Dr. Correas Presentation Notes

Veterinarians: Key Drivers in Food Safety

* Food animal production
	+ Disease prevention, control, and treatment
	+ Development of new medicines
	+ Humane food animal harvesting
* Enclosed barns
	+ Required to protect animals from extreme weather
* Herd Health versus Individual Pet Health
	+ Management
		- Minimizing disease:
			* Barn design
			* Sanitation
			* Controlling traffic
			* Timely vaccinations
		- Identify/Treat/Control Disease
			* Appropriate diagnostics
			* Antibiotics only when needed
	+ Veterinary medicine and science-based farming eliminated or significantly reduced:
		- Dysentery
		- Atrophic rhinitis
		- Actinobacillus
		- Brucellosis
		- Pseudorabies
		- Parasites
* Foreign Animal Disease (FAD)
	+ On frontlines to protect against FAD
	+ State veterinarians are first in command to:
		- Shutdown nationwide livestock movement for 72 hours
		- Continue lockdown in states where FAD is suspected
		- Open states after confirmed FAD not detected
	+ African swine fever (ASF)
		- Impacts pigs only, not humans
		- Cannot be transmitted to humans through contact with pigs/pork
		- U.S. pork – safe for human consumption
* Pigs farming phases
	+ Breeding/gestation
	+ Farrowing – birth of piglets
	+ Nursery
	+ Growing/finishing
		- Everything done to minimize human interference
* Nutrition
	+ Nutrients for age, weight, and gender
		- Amino acids
		- Calories, carbs, fats
		- Vitamins and minerals
	+ 8-10 feed formulations
	+ Corn and soybeans
	+ Grass-fed pigs = not good
		- Pigs cannot effectively digest grass
		- Monogastric, so need food that is easy to digest
* Housing options
	+ Pastures
	+ Hoops
	+ Specialized barns
		- Protection: weather, predators, disease
		- Constant levels of care and nutrition
		- Feed and water monitored to meet pigs’ growth cycle
* Disease prevention
	+ All-in/all-out management system
		- Animals moved in distinct groups
		- Reduces spread of disease
		- Facilities disinfected between groups
* Responsible antibiotic use
	+ ensure antibiotic is:
		- Needed for condition
		- Appropriate for condition
		- Given in correct:
			* Dose
			* Frequency
			* Duration
			* Delivery method
			* Withdrawal time
	+ FDA Antibiotic Classes
		- Medically important
			* Important for treating human disease
			* Include: penicillins, cephalosporins, quinolones, fluroquinolones, tetracyclines, macrolides, sulfas, glycopeptides
			* Requires VFD for feed. Rx for water
		- Non-medically important
			* Used almost exclusively in animal medicines and feed
	+ Individual administration
		- Injections
	+ Herd administration
		- Food and water
	+ Antibiotic free pork
		- American Association of Swine Veterinarians– If a pig is sick, or at risk of getting sick, antibiotics should be used for treatment
	+ USDA Hormone labeling policy
		- Hormones not allowed
* Group housing can cause aggression and competition between sows
	+ People with expert knowledge would be needed to successfully maintain this type of housing
* Pain management
	+ FDA approved pain medicine for pigs: none
		- Due to people not wanting residues in their food
* Euthanasia
	+ Is humane thing to do at times
* Sustainable pig farming
	+ Environmental impact has decreased per pound of pork from 1960-2015
		- 25% less water
		- 7% less energy
		- Etc.
	+ Swine only accounts for 0.35% of greenhouse gas emissions
* Careers
	+ Private practitioners
	+ Staff veterinarian
	+ Pharmaceutical veterinarian
	+ Genetics veterinarian
	+ Nutrition consultant
	+ Research and teaching
	+ Federal government (USDA, APHIS, FSIS)
	+ Epidemiologist
* Student membership to AASV
	+ $15 per year
	+ AASV student membership benefits
		- Journal of swine health and production
		- AASV e-letter
		- Swine information library and swine disease manual
		- Scholarships and externship grants