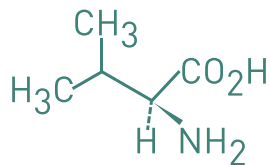


L-VALINE

CHEMICAL STRUCTURE OF L-VALINE



Produced by fermentation with a approved safe microorganism and designed to meet the digestible valine requirements of high-yielding genetics

MAIN BENEFITS OF L-VALINE

ESSENTIAL AMINO ACID FOR MUSCLE CELL METABOLISM

01 Piglet : Advanced nutrition

- In piglet nutrition, there is growing awareness that the inclusion of 70% digestible to lysine ratio is optimized growth performance and gut health.

02 Sow : Optimized performance

- A sufficient supply of L-Valine is directly related to milk composition which aids in maintaining piglet weight gain.

03 Broiler : Positive response

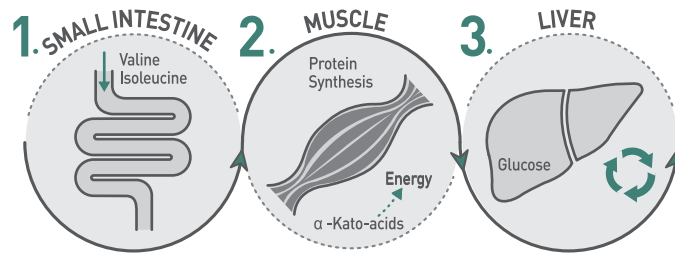
- L-Valine aids in maintaining growth performance by optimizing ADG, FCR and body protein synthesis.

04 Layer : Increased productivity

- L-Valine supplementation aid in maintaining healthy body weight and optimal egg production.



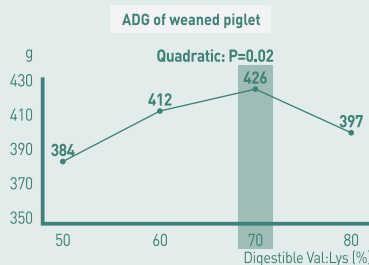
HOW L-VALINE IS USED IN THE BODY?



L-VALINE FOR SWINE AND POULTRY

PIGLET

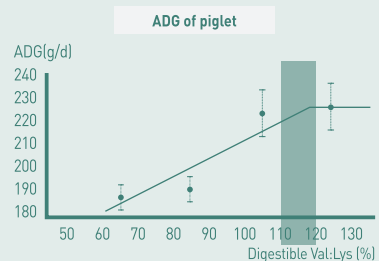
- **Recommendation: 70% VAL:LYS ratio**
- Optimized performance: Weight gain↑ & FCR↓
- Gut development: Diarrhea incidents↓ & Energy efficiency↑



• REF. Xu et al., 2017, Asian-Australian journal of Animal Sciences

SOW

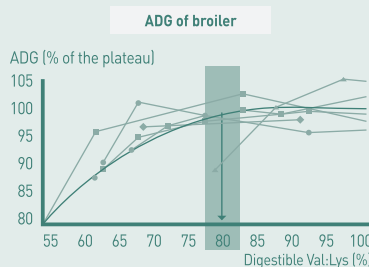
- **Recommendation: 113% VAL:LYS ratio**
- Optimized lactation performance : Mammary function↑ & Piglet growth↑
- Backfat loss↓: Shortening WEI & Longevity



• REF. Xu et al., 2016, Animal Sciences Journal

BROILER

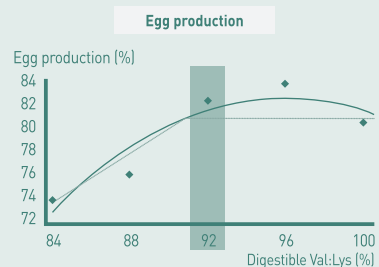
- **Recommendation: 80% VAL:LYS ratio**
- Optimized performance (ADG, FCR)
- Body protein synthesis↑ & proteolysis↓



• REF. Meta-analysis, 2011, Lohmann

LAYER

- **Recommendation: 92% VAL:LYS ratio**
- Optimized productivity (FCR, egg production improvement) Decreases body loss



• REF. Leis et al., 2014, J. Appl. Poult. Res

• [Product Guarantee]

Valine	Minimum	96.5 %	HPLC, AOAC 999.13
Moisture	Maximum	1.5 %	105°C for 4 hours
Purity	Minimum	98 %	L-Valine on dry matter