



Poultry Program at UMD-CP

Chad H. Stahl

Professor and Chair, Department of Animal and Avian Sciences



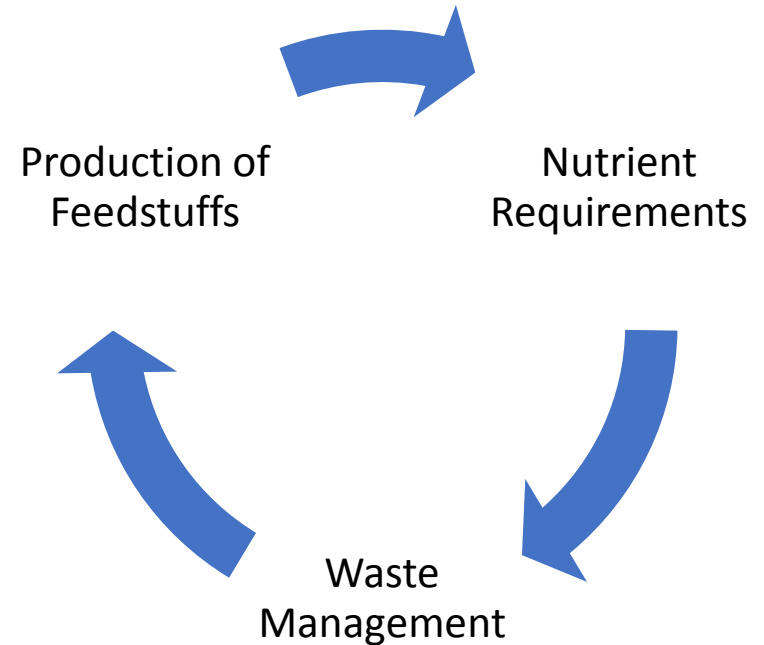
Thematic Areas

- **Nutrition and Nutrient Management**
- **Physiology of Growth**
- **Animal Well-Being and Behavioral Development**
- **Food Safety**



Nutrition and Nutrient Management

- Research over the complete nutrient cycle
- Departments
 - Animal and Avian Sciences (ANSC)
 - Environmental Science and Technology (ENST)
 - Plant Science and Landscape Architecture (PLSA)
 - Agricultural and Resource Economics (AREC)



Poultry Nutrition (ANSC)



Roselina Angel:

- Digestibility and nutritional requirements for Ca and P.
- Modeling of Ca and P requirements for different growth rates, processing weights, and goals.



Tom Porter:

- Identifying genes and gene networks that function in the endocrine system to control growth, body composition, and feed intake.
- Impact of early-life heat stress.

Waste Management (ENST)



Frank Coale:

- Agronomic and environmental management of field applied nutrients.
- Fate and transport of soil P as related to water quality protection.



Lance Yonkos:

- Effect of tillage practices on surface runoff of nutrients and antibiotics from poultry litter amended fields.



Waste Management (ENST)



Stephanie Lansing:

- Development of poultry manure to energy technologies.
- Anaerobic digestion for biogas production.



Gary Felton:

- Agricultural nutrients and contaminant control with a focus on compost processes related to water quality.



Waste Management (AREC)



Erik Lichtenberg:

- Economic analysis of the impact of the Phosphorus Management Tool (PMT) on poultry litter utilization on the Eastern Shore.



Production of Feedstuffs (ENST/PLSA)



Wendy Peer (ENST):

- Fundamental mechanisms that underpin seedling establishment.
- Improving nutritional value of crops.



Katherine Tully (PLSA):

- Improve the sustainability of food production systems by examining their effects on interactions among plants, soils, carbon, nutrient, and water cycles.



Production of Feedstuffs (PLSA)



Jason Wright:

- Variety/hybrid performance, small grains improvement and development, conservation tillage, cover crops, and novel soil amendments.



Robert Kratochil:

- Production and nutrient management practices for wheat, barley, corn, soybean, and cover crops.



Physiology of Growth



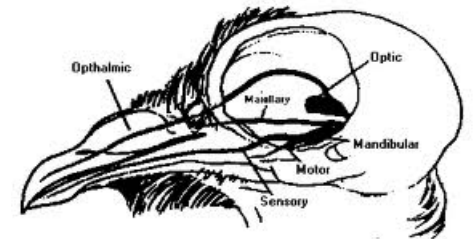
Tom Porter:

- Determining the molecular and cellular mechanisms which regulate growth hormone cell differentiation.
- Gene expression in the hypothalamus and pituitary gland that contribute to the regulation of growth and body composition.



Lisa Taneyhill:

- Developmental biology
- Neural crest formation to better understand overall animal growth and development.





Physiology of Growth



Nishanth Sunny:

- Metabolic regulation during growth and development.
- Nutritional impacts on mitochondrial metabolism.



Chad Stahl:

- Developmental programming of tissue-specific stem cells
- Nutritional programming of muscle, bone and fat growth

Animal Well-Being and Behavioral Development



Rachel Dennis:

- Behavior modification through embryonic, early life and current environment.
- Impact of serotonin and catecholamines, and UV light exposure on fear-related and impulsive behaviors as well as feeding



Jiuzhou Song:

- Genetics and epigenetics relating to disease.
- The role of long non-coding RNAs in Marek's disease
- Genetic resistance to Marek's disease and infectious laryngotracheitis.



Food Safety



Debabrata Biswas:

- Alternatives to antibiotics for reduction of foodborne pathogens and animal health.
- Probiotics, novel feed ingredients, vaccines.



Rohan Tikekar (NFSC):

- Development of novel processing technologies to improve food safety and quality
- Development of in-plant sanitizers for egg and poultry industry.



Departmental Contacts



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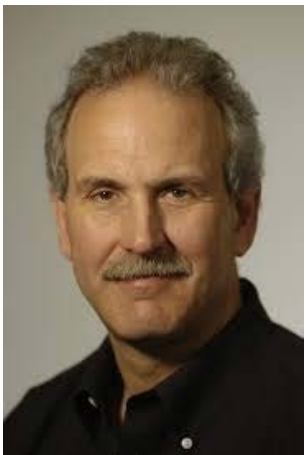
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