Aflocox®



Natural Prevention of Anticoccidial Resistance

Coccidiosis is the costliest disease in poultry production, with estimates of global economic losses as high as 3 billion dollars per year. Caused by multiple species of Eimeria, this endemic challenge has been addressed with shuttle, bio-shuttle or vaccination programs based on various anticoccidial tools. However, resistance to existing compounds is increasing. Restrictions on the use of some products due to voluntary marketing programs such as "no antibiotics ever" further limit successful control of coccidiosis. Thus, management programs incorporating new product categories are urgently needed.

- Even birds with subclinical infections exhibit reduced growth and efficiency;
- Intestinal damage caused by coccidiosis increases the risk of secondary pathogenic infections and disease, including *Clostridium perfringens*induced necrotic enteritis in broilers and blackhead in turkeys triggered by *Histomonas meleagridis*;
- Serious infections may result in severe diarrhea, hemorrhage, and high mortality;
- Birds that survive coccidiosis never recover their full growth or production potential.

Options for Mitigation of Coccidial Risk		
1. Coccidiostats	Synthetic chemicals; Resistance issues with continuous use.	
2. lonophores	Less lethal, allows some cycling; Multiple points of action; Protection while birds build immunity.	
3. Live vaccines	Effective in birds receiving a full dose; Uneven intake of vaccine is common; Under- or unvaccinated chicks at high risk.	
4. Phytobiotics	All natural; Directly affect <i>Eimeria</i> ; Support immune response to invasion and recovery.	
Effective programs are built on rotations and combinations		

Considerations for Aflocox[®] Use Feeding rate 0.40 lb/ton of finished feed

VACCINE SUPPORT: Protect naïve (under- and un-vaccinated) chicks from overwhelming infection levels due to oocyst shedding by their vaccinated flock mates.

PAIRED PROGRAM WITH LUMIN: Research supports the synergistic benefits of combining Aflocox[®] with this intestinal health management tool. Lumin[®]'s slow-release butyrate and select plant bioactives help maintain optimum gut health and function through coccidiosis challenges.

TARGETED DOSING: Commercial growers have successfully utilized Aflocox[®] to reduce the incidence of clinical disease through known necrotic enteritis challenge windows.

STARTER FEEDS FOR LAYERS AND BREEDERS: A healthy start sets hens up for lifetime success.



Aflocox® A Multi-Component Management Tool

- ✓ Select blend of synergistic plant extracts
- ✓ 100% natural
- ✓ No contribution to resistance
- No interference with development of immunity from live oocyst vaccines
- ✓ No withdrawal time
- ✓ No feed cross-contamination
- ✓ Heat stable; withstands pelleting
- ✓ Lower input cost

Antiprotozoal • Aids in Recovery



Putting **Aflocox**[®] to the Test

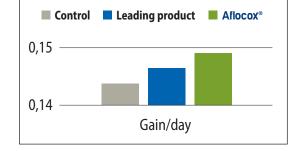
Contraction of the second	Challenge Trial	 Introduced high <i>E. tenella</i> challenge Aflocox[®]/Lumin[®] combo <i>vs</i> Control 0% vs 25% mortality
	Mini-Pen Performance Trial	 Natural challenge Aflocox[®] group ADG 0.1lb greater <i>Eimeria</i> populations & dysbiosis reduced
	Commercial Field Trial	 100 houses, two treatments Lumin®/Aflocox® vs Competitor/butyrate Necrotic enteritis cases reduced by 50% FCR improved

Integrator Pen Studies

- 🗸 Large Delmarva NAE
- ✓ 10 pens, 50 birds/pen

✓ Aflocox[®] treatment:

FCR ↓ 4 pts vs Control, ↓ 2 pt vs major competitor – with a lower feeding rate



Saponins, Flavonoids, Phenolics, Terpenes, Carotenoids, Alkaloids

Bioactive Saponins causing partial *immunomodulatory* cell lysis and death of oocyst **Antiparasitic Enhances** compounds effect immunity Saponins, Terpenoids Saponins, Terpenoids Aflocox® Alleviates Reduces **Plant bioactives to reduce Antioxidant bioactives** oxidative inflammatory acute inflammation Phenolics, Flavonoids, responses stress Saponins, Alkaloids **Carotenoids**

To learn more

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✓ Large North Carolina NAE

✓ Introduced Cocci challenge

✓ Aflocox[®]/Lumin[®] treatment:

"best program" combination

✓ 12 pens, 50 birds/pen

FCR 4.2 points vs