AAAP Research Priorities
2019 Survey

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Outline

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Introduction

**AAAP Research Priorities Committee Mission**

To advance the application of science-based knowledge in the poultry industry by **ensuring that the practical research needs of the industry are communicated to researchers and research funding agencies**
Introduction

This mission is achieved by:

- Annual survey
  - Association of Veterinarians in Broiler Production (AVBP)
  - Association of Veterinarians in Egg Production (AVEP)
  - Association of veterinarians in Turkey Production (AVTP)
  - Association of Poultry Primary Breeder Veterinarians (APPBV)
  - Communicating research priority listings to poultry researchers and research funding agencies.

Research Priorities Committee goal for 2019:

- Redesign and standardize broiler, egg and turkey Research Priorities surveys.
Methods

Phase 1: Associations generate complete list of research needs under categories:

Phase 2: Research Priorities Committee reviews & edits lists

Phase 3: Electronic surveys designed (in JotForm) & sent; regular reminders

Phase 4: Data analysis
Ranked listings of research priorities generated based on scores
**Reovirus:** Investigate the epidemiology of reoviruses, and the emergence of novel reovirus strains
AVBP – Broiler Research Priorities

- **Survey**
  - 79 research needs statements
  - Expected survey response time: 12-15 min
- **Survey respondents**
  - 30 U.S. veterinarians (71% response rate)
  - 17 production companies & 2 primary breeder companies represented
  - 27 states
  - 179.4 million broilers processed/wk
### BROILERS: TOP 10 OVERALL RESEARCH PRIORITIES

1. **SALMONELLA**: Intervention strategies resulting in quantifiable reduction each production stage
2. **SALMONELLA**: Methods to quantify impact of control interventions
3. **INFECTIOUS BRONCHITIS**: Improved live vaccines
4. **CAMPYLOBACTER**: Live production strategies to reduce levels
5. **HISTOMONIASIS**: Improved treatment & prevention options
6. **REOVIRUS**: Improved live and inactivated vaccines
7. **CAMPYLOBACTER**: Processing interventions to reduce levels
8. **NECROTIC ENTERITIS & GANGRENOUS DERMATITIS**: Non-antibiotic strategies for prevention & control
8. **NECROTIC ENTERITIS & GANGRENOUS DERMATITIS**: Improved vaccines
8. **GUT HEALTH**: Non-antibiotic strategies to optimize intestinal health & improve feed conversion
8. **AUTOGENOUS VACCINES**: Improved selection of isolates for production

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<tr>
<th>Rank</th>
<th>Research Area</th>
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<td>1</td>
<td>SALMONELLA</td>
<td>Intervention strategies resulting in quantifiable reduction each production stage</td>
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<td>2</td>
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<td>6</td>
<td>REOVIRUS</td>
<td>Improved live and inactivated vaccines</td>
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<td>7</td>
<td>CAMPYLOBACTER</td>
<td>Processing interventions to reduce levels</td>
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<td>8</td>
<td>NECROTIC ENTERITIS &amp; GANGREOUS DERMATITIS</td>
<td>Non-antibiotic strategies for prevention &amp; control</td>
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AVEP – Egg Research Priorities

- **Survey**
  - 40 research needs statements
  - Expected survey response time: 6-9 min

- **Survey respondents**
  - 18 veterinarians (17 U.S., 1 Canada) (42% response rate)
  - 6 production companies; 2 primary breeder companies; 4 allied companies; 1 university; 3 consultants represented
  - All U.S. states & Canada
EGG: TOP 9 OVERALL RESEARCH PRIORITIES

1. INFECTIOUS BRONCHITIS: Strategies to prevent False Layer Syndrome

2. INFECTIOUS BRONCHITIS: DMV 1639 prevention strategies

3. INFECTIOUS CORYZA: Safe & effective mass-applied live vaccine

4. INFECTIOUS BRONCHITIS: Effect of DMV 1639 on egg layers in production

5. VARIOUS DISEASES: Develop treatments with zero-day withdrawal times for egg layers

6. POST-BACTERIN HEPATITIS: Factors associated with high mortality

7. COLIBACILLOSIS: Non-antibiotic products for prevention or treatment

8. IN-OVO SEX DETERMINATION: Develop & apply commercially

8. INFECTIOUS BRONCHITIS: Development of safe & effective vaccines against variant strains
- AVTP – Turkey Research Priorities
  - Survey
    - 43 research needs statements
    - Expected survey response time: 9-12 min
  - Survey respondents
    - 24 veterinarians (23 U.S.; 1 Canada) (48% response rate)
    - 10 production companies; 1 primary breeder company; 2 allied companies; 5 consultants represented
    - 21 U.S. states; 1 Canadian province
TURKEYS: TOP 11 OVERALL RESEARCH PRIORITIES

1. SALMONELLA: Intervention strategies resulting in quantifiable reduction each production stage
2. SALMONELLA: Methods to quantify impact of control interventions
3. REOVIRUS: Diagnostic tool for turkey reovirus surveillance & strain identification
4. SALMONELLA: Vaccines, pro/prebiotics, immune modulators, etc to reduce/eliminate in processing plant
5. REOVIRUS: Epidemiology & emergence of novel strains
6. REOVIRUS: Rapid test for identification of infected poults in hatchery
7. REOVIRUS: Inactivated vaccines against current & emerging strains; live vaccines risks & benefits
8. REOVIRUS: Alternative vaccine technologies for protection against emerging variants
9. HISTOMONIASIS: Therapeutic & preventative strategies
10. ORNITHOBACTERIUM RHINOTRACHEALE: Pathogenesis & risk factors
11. COCCIDIOSIS: Non-antibiotic anticoccidials & vaccines labeled for turkeys; prolong chemical efficacy
Top Research Priorities

**Common disease issues in Top 10:**
- Salmonella (#1,2 Broiler; #1,3 Turkey)
- Infectious Bronchitis (#3 Broiler; #1,2,3,6 Egg)
- Histomoniasis (#5 Broiler; #5 Turkey)
- Reovirus (#6 Broiler; #2,3,4,5 Turkey)

**Other disease issues in Top 10:**
- Campylobacter (#4,7 Broiler)
- Necrotic Enteritis & Gangrenous Dermatitis (#8 Broiler)
- Infectious Coryza (#3 Egg)
- ORT (#6 Turkey)

**Top scoring research needs categories**
- Vaccines & Pharmaceuticals; Food Safety
Conclusion

Research priority listings will be communicated to researchers & research funding agencies, and posted on AAAP website (www.aaap.info)

We all have an important role to play in addressing the practical research needs of the poultry industry!

- All AAAP members
- Researchers
- Research funding agencies
- Members of AVBP, AVEP, AVTP, APPBV
Acknowledgements

AAAP Research Priorities Committee
- Dr. Mark Burleson AVBP President
- Dr. Eric Gingerich AVEP President
- Dr. Seiche Genger AVTP President
- Dr. Travis Schaal APPBV President
- Dr. John Smith AAAP Board Liaison
- Dr. John Glisson Research Director, US Poultry & Egg
- Dr. Naola Ferguson-Noel Researcher, PDRC, UGA

AVBP, AVEP, AVTP and APPBV members

AAAP Office
- Nathan Bevans-Kerr
- Diana Kerr
- Bob & Janece Bevans-Kerr

AAAP Epidemiology Committee
- Dr. Dave Fernandez
Questions??