Avian Arizonosis

- Similar to other Salmonella infections, seen mainly in turkeys less than three weeks of age.
- Problem has essentially been eliminated in foundation breeders through the use of antibiotics and bacterins.
Causative Agent

- *Salmonella arizona*
  - This organism differs from other salmonellas biochemically and serologically.
  - It is motile.
Incubation Period
4 to 5 Days

Course of Disease
5 Days in acute cases with losses extending over 2-3 weeks
Mortality

- 5-10% in young birds.
- Occasionally up to 60% if exposed at hatching time.
- No mortality in adult birds; they become carriers.
Method of Spread

- Egg shell contamination
- Transovarian transmission in turkeys
- Hatchery contamination – lateral transmission
- Carrier birds, fecal contamination
- Biological vectors – rats and mice
Clinical Signs

- Similar to other Salmonellas – diarrhea, listless, huddling, mortality.
- Often blindness and nervous signs are seen in poults.
- **Opacity of anterior chamber of eye in poults**
- None in adult carriers
Nervous Signs
Huddling
Eye Lesion
Opacity of Anterior Chamber
Postmortem Lesions

- Same as other Salmonellas
- Eye lesions (opacity) in poult's very common
- Omphalitis
- Cecal cores
Cecal Cores
Diagnosis

- Isolation and serotyping.
- There is no diagnostic antigen available.
Culture Methods

Similar to other Salmonellas
Treatment

- **Poult**
  - Nicholas formula: 1-day-old injection with antibiotics (gentamicin or spectinomycin) + Vit. B complex.
  - Same as *S. pullorum* Treatment II. Page 126.

- **Chicks**
  - Same as *S. pullorum* Treatment II. Page 126.
Prevention

- Use only S. *arizona* negative breeders.
- Concentrate on egg sanitation.
- Pre-incubation fumigation.
- Three times amount of fumigant used for paratyphoids, but this can decrease hatchability.
Control

- Controlled by egg-dipping (Gentamycin).

- Turkey breeders vaccinated at 20-28 weeks. Use autogenous bacterins.

- Bacterins – not USDA approved but OK*

  *Must be made by owner.
Comment

- Re-infection may take place at commercial breeder or farm level.