

Ideation Phase

Poultry Diseases For Enhanced Health

Date	24 Jun 2025
Team ID	LTVIP2025TMID33049
Project Name	Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management
Maximum Marks	4 Marks

Poultry Diseases For Enhanced Health :

An empathy map is a useful tool that helps us understand the farmer's daily challenges, emotions, and decision-making during poultry health issues.

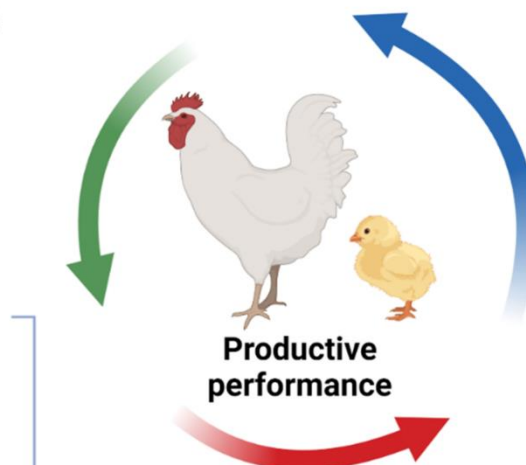
It allows us to create smarter solutions—like AI-based early disease detection—by seeing the problem from the farmer's perspective. This helps build tools that are accurate, accessible, and impactful for real-world poultry management.

Example:

Environmental factors

Farm management

- **Husbandry**
 - Stocking density
 - Temperature
 - Photoperiod
 - Ventilation
- **Feed management**
 - Feed and water access
 - Feed quality
- **Litter management**
 - Litter type
 - Litter humidity
- **Nutrition**
 - Feed composition
 - Feed ingredients
 - Particle size
 - Micronutrients
 - Enzymes
- **Health interventions**
 - Antibiotic growth promoters
 - Vaccination
 - Probiotics/Prebiotics
 - Plant bioactives



Productive performance

Gut microbiota

- **Functional output**
 - Production of SCFA
 - Added metabolic potential
 - Competitive exclusion of pathogens

- **Composition**
 - Richness species
 - Population structure and complexity
 - Balance between commensal and detrimental microorganisms

Host factors

Genetic background

- Bird species
- Type (i.e. broiler, layer)
- Breed
- Sex

Gut development and maturation

- Immune system
- Gut morphology
- Microbiota acquisition



Gut health

- Nutrient assimilation
- Intestinal barrier integrity
- Immune response efficiency
- Inflammatory balance
- Susceptibility to enteric pathogens (*E. coli*, *Salmonella*, *Campylobacter*, *C. perfringens*)

Reference: <https://www.sciencedirect.com/>

Example:

