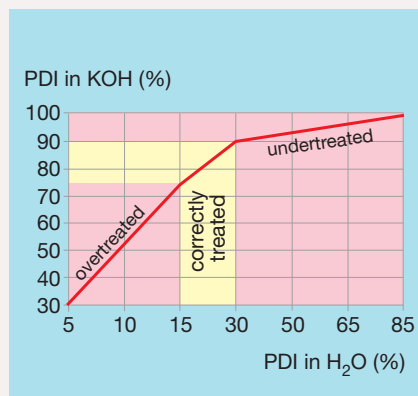


# Treatment of Fullfat Soybeans

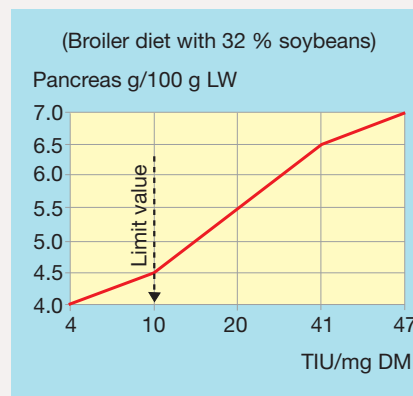
Nutrients	(% in OM)
Crude protein	36
Crude fat	18
Crude fiber	5
NfE	25

Anti-nutritive factors	Effects
Trypsin inhibitor	Inhibition of protein digestion
Urease	Splitting of urea
Lectins	Inhibition of blood coagulation
Glycinins	Intestinal antigenic effects

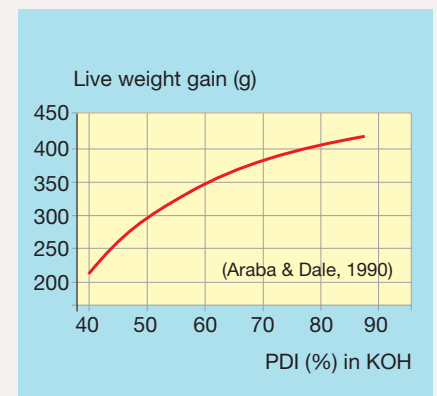
The nutritional quality after treatment can be evaluated by the determination of protein solubility (PDI).



Solubility of soya protein (PDI)



Trypsin inhibitor of soya and pancreas weight



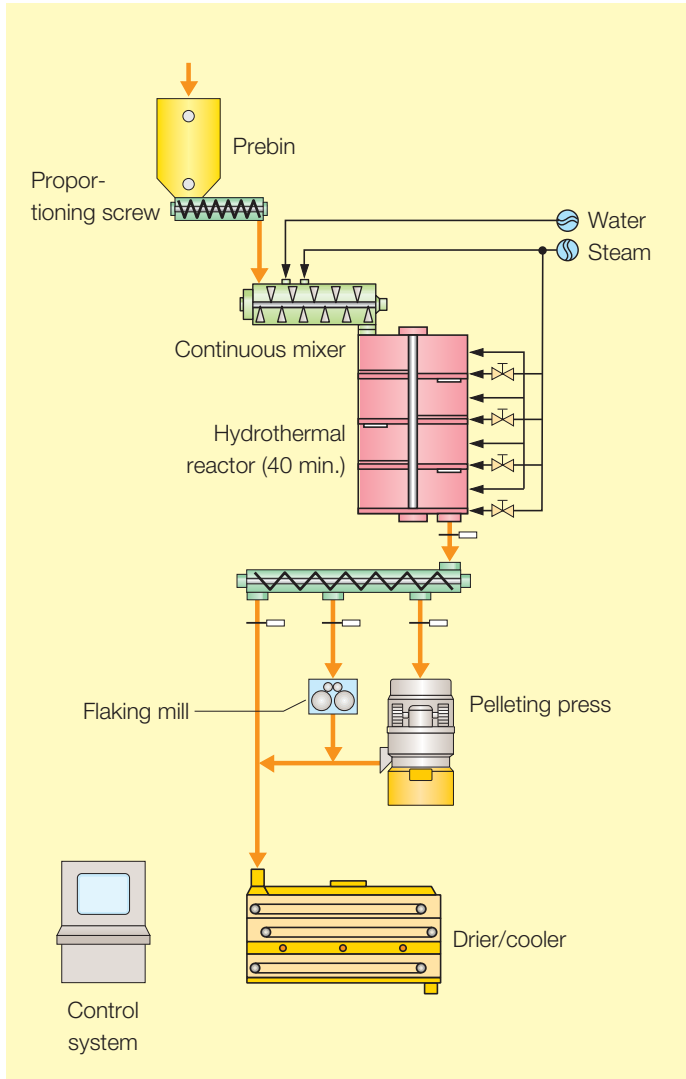
Effect of PDI upon live weight gain in broilers (1-18 days)

BTreatment method:		Hydrothermal treatment (40 minutes)	Hydrothermal treatment (10 minutes) plus expander
		(Diagram 1)	(Diagram 2)
TME <sub>n</sub>	(MJ/kg DM)	15.7 (flaked)	15.0
Trypsin inhibitor	(TIU/mg DM)	< 2	< 10
Urease	(mg N/g* min)	< 0.2	< 0.4
PDI in H <sub>2</sub> O	(%)	> 30	> 25
Rumen undegradable protein	(%)	marginal effect	40 - 45
AAT	(g/kg DM)	-	150
PBV	(g/kg DM)	-	170

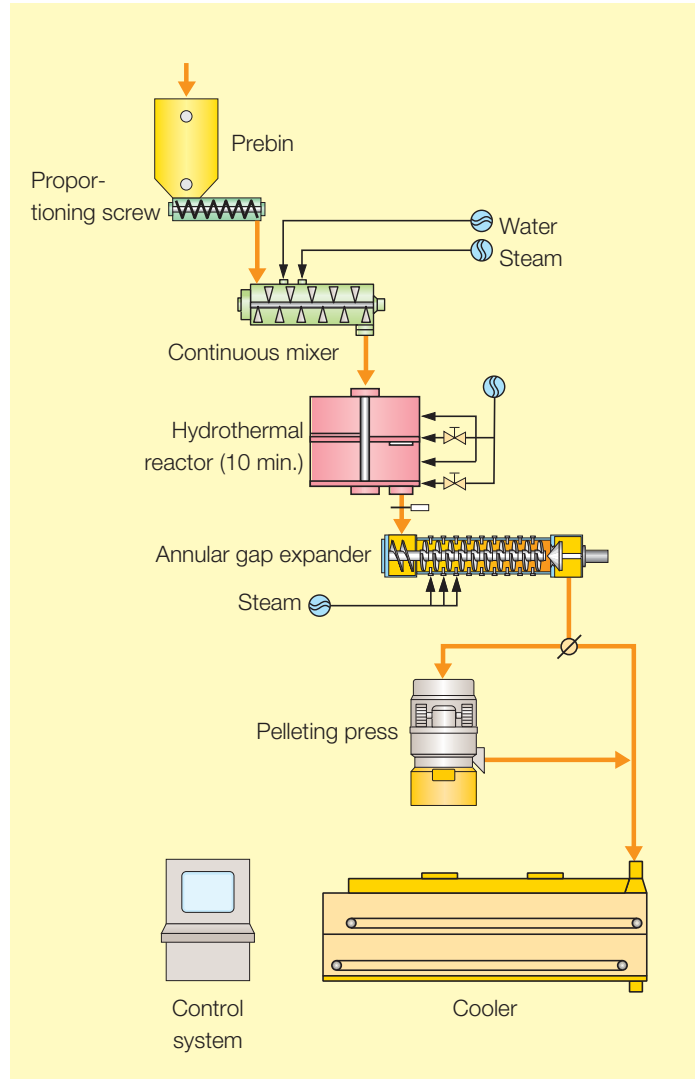
AAT: Intestinal absorbable amino acids  
PBV: Ruminal protein balance

# KAHL Technology

## Treatment of Fullfat Soybeans



**Diagram 1:**  
Hydrothermal treatment (40 minutes)



**Diagram 2:**  
Hydrothermal treatment (10 minutes)  
plus expander



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