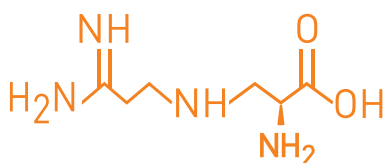


# L-ARGININE

## CHEMICAL STRUCTURE OF L-ARGININE



CJ L-Arginine, a conditionally essential amino acid, is necessary for maintenance, growth, reproduction, and immunity. Poultry are not able to synthesize Arg themselves, and therefore depend on dietary Arg to meet their needs for protein synthesis and other functions.

## MAIN BENEFITS OF L-ARGININE

100% BIO AVAILABLE

### 01 Fermentation based

- CJ L-Arginine is produced with an innovative fermentation processes using raw sugar, thus combining sustainability and efficiency in animal nutrition



### 02 Promote **Nitric Oxide [NO] synthesis** and aid in **blood circulation**

### 03 Suppress Fatty Acid Synthase [FAS] impacting **abdominal fat deposition**


| CJ has sponsored research which has been published showing this, which would be perfect.

### 04 Growth **hormone synthesis**      05 Stimulate **cell proliferation**

### 06 Enhance antioxidant enzymes aiding in **oxidative stress management**



# Main functions of L-ARGININE in livestock



## Poultry

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### Broilers

- Suppress hepatic Fatty Acid Synthase (FAS)
- Enhance CPT1 and 3HADH which are enzymes related to transferring fat into energy

Abdominal Fat ↓    Carcass Yield ↑    Breast Meat Yield ↑

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### Layers

- Increase **antioxidant capacity** and decrease oxidative stress which is caused by heat / cold stress
- **NO** induces vasodilation and aids in blood circulation to reproductive organs

Stress ↓    Mortality Rate ↓    Egg Production ↑



## Swine

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### Pregnant pigs

- Arg is common substrate for NO and polyamine synthesis : Key regulators of embryogenesis, placental and fetal growth.

Pregnancy Outcome ↑    **Aids in optimizing swine litter size**

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### Young pigs

- Key precursor for growth hormone synthesis
- Creatine and polyamine synthesis, enhances cell proliferation

Growth Performance ↑



## Aqua

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### Salmon

- Promotes lipid metabolism aid in regulating adipose mass

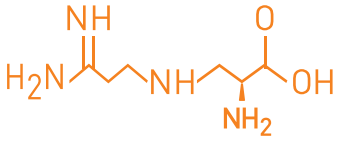
Farmed Salmon Fat Portion ↓

- Polyamines promotes embryo development

Reproduction Performance ↑

## CJ BIO L-ARGININE SPECIFICATION

### • [ Chemical Description ]

Chemical Structure	
Molecular formula	C <sub>6</sub> H <sub>14</sub> N <sub>4</sub> O <sub>2</sub>
Molecular weight	174.20 g/mol
Isomer	L (Laevo-rotatory)

### • [ Product Guarantee ]

L-Arginine	Minimum	98.5 %	HPLC(FCC/USP/EP)
Moisture	Maximum	0.5 %	FCC, USP