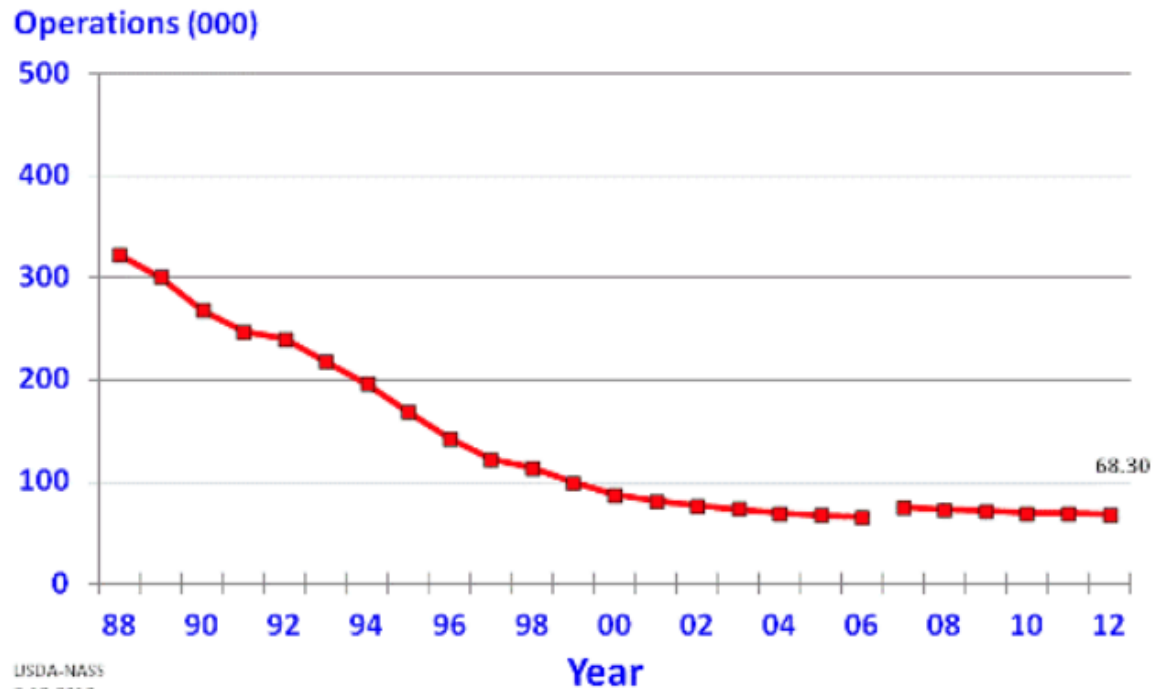


Swine Industry – Things to Know

- US Live animal population ~70 million head
 - Over 1 million pigs, daily, are riding on rubber tires!
 - Pigs to harvest >400,000 daily
 - Weaned and feeder pigs – (60k/day into Iowa alone)
- Annual harvest is ~120 million head
- Approximately 65,000 production farms in the US (farms with >10 pigs)
 - Top 50, large, multi-state operations produce >70% of pigs

Hogs: Number of Operations by Year, US

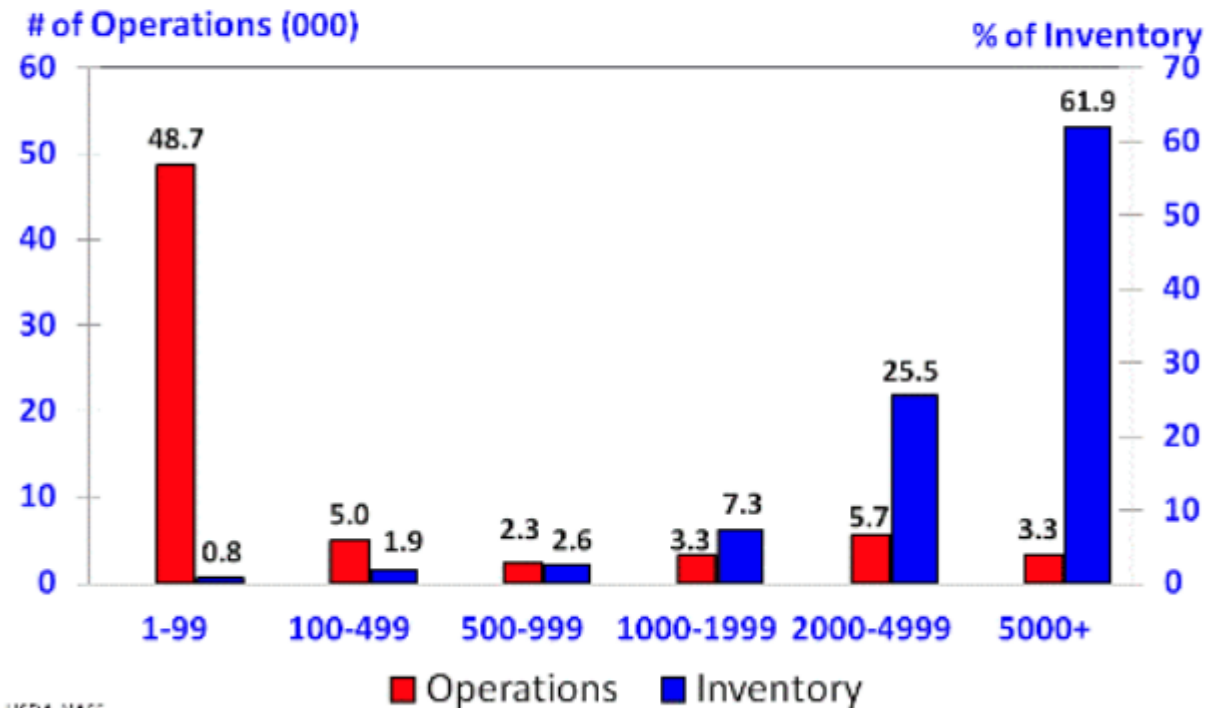
Number of Hog Operations
United States



USDA-NASS
2-19-2013

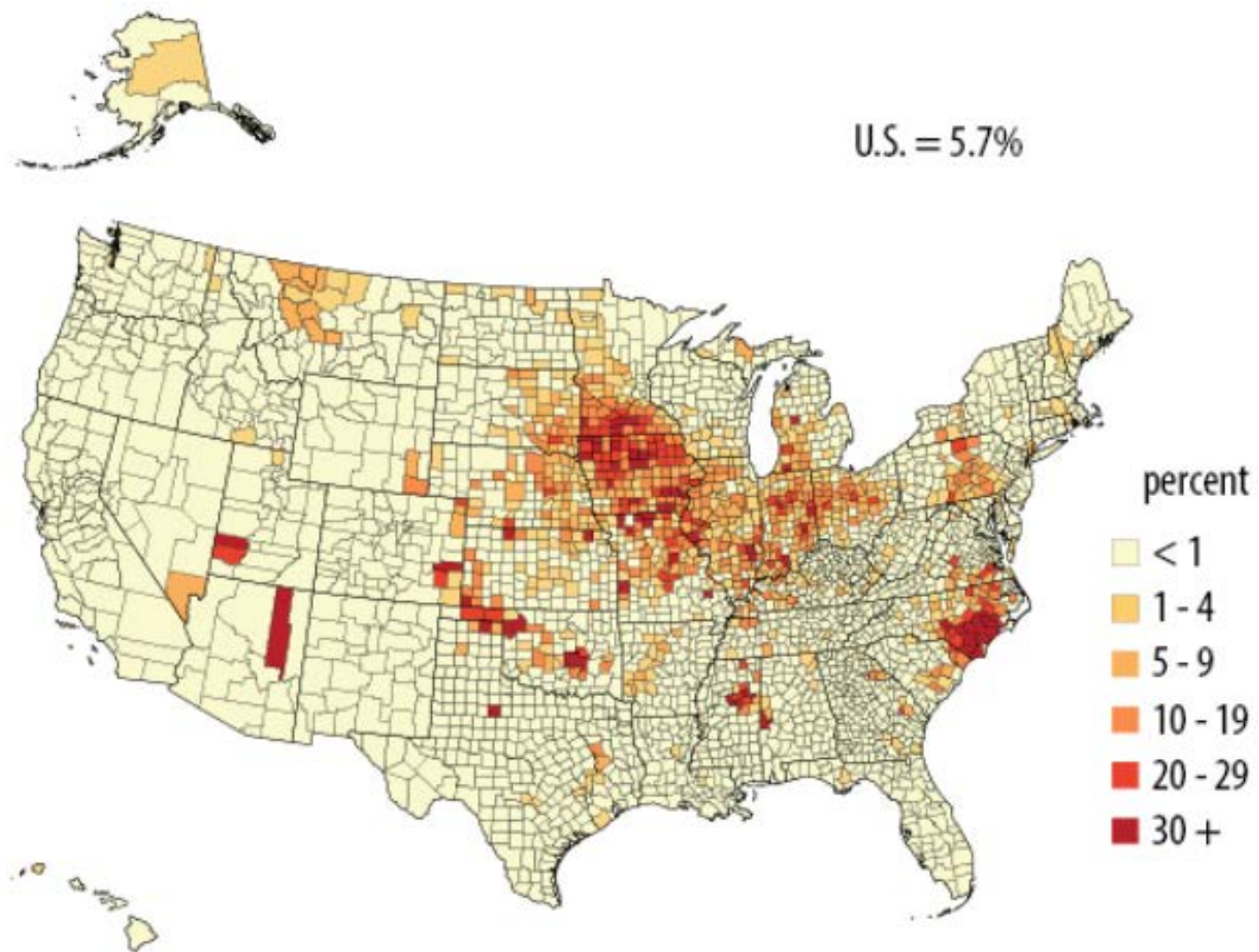
Hogs: Operations and Inventory by Size Group, US

U.S. Hog Operations
Number of Operations and Percent of Inventory, 2012

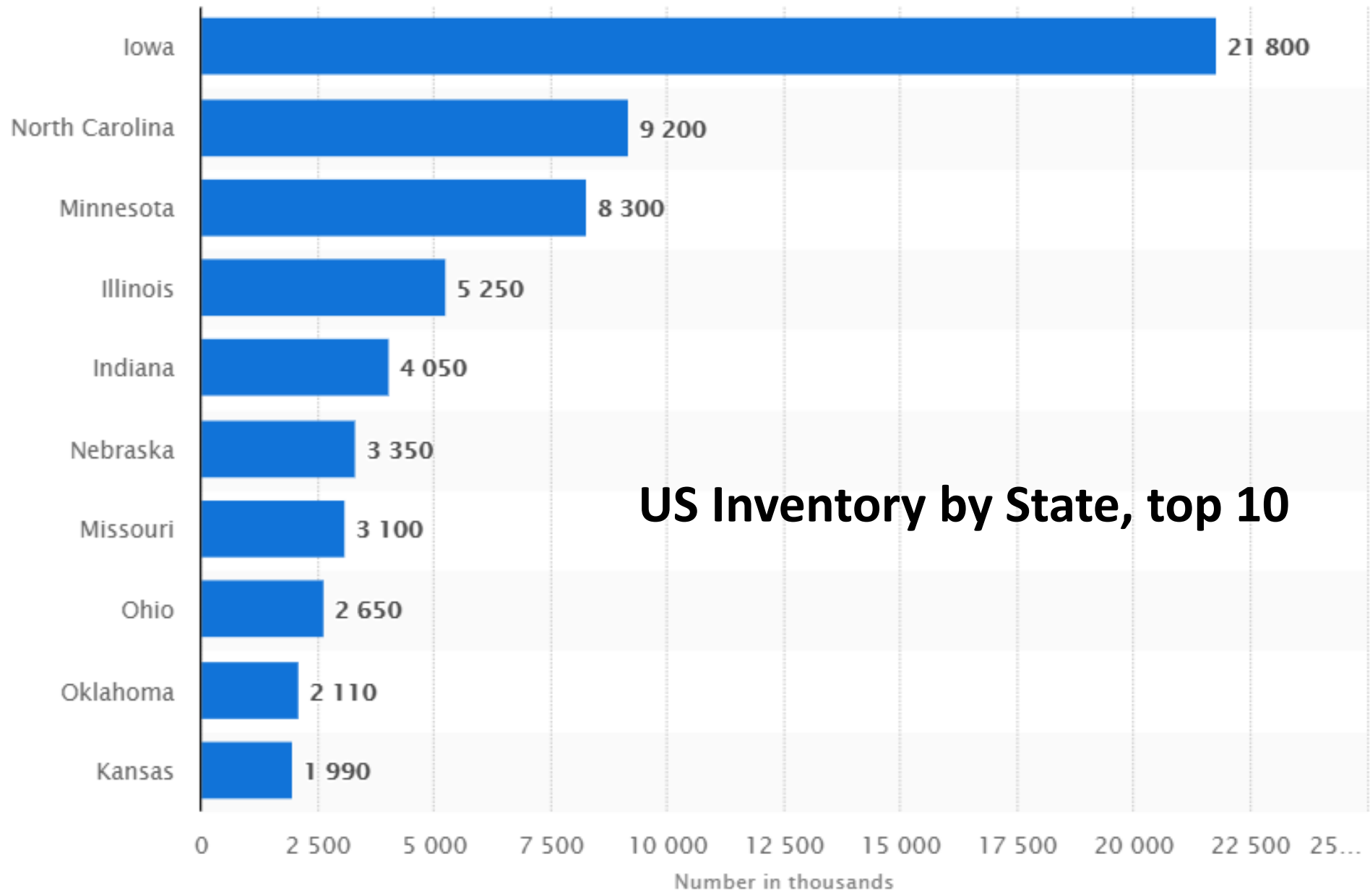


USDA-NASS
2-19-2013

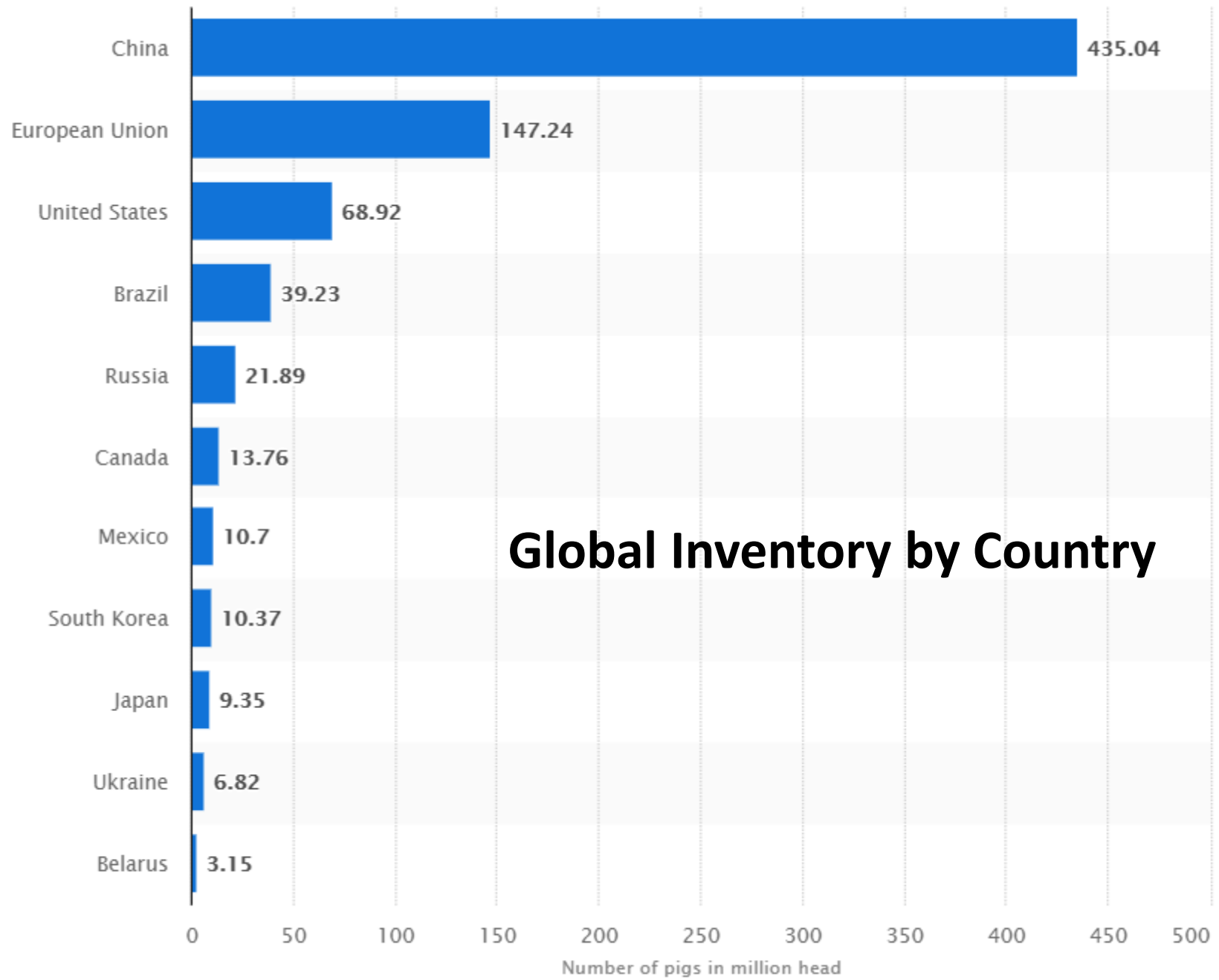
Hog and Pig Sales as Percent of Agriculture Sales, by County, 2012



Source: USDA NASS, 2012 Census of Agriculture.



US Inventory by State, top 10



Global Inventory by Country

Some disease history – novel, transboundary

- 1970's – elimination of CSF (Hog cholera)
- 1970's – 1980's emergence of PRV (Aujeszky's)
- Late 1980's – emergence of PRRS (most costly disease)
- 1998 – new influenza variants emerge (only 1918 H₁N₁ prior)
- 2000's – PCV emerges (circovirus disease)
- 2010's – PEDv enters country (porcine epidemic diarrhea virus)
- 2010's – Seneca Valley virus emerges, mimics FMD lesions

“Production diseases”not USDA-APHIS concerns!

SHIC – Swine Health Information Center

- Formed 2015 with producer money - investing in better monitoring for disease, prepared should it emerge, having a better, quicker, coordinated response
- A program for supporting nationwide operational disease response with a Rapid Response Corps (RRC) is operational.
- Research confirmed the potential for feed and feed ingredients to harbor and transmit viral pathogens.
- Veterinary Diagnostic Lab Data Standardization project, a novel database application of VDL swine test results
- A near real-time global surveillance system for swine diseases has been developed.
- On line monographs on ranked disease threats www.swinehealth.org
- ...and many more details on the web site

Personal experiences, observations, opinions

- KEY to rapid and effective threat responses lie with the animal industries and the SAHOs!
- Strategies in biosecurity and knowledge of potential threats by the protein industries is critical.
- Premise ID and animal identification systems which make database systems, such as USAHerds, AgConnect and others fully functional tools in animal movements are critically needed to manage and curtail pathogen outbreaks.
- Well-trained, capable “boots on the ground” capacity for intervention and investigation personnel are sorely lacking. As is funding and discipline.....



Proud! – strong support of SHIC

- KSU VDL is a collaborator on the VDL data standardization project
- Dr. Cassie Jones – working on innovative way to monitor feed mills for pathogens
- Dr. Megan Niederwerder is working on ASF, CSF and PRV feed transfer and mitigation in the BRI
- Multiple other K-State researchers worked with SHIC to develop/improve Matrix high-priority diagnostics