

INVISIBLE ENEMIES IN POULTRY FARMS: HOW PARASITES ARE SILENTLY REDUCING PROFITS AND THREATENING POULTRY HEALTH

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Invisible Enemies in Poultry Farms: How Parasites Are Silently Reducing Profits and Threatening Poultry Health

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Abstract

Imagine a poultry farmer who has invested heavily in quality chicks, balanced feed, vaccines and modern housing. Everything appears perfect. Yet, after a few weeks, the birds are growing slowly, eating more feed than expected and producing disappointing returns.

What went wrong?

The answer may be something so small that it cannot be seen with the naked eye—**parasites**.

These tiny organisms quietly invade the intestine, skin or blood of birds, stealing nutrients, weakening immunity and reducing production long before obvious signs of disease appear. Because their effects are gradual, farmers often blame feed quality, weather or management while the real culprits remain hidden. Subclinical parasitic infections significantly reduce feed efficiency, growth rate and overall flock performance without causing obvious clinical signs (Chapman, 2014; Blake et al., 2021).

Did You Know?

Coccidiosis alone causes an estimated global economic loss of over ₹1.4 lakh crore (approximately US\$15 billion) every year due to poor growth, reduced feed efficiency, treatment costs and mortality (Blake et al., 2021).

Why Are Poultry Parasites Making a Comeback?

Modern poultry farming has become faster and more intensive than ever before. Thousands of birds are often reared under one roof, creating ideal conditions for parasites to spread rapidly. High stocking density increases the contamination of litter with parasite eggs and *Eimeria* oocysts, thereby enhancing disease transmission (Peek & Landman, 2011).

Moist litter, overcrowding, poor ventilation and warm weather help parasite eggs survive for longer periods. Climate change has further worsened the situation by increasing humidity and extending the survival of infective stages in the environment (Morgan & Wall, 2009).

Another worrying issue is **drug resistance**. Many anticoccidial medicines that worked effectively a decade ago are gradually losing their power because parasites are adapting to them. Continuous use of the same anticoccidial drugs has resulted in resistant *Eimeria* populations, making disease control increasingly difficult

(Chapman, 2014; Blake et al., 2021).

Meet the No. 1 Enemy – Coccidiosis

If poultry parasites had a "most wanted" list, **coccidiosis** would undoubtedly top it.

The disease is caused by microscopic protozoan parasites of the genus *Eimeria* that multiply rapidly inside the intestine. As they grow, they destroy the intestinal lining, preventing birds from absorbing nutrients efficiently. Seven *Eimeria* species infect chickens, with *Eimeria tenella* being the most pathogenic (Shirley et al., 2005).

The result?

- Birds eat more but gain less weight.
- Feed conversion becomes poor.
- Growth slows down.
- Bloody diarrhoea may appear.
- Mortality increases during severe outbreaks.

Young broilers between **3 and 6 weeks of age** are the most vulnerable because their intestinal immunity is still developing (Conway & McKenzie, 2007).

Watch for These Warning Signs

LIFE CYCLE OF *Eimeria* (Coccidia of Poultry)

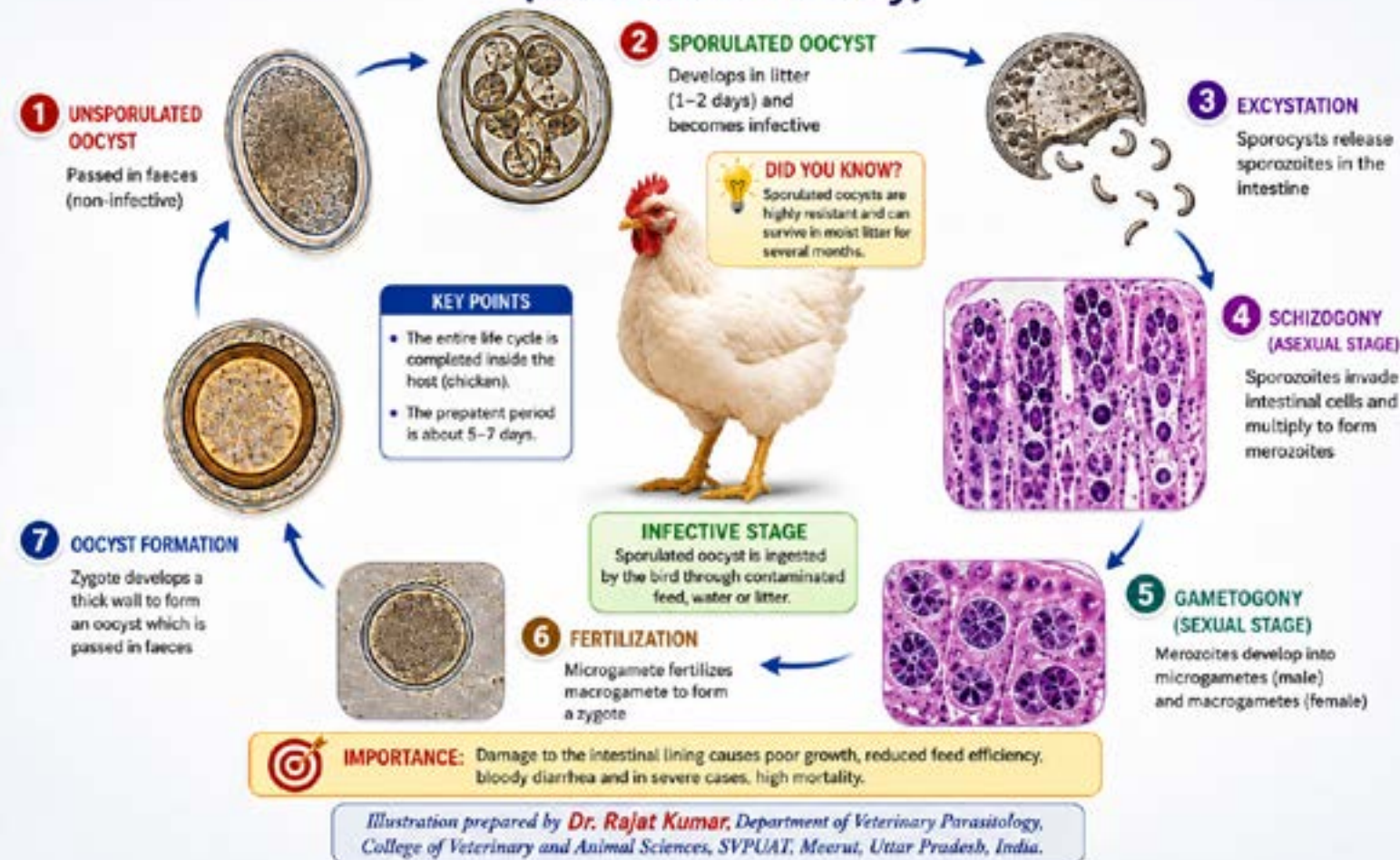


Figure 1. Life cycle of *Eimeria* spp. and characteristic caecal lesions caused by coccidiosis in poultry.

Early detection can save your flock! Monitor your birds daily for these common signs of parasitic disease or coccidiosis:

- **Wet litter** – Often the first indication of intestinal problems.
- **Bloody droppings** – A classic warning sign of severe coccidiosis.
- **Pale combs** – May indicate blood loss, anaemia, or heavy parasite burden.
- **Huddling birds** – Birds appear depressed, weak, and

reluctant to move.

- **Poor weight gain** – Slower growth despite adequate feeding.
- **Reduced feed intake** – Sick birds eat less, leading to production losses.
- **Uneven flock size** – Large variation in bird growth suggests underlying health

Prompt veterinary diagnosis through faecal examination or laboratory testing can prevent severe outbreaks and minimise production losses (Taylor et al., 2016).

Small Parasites, Big Economic Losses

Many farmers notice reduced profits but fail to realise that parasites are responsible.

A flock affected by parasites requires:

- More feed
- More medicines
- More labour
- More time to reach market weight

Even a mild infection can silently reduce profitability without causing obvious disease. Besides reduced body weight, parasitic infections lower feed conversion efficiency, increase treatment costs and predispose birds to secondary bacterial infections such as necrotic enteritis (Blake et al., 2021).

“Don't wait until birds become sick. Regular litter management, biosecurity and routine parasite monitoring are far more economical than treating an outbreak.”

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