



VENKATESHWARA  
B.V. BIOCORP

# Welcome



“Kolkata International Poultry Fair 2026”  
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# Feeding For Finesse:

*“The Science Of Precision  
Nutrition In Layers”*

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# Overview of the Layer Industry in India

01

## Global Position:

- Annual egg production - 149.11 billion. (BAHS 2025)
- Per Capita – 106 Eggs
- India ranks 2nd in egg production worldwide.

02

## Scale:

The poultry sector contributes significantly to India's livestock economy, alongside dairy & fisheries.

03

## Contributions to Growth:

- Rising middle-class demand for affordable protein.
- Vertically integrated poultry companies that manage feed, breeding & distribution.
- Government support for feed supply (Maize, Soybeans) & rural employment.



# Layer Business Targets

**Keeping layers up to 100 weeks**

**01**

Maintaining Productivity  
Egg Size & Egg Shell Quality

**Feed Cost Control**

**02**

Feed Ingredients Price Fluctuations  
Quality & Consistency of Feed Ingredients  
Alternative Feed Ingredients  
Balanced Nutrition

**Managing the Daily Operations**

**03**

Availability of Manpower  
Skilled/unskilled  
Training  
Retaining

**Disease Prevention & Bio-Security**

**04**

Continuous disease threats  
Vaccination Protocols  
Disinfection & Cleaning  
Water Sanitation

# Critical Factors

01

## Producing a Robust Pullet

Brooding, Growing//Nutrition//Gut Health

02

## Body Weight & Uniformity

Weekly Body Weights

03

## Breast Muscle Development

ME & AA Balance

04

## Early Chick Nutrition

Growth//Development

05

## Medullary Bone Development

Calcium & Phosphorus Content in PreLay

06

## Early Laying Performance

Feed Consumption//Body Weight//Light Stimulation

07

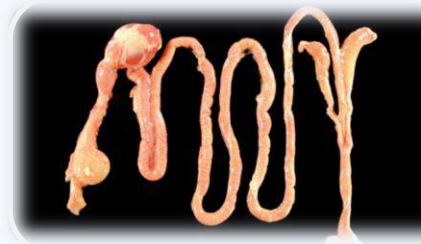
## Feeding the Birds

Formulation//Consumption

08

## Gut Health

Developing gut

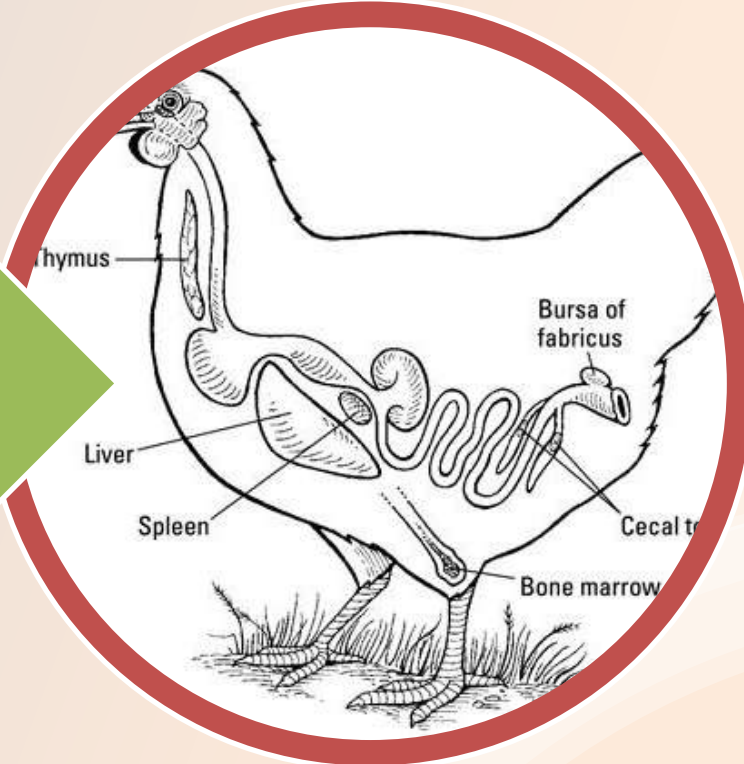




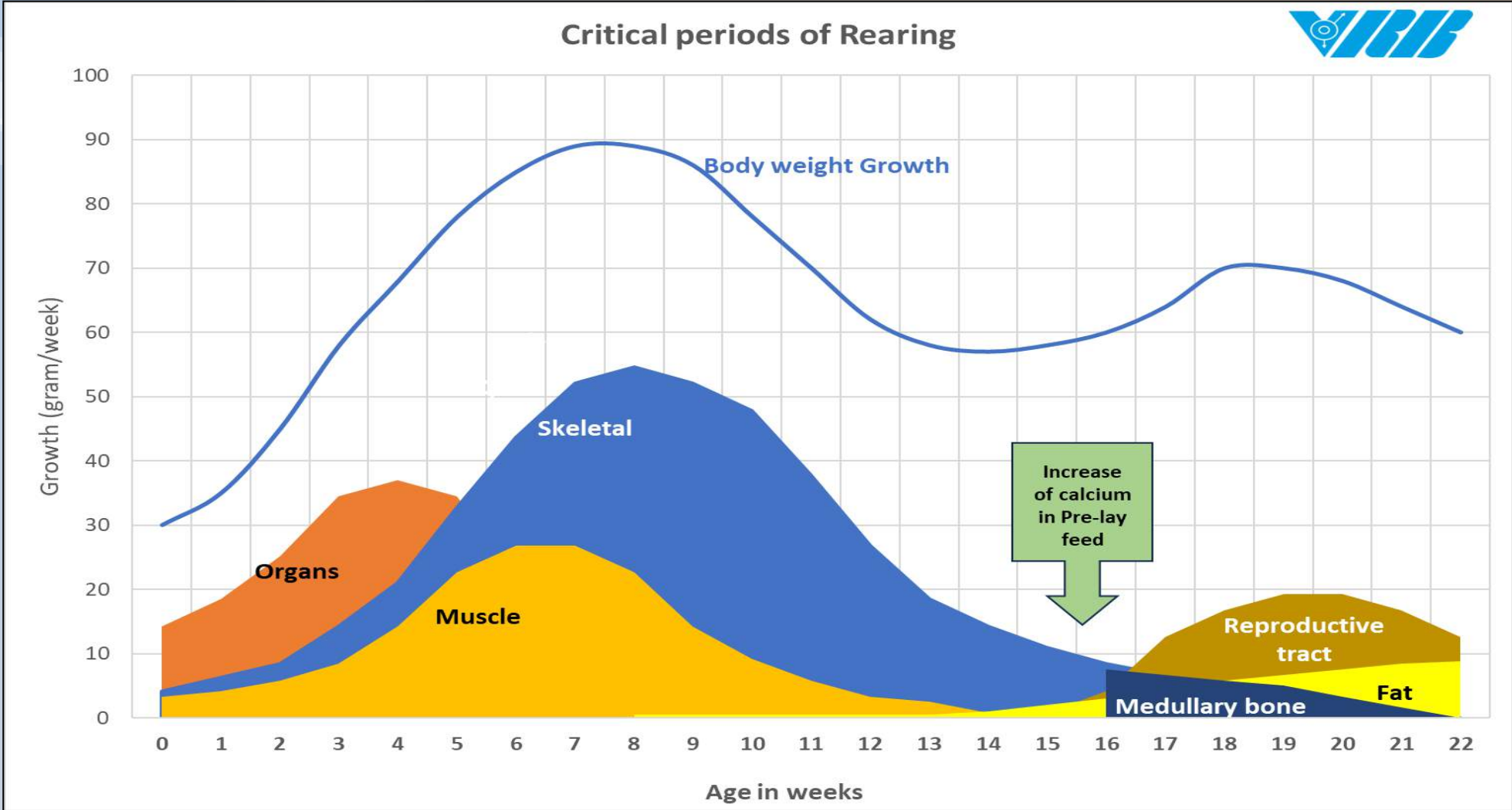
**Pullet** *is the Foundation for  
Successful Laying*



# Gut Health, Liver Health & Immunity



# Critical periods in rearing pullets



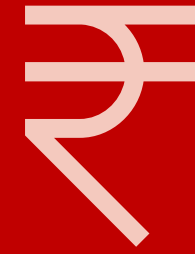
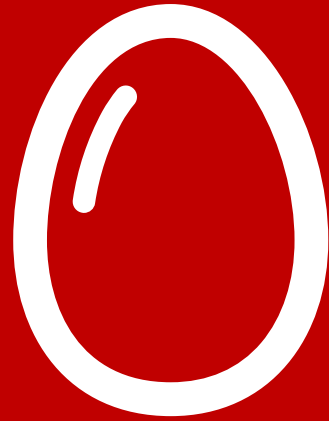
# Intake, intake, intake

Laying birds need dense feed between 16 to 30 weeks (maturity) -

Sr	Details	At 19 week	At 30 week	Increase
1	Feed/Bird/Day (gm)	80.00	110.00	37.50%
2	Body Weight (kg)	1.300	1.490	14.62%
3	Egg Production (%)	25.00	98.00	292.00%
4	Egg Weight (gm)	42.50	56.20	32.24%

“Intake, intake & more intake is crucial”

## Why Nutrition Matters?



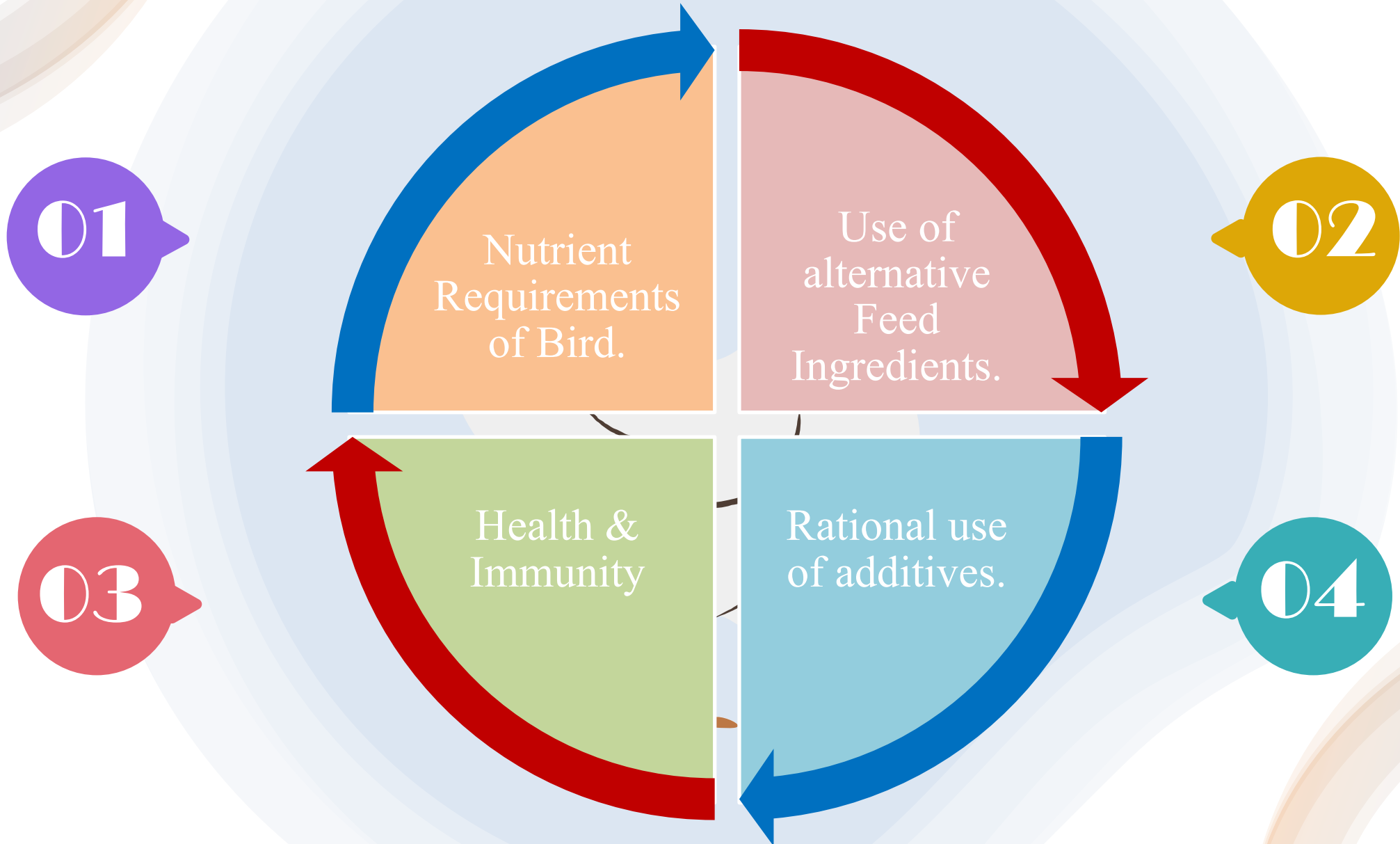
## Economic Impact:

**More than 75% Contribution to Production Cost**

In short, nutrition isn't just a technical detail—

- *It's the foundation of poultry performance, health, & farm profitability.*

# Basis of feeding the Laying Hens



# Controlling Feed Cost



01

## Consumption based Formulations

Providing nutrients more accurately to birds to support higher & more consistent egg output.

02

## Use of Alternative Feed Ingredients

Max. Inclusion Level  
Anti – Nutritional Factors//Cost

03

## Precise Application of Nutrient Matrix

Nutrient matrix application of feed additives

04

## Nutrient Safety Margins

Formulation to fulfill nutrient req. precisely.  
Minimum safety margins.

05

## Phase Feeding

To avoid overfeeding & underfeeding of nutrients.  
Optimize cost of the feed/egg

06

## Monitoring Egg Weight/Bird Weight

To improve feed efficiency.

07

## Maintaining Egg Shell Quality

More eggs per hen.  
Higher saleable eggs.

08

## Management in Shed

Feed distribution//Feed consumption  
Egg collection.  
General management.

# Approx. Daily Nutrient Requirements of Laying Hens

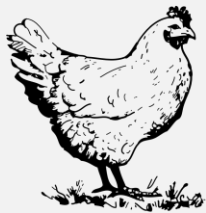
Nutrient/Feed Element	Recommended Level	Purpose
Feed Intake	110-115 g/day	Optimal intake for layers
Crude Protein	16–18%	Higher during peak, lower as hens age
Lysine	700-800 mg/day	Essential for growth, egg production
Methionine	280-400 mg/day	Essential for egg size
Calcium	4.0–4.50 g/day	Strong shells
Av. Phosphorus	300 to 450 mg/day	Strong shells
Energy	270-280 kcal/day	Maintain body weight & activity
Water	Unlimited access	Hydration & egg formation

# Common Feeding Mistakes

01

*Too frequent changes in feed:*

Dilutes nutrition & reduces egg output.



02

*High calcium diets:*

Leads to thin or broken shells.



03

*Irregular feeding schedules:*

Stress to birds & lower productivity.



*Solution:*

# Feeding For Finesse:

*“The Science Of Precision Nutrition  
In Layers”*





# Feeding for finesse

"Feeding **finesse**" in animal nutrition is used as a general concept for **precision feeding strategies**.

**Finesse used as Precision Feeding Strategy.**



“Feeding for finesse” refers to the art & science of precisely meeting an animal’s daily nutrient needs to optimize health, growth & efficiency while minimizing wastage.



This involves an in-depth understanding of the complex interplay of ingredients, animal physiology, and environmental factors.



# Feeding for finesse In Layers

Feeding for finesse in laying hens means providing a balanced, nutrient-rich diet that maximizes egg production, shell quality, and hen health while avoiding common mistakes like overfeeding or underfeeding.

The goal is precision feeding—meeting nutritional needs without waste or imbalance.



# Feeding for finesse

## *Key aspects:*



### **Balancing Nutrients**

01

**Balancing Nutrients** to avoid nutrient excesses or deficiencies.



### **Feed Processing**

02

**Feed Processing** to improve the digestibility & bioavailability of nutrients.



### **Feed Management**

03

**Feed Management** to ensure consistent intake, prevent spoilage, & maintain a healthy gut environment.



### **Supplements**

04

**Strategic Supplementation** to enhance nutrient absorption & overall health.

*This approach allows nutritionists to use a "toolbox" of various feed ingredients & adjust them based on economic factors & specific nutrient requirements.*

# Essentials for Feeding with Finesse

- ① **Deep ingredient knowledge**  
Understanding variability in raw materials to do adjustments intuitively.
- ② **Adaptive formulation skills**  
The ability to tweak diets in response to field realities—ingredient shifts, seasonal changes, or bird health challenges—without losing balance.
- ③ **Integration of additives**  
Skillful use of functional additives to fine-tune performance under stress conditions.
- ④ **Economic sensitivity**  
Balancing cost & benefit—knowing when to invest in higher-value ingredients or additives, & when to economize without compromising bird health.
- ⑤ **Holistic perspective**  
Considering gut health, water quality, management practices, & environment alongside feed formulation, ensuring nutrition strategies are practical & sustainable.
- ⑥ **Communication finesse**  
Translating technical nutrition into clear, actionable guidance for farmers and industry stakeholders, often with visuals, slogans, or training aids.
- ⑦ **Continuous feedback loop**  
Using trial data, field performance, & farmer observations to refine strategies dynamically.

# Feeding for finesse

Feeding finesse succeeds when science (precision) & art (adaptability) are harmonized, guided by data but responsive to real-world conditions.

It captures the elegance of fine-tuned feeding while emphasizing the rigor of precision nutrition.

**Feeding for finesse** is about the **art of nutrition**: skillfully balancing ingredients, adapting to field realities, & fine-tuning diets to optimize bird performance under varying conditions.

It emphasizes flexibility, creativity, and responsiveness.

**Precision nutrition** is the **science behind that art**: using data, modeling, & exact nutrient delivery to ensure birds get what they need at the right time, in the right amount.

It emphasizes accuracy, measurement, & predictability.

Ensures every nutrient is delivered with accuracy to meet the bird's exact physiological needs.



## Finesse & Precision

### When aligned,

- Finesse provides the adaptability & creativity to tailor feeding strategies,
- Precision brings the rigor of science & measurement,
- Together creating a holistic approach that maximizes performance, efficiency, & profitability without compromising animal well-being.

# Why finesse needs precision?

## Foundation of accuracy

Without precision, finesse risks becoming guesswork.

Precision nutrition provides the baseline data & nutrient targets that finesse can then adapt to real-world variability.



## Performance + profitability

Precision nutrition drives efficiency and cost control, while finesse ensures those precise formulations translate into practical success in diverse farm conditions.

## Consistency with adaptability

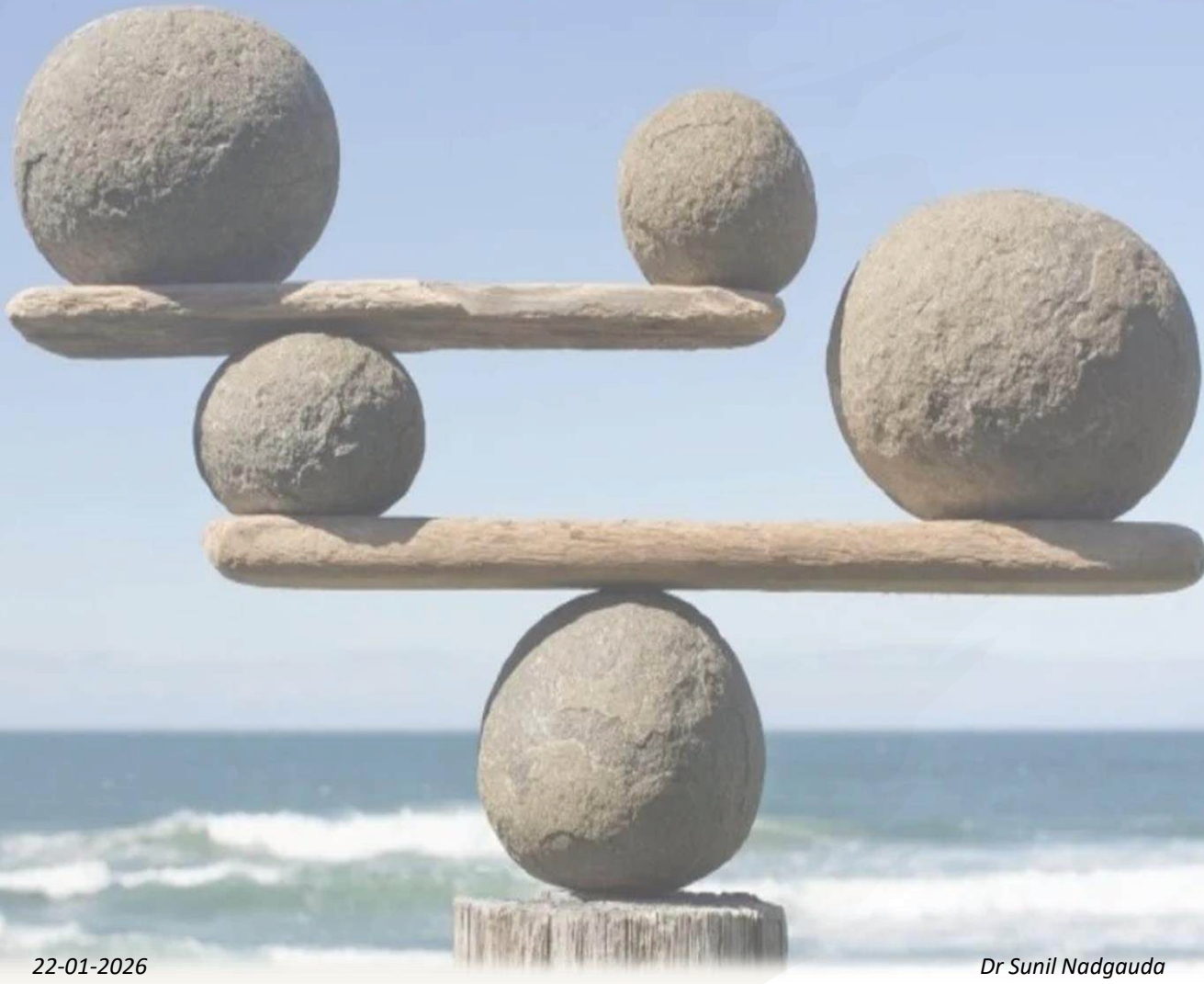
Precision ensures diets meet physiological requirements consistently, while finesse allows you to adjust for factors like ingredient variability, heat stress, or gut health challenges.



## Science + art synergy

Finesse makes nutrition strategies engaging and adaptable, but precision ensures they remain scientifically valid and economically sound.

# What Is Precision Feeding?



# Precision Nutrition

About delivering the right amount of nutrients, at the right time, to the bird.

*It uses technology, data, & nutritional science –*

➤ To optimize feed efficiency

➤ Improve bird health

➤ Reduce wastage

➤ Minimize environmental impact.



# Concept of Precision Feeding

01

## **Targeted nutrition delivery:**

Precision feeding provides birds with the exact amount of nutrients they need at different stages of laying, avoiding over- or under-supply.

02

## **Dynamic adjustment:**

Fine tuning of nutrient levels based on age, health, & production cycle, to ensure birds receive the right balance of protein, energy, calcium, phosphorus, & trace minerals.

03

## **Reduced feed waste:**

By minimizing excess nutrients, precision feeding lowers feed costs & environmental impact while maintaining productivity.

# How Precision Feeding Works?



1

## Data Collection

Regarding Body Weight, Feed Consumption, Egg Production, Mortality.

2

## Feeding the birds

Formulating the feed as per the exact nutrient requirements of the birds.

3

## Delivery

Delivering the feed as per the decided feed formulation.

4

## Feedback

Continuous monitoring of the performance & birds response to the feed formulation.

5

## Fine Tuning

Fine-tuning of nutrient requirements based on feedback & implementation.

# Benefits of Precision Feeding



## Efficiency



Efficiency

- Reduces feed wastage
- Improves feed conversion.

## Health



- Prevents underfeeding or overfeeding,
- Reduces metabolic disorders.
- Improved gut health
- Better overall bird welfare
- Reduction in diseases.

## Productivity



- Enhances growth.
- Better egg size, shell quality.
- Persistency in laying.

## Sustainability



- Reduced nutrient excretion (like phosphorus).

## Cost Savings



- Optimizes feed usage, Lower feed costs, less waste, higher profit.



# Benefits for Egg Shell Quality & Egg Production

## *Calcium optimization*

Precision feeding ensures calcium supply to the bird at the right time of day, which is critical for shell formation.

## *Stronger shells*

Adequate calcium & phosphorus balance reduces thin shells & breakage, improving marketability to reduce losses.

## *Trace mineral support*

Develop improvement strategies, allocate resources, and set actionable goals

## *Improved laying performance*

Providing nutrients more accurately to birds to support higher & more consistent egg output.

## *Better feed efficiency*

Precision feeding reduces the nutrient & feed wastage

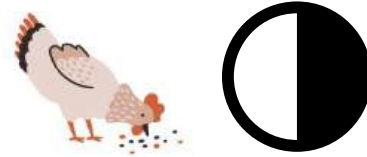
## *Enhanced bird health*

Balanced feed reduces metabolic stress, supports longer laying cycles & better flock uniformity.



# Conventional Feeding Vs. Precision Feeding

Aspect	Conventional Feeding	Precision Feeding
Nutrient delivery	Generalized, uniform	As per bird's requirement
Safety Margins	Higher	Lesser - Exact nutrient supply
Feed efficiency	Moderate	High (less wastage)
Egg production	Variable	More consistent, optimized
Shell quality	Often uneven – higher egg breakage	Stronger, & thick shells – less egg breakage
Economic Impact	Results in higher cost	Optimizes the cost
Environmental impact	Higher (wastage, emissions)	Lower (efficient use)



- Morning feed higher in protein supported egg mass & albumen quality.
- Evening feed rich in calcium improved shell thickness & strength.
- **Better nutrient utilization & higher laying performance** compared to conventional single feeding

## Split Feeding/AM-PM Feeding

**Split feeding is providing two separate feeds:**

- Morning Feed (High Protein/Energy)
- Afternoon/Evening Feed (High Calcium)

# Future Scope of Precision Feeding



More precise feed formulation as per exact nutrient requirement.



Use of AGP alternatives to fine-tune feeds for improving gut health.



Greater focus on sustainable feed resources.



Towards production of nutrient rich/value added poultry production (eggs & chicken).



# Future Scope of Precision Feeding

Precision feeding is transforming animal nutrition into a *data-driven science*.

It's not just about feeding animals—it's about feeding them smarter, with sustainability & efficiency at the core.

In short, precision feeding is a game-changer for poultry farming –

Improvement in productivity

Improvement in external & internal egg quality

Reduction in production costs

Reduction in environmental impact.



# In Conclusion ..



# In Conclusion ..

1

*In essence*, feeding for finesse requires mastery of both science and subtlety—precision provides the numbers, but finesse ensures those numbers work in the real world.

2

*In short*: finesse without precision is fragile; precision without finesse is rigid.

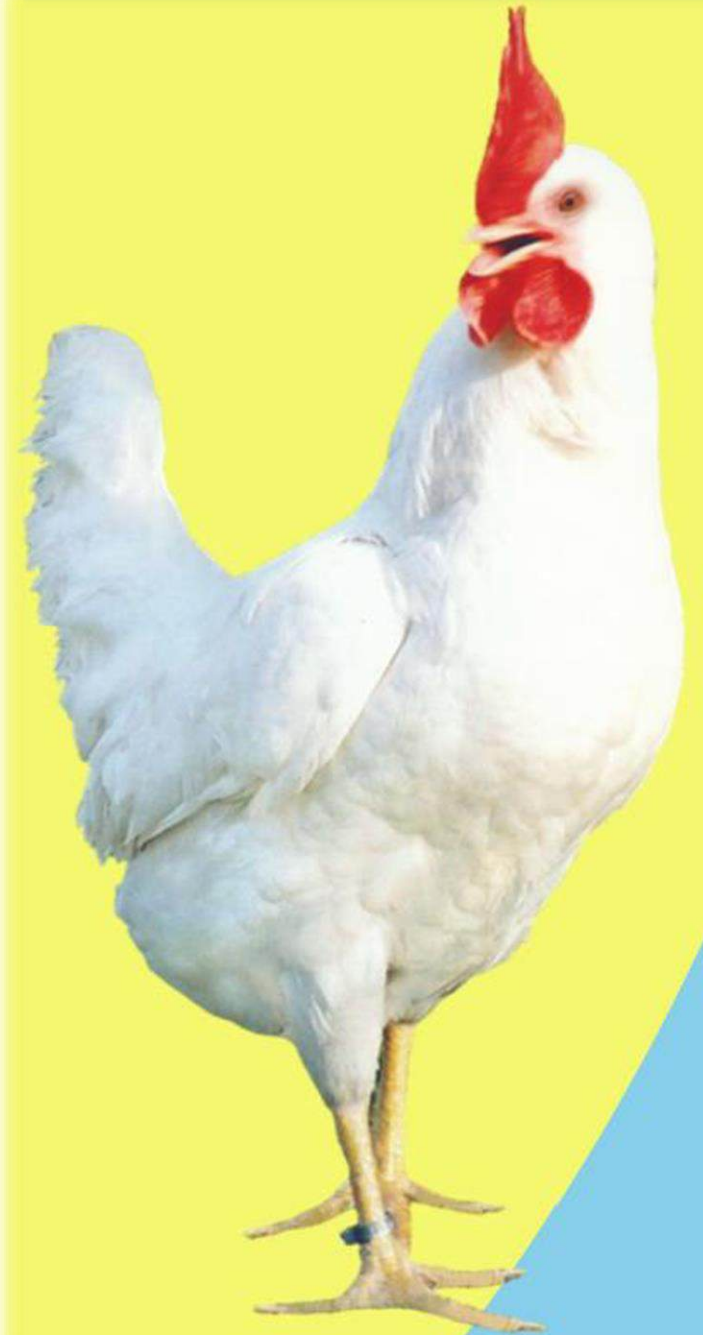
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*Together*, they create a resilient, profitable, and performance-driven feeding strategy.

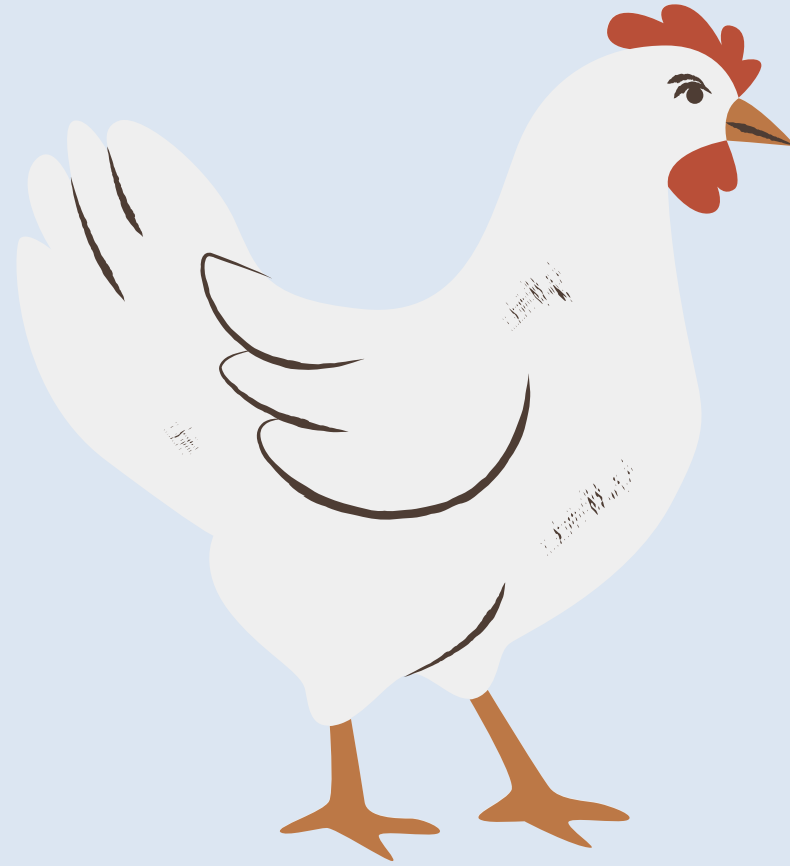
# Feeding For Finesse:

*“The Science Of Precision  
Nutrition In Layers”*

*“Every gram of feed counts ..  
.. every shell tells a story”*



# What's your biggest challenge in layer nutrition?



## Questions?

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**Thank You ..**

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