

## Putting Things in Perspective

### AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

My graduate school area of study was plant breeding and genetics. Yes, that's a round about way of becoming a county extension agent. But one thing that getting a graduate degree in plant breeding/genetics does for you is you get to take a lot of classes in statistics. While most people groan at the thought of taking statistics classes, I reveled in it! While you may also wonder how that applies to being an extension agent, I can tell you that it was incredibly valuable! One of the key components of statistical analysis comes down to probability. Most people think of probability as the odds of winning the lotto, but it comes down to things as simple and mundane as determining real yield differences in crops, or growth rate of livestock or even the probability of something happening to me as in individual.

Which comes around to the past couple of months worth of discussions that I've had with a lot of people. Discussions on things as varied as holiday travel, ebola, and terrorist attacks on commercial aircraft. People are generally irrational creatures. I'm not pointing fingers here - just assessing the population as a total. What I learned in population genetics is that you can never predict what one individual will do or what will happen to them. But you can predict what a population will do or what may happen to a limited number of people in a large population.

For example given the number of people struck by lightning every year and the number of people in the US, you have a 1 in 500,000 chance of being struck by lightning in any given year. Your chance of dying from a lightning strike in your lifetime is about 1 in 136,000. Of course, if you stay inside during thunderstorms, your risk of being struck goes way down!

Compare that to your odds of contracting ebola. If you live in the US, and haven't traveled to a high risk area, your current odds of contracting ebola aren't worth the effort of calculating. Sure, the current ebola outbreak has killed 1,500 people, worldwide, but compare that to things like measles and cholera that kill over 100,000 people worldwide annually, or diarrheal diseases that kill over 1.5 million people annually.

Let's bring it even closer to home. Annually in the United States, around 36,000 people will die from influenza. There are very effective vaccines for influenza, yet how many people don't bother to get a flu shot? The number that will be hospitalized with influenza is over 200,000 annually. So if you haven't gotten a flu shot, there's still time, and it really doesn't hurt! Here's the one that really bugs me. We lose 32,000 to 33,000 people annually in traffic accidents. Talk about something that's so preventable. Seat belts, slowing down, and not driving impaired all have great opportunities to reduce this number.

As I said at the start, humans are highly irrational. They panic about things that are very low risk. The biggest risk that many of us take on any given day, is to climb into that car that sits in our driveway or garage. But we don't give it another thought. An airplane crashes and people start canceling travel plans. A few cases of ebola show up in the country and people that have no idea how the disease spreads are clamoring for an isolationist policy. But then they go on their way without a flu shot and driving every day. We are coming into a busy holiday season. We'll be driving and flying all over the country. Take the time to control what you can control. Don't worry about ebola or a plane crash. Worry about making sure your seat belt is fastened and that the driver of your car isn't impaired. Put the risks into the right perspective and have a fun, but safe, holiday season!