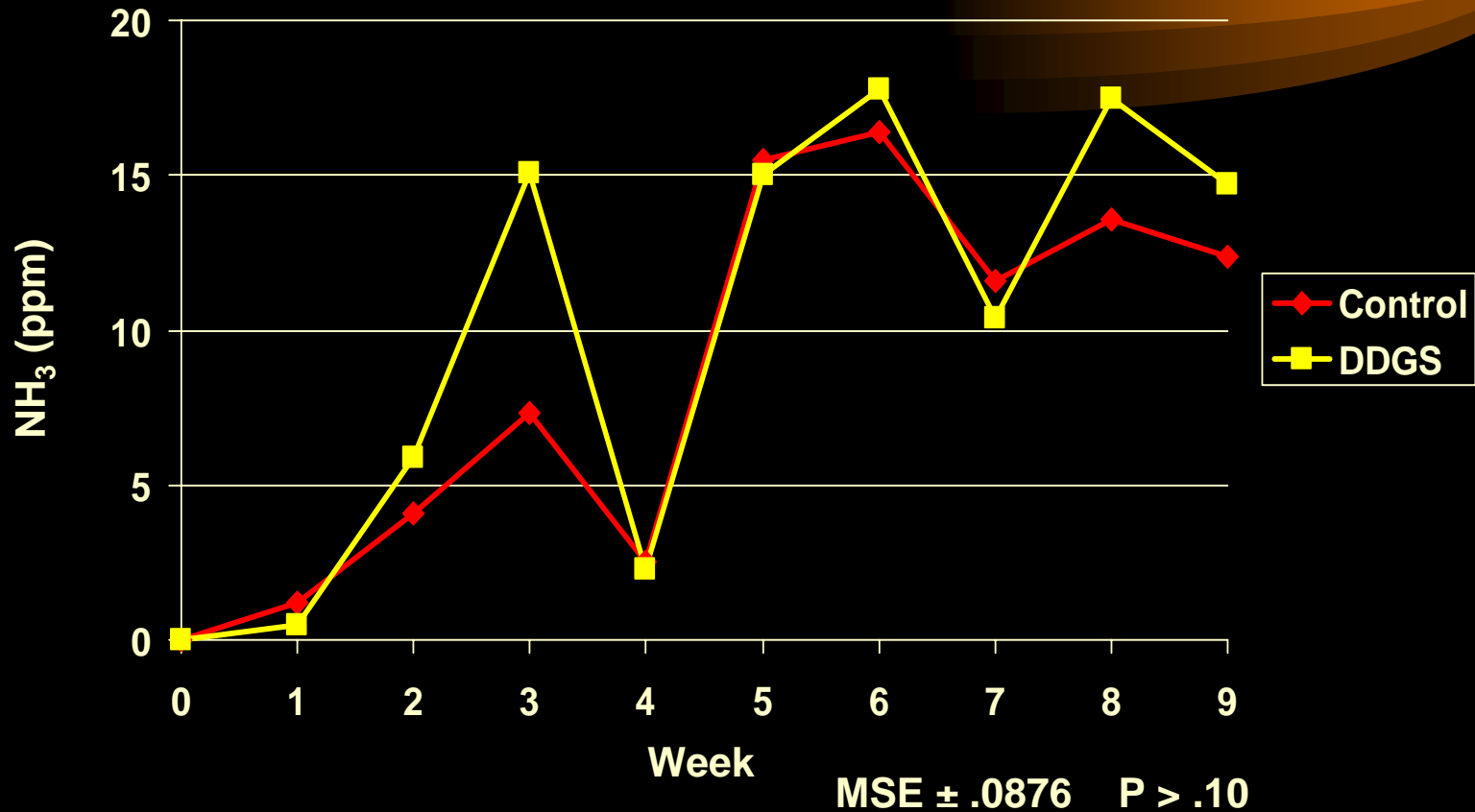
Effect of dietary treatment on manure odor detection threshold



Effect of dietary treatment on hydrogen sulfide emission



Effect of dietary treatment on ammonia emission



Summary

- Under conditions of this study, adding 20% MNSD DDGS to corn-soybean meal diets did not affect:
 - Hydrogen sulfide emission
 - Ammonia emission
 - Odor detection level
- Results may have been influenced by:
 - Length of trial
 - Techniques available to analyze odor and gas

Special thanks to:



MN-SD Distiller's Group

MN Corn Grower's Association