Salmonella foodborne infection

News

2019 salmonellosis outbreaks

We found the problem – all of your internal organs are in this little bag.
2019 Multistate outbreaks, *Salmonella*

Multistate outbreak of multi-Drug resistant *Salmonella* linked to raw turkey

“Ok, one last time: stuff me the right before, no washing the cutting board, and I’m ready at around 140 degrees. Got it?”

Aseptic packaging

Are there antibiotics in your food?
- Why are antibiotics used in animal feed?
- Are they in the beef/poultry you eat?
- Then what’s the problem with antibiotic use in animal feed?
Why am I sleepy after eating…

H2N CH

\[
\text{H}_2\text{N-CH-} \text{OH}
\]

\[\begin{align*}
\text{Tryptophan} \\
\text{Soybeans} & 590 \\
\text{Chicken breast} & 370 \\
\text{Corn} & 287 \\
\text{Sugar-free cocoa powder} & 263 \\
\text{Chicken leg} & 272 \\
\text{Turkey breast} & 272 \\
\text{Dried peas} & 266 \\
\text{Turkey leg} & 265 \\
\text{Raw pork} & 220 \\
\text{Raw salmon} & 220 \\
\text{Oats} & 182 \\
\text{Walnuts} & 170 \\
\text{Chicken eggs} & 167 \\
\text{Brown rice} & 151 \\
\text{Corn flour} & 46
\end{align*}\]
Sexing chicks?

Wait until their first breeding season. You don’t have to be an expert turkey observer to realize who’s who during a mating.

The current population is in Hardy Weinberg equilibrium and has 610 Blue comb turkeys and 390 Red comb turkeys.

What are the allele frequencies for the population?

R\_R\_ Rr rr

\[ p^2 + 2pq + q^2 = 1 \]

Fitness

If 100 Rr x Rr reproduce, 80% are successful.
If 100 Rr x Rr reproduce, 80% are successful
rr x rr are 60% successful

Fitness

White > color
W_ =

& the W allele is epistatic
A cross between slate blue turkeys produces, slate blue, self blue (Lavender), and royal.

How is blue inherited?

Triple allele
Black = B_<
Bronze = bb
b-b1
Black-winged bronze = b1/b1

Cross of two turkeys yielded
4 white, 2 black, 1 bronze, 1 black-winged bronze
What do the parents look like?
What are the parent’s genotypes?
Black = B_<
Bronze = bb
b-b1
Black-winged bronze = b1/b1

& the W allele is epistatic
A cross between slate blue turkeys produces, slate blue, self blue (Lavender), and royal.
Self blue x slate blue will result in slate and self-blue, with no royals being produced.

How is blue inherited?
Cross of two turkeys yielded
4 white, 2 black, 1 bronze, 1 black-winged bronze

What do the parents look like?
What are the parents' genotypes?
White × black-winged bronze
WwBbl × wwbbl