

# Benchmarking Antimicrobial Use on Ontario Swine Farms – 2022 Update



# Funding Partner – Ontario Pork



# AMU Working Group

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# Key Objectives

- Quantify the amount, category and cost of antimicrobials used to raise pigs through each phase of the production cycle
- Provide data to assist pork producers in benchmarking their antimicrobial use within the industry
- Identify potential reasons for year-to-year changes in both on-farm and industry wide antimicrobial choice, costs and usage

# Participant Information

41 Ontario based swine farms that had participated in previous iterations

- 98% of these farms have participated in the last 3 iterations (2016, 2018 and 2022)
- Single and multi-site operations
- Production information was collected from producers
- AMU was collected from producers, veterinarians and feed companies
- The same calculations were done as in previous iterations using the Compass platform (Boehringer-Ingelheim)
- Measured in both grams and animal daily dose (ADD)

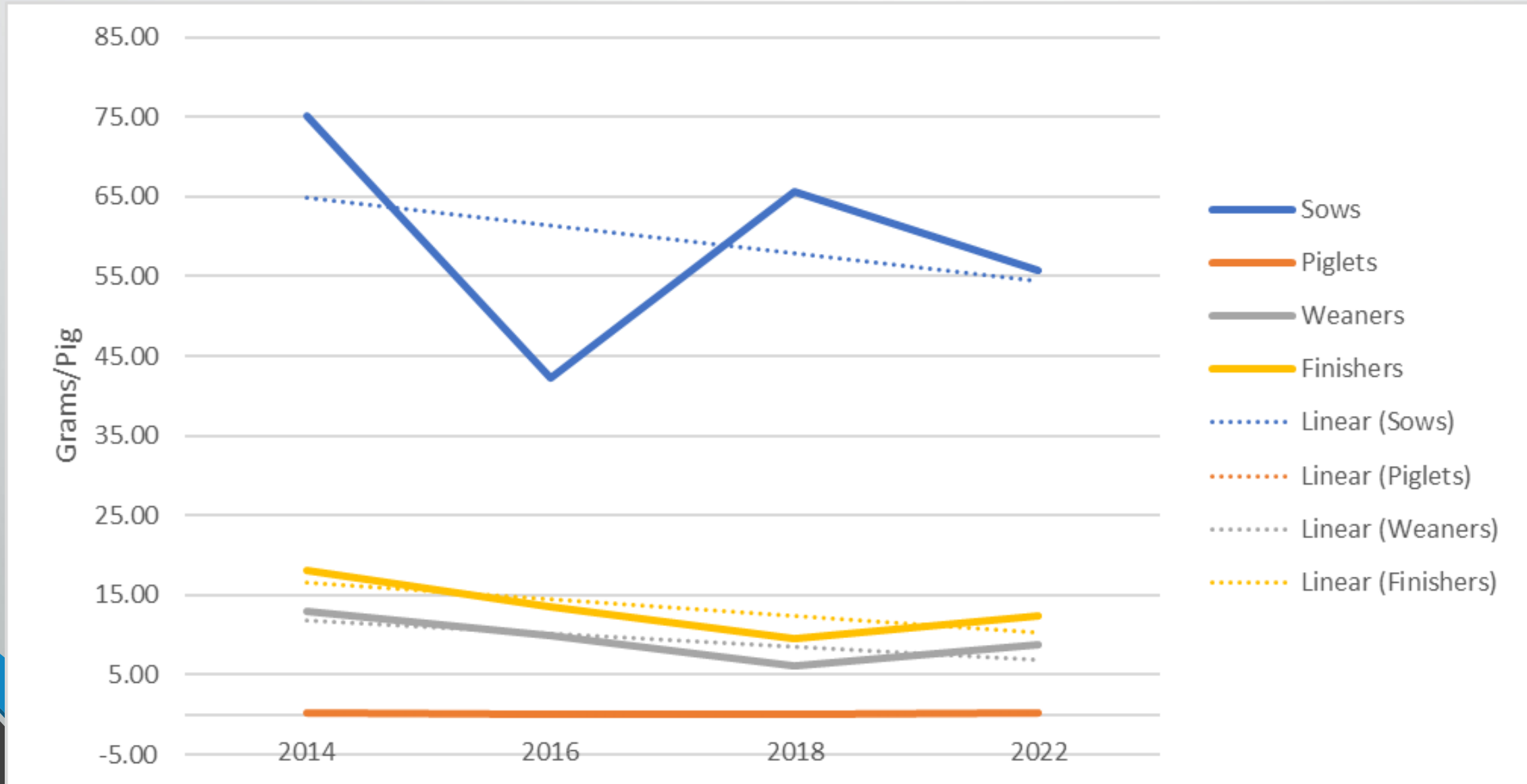
# Participant Information

	2014	2016	2018	2022	% Change 2018-2022
Number of Farms	34	53	51	41	-19.61%
Number of Sows	31,323	77,757	93,377	82,006	-12.18%
Number of Piglets	779,336	1,949,523	2,388,827	2,179,543	-8.76%
Number of Weaners	751,691	1,346,279	1,664,587	1,874,999	12.64%
Number of Finishers	625,388	1,133,974	1,379,952	1,721,639	24.76%

## Average Quantity Used (g/pig)

	2014	2016	2018	2022	% Change 2018-2022
Sows	75.04	42.15	65.53	55.74	-14.95%
Piglets	0.14	0.09	0.10	0.18	69.88%
Weaners	12.881	9.994	6.029	8.742	45.00%
Finishers	18.05	13.48	9.59	12.38	29.18%

# Average Quantity Used (g/pig)

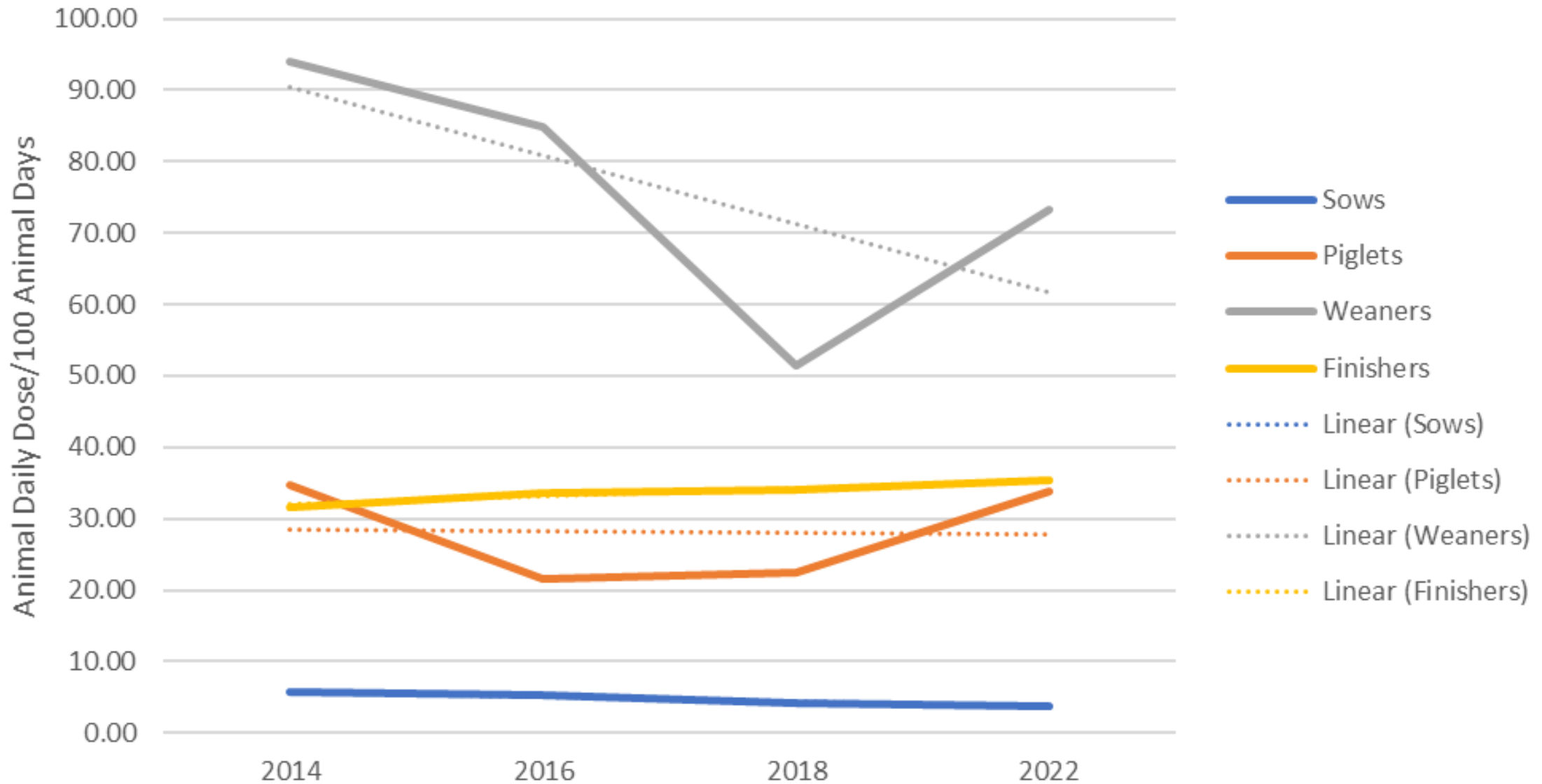




## Average Dose (Daily Dose/100 Days)

	2014	2016	2018	2022	% Change 2018-2022
Sows	5.73	5.29	4.24	3.66	-13.77%
Piglets	34.67	21.67	22.43	33.71	50.28%
Weaners	94.10	84.94	51.46	73.31	42.46%
Finishers	31.66	33.65	33.97	35.37	4.11%

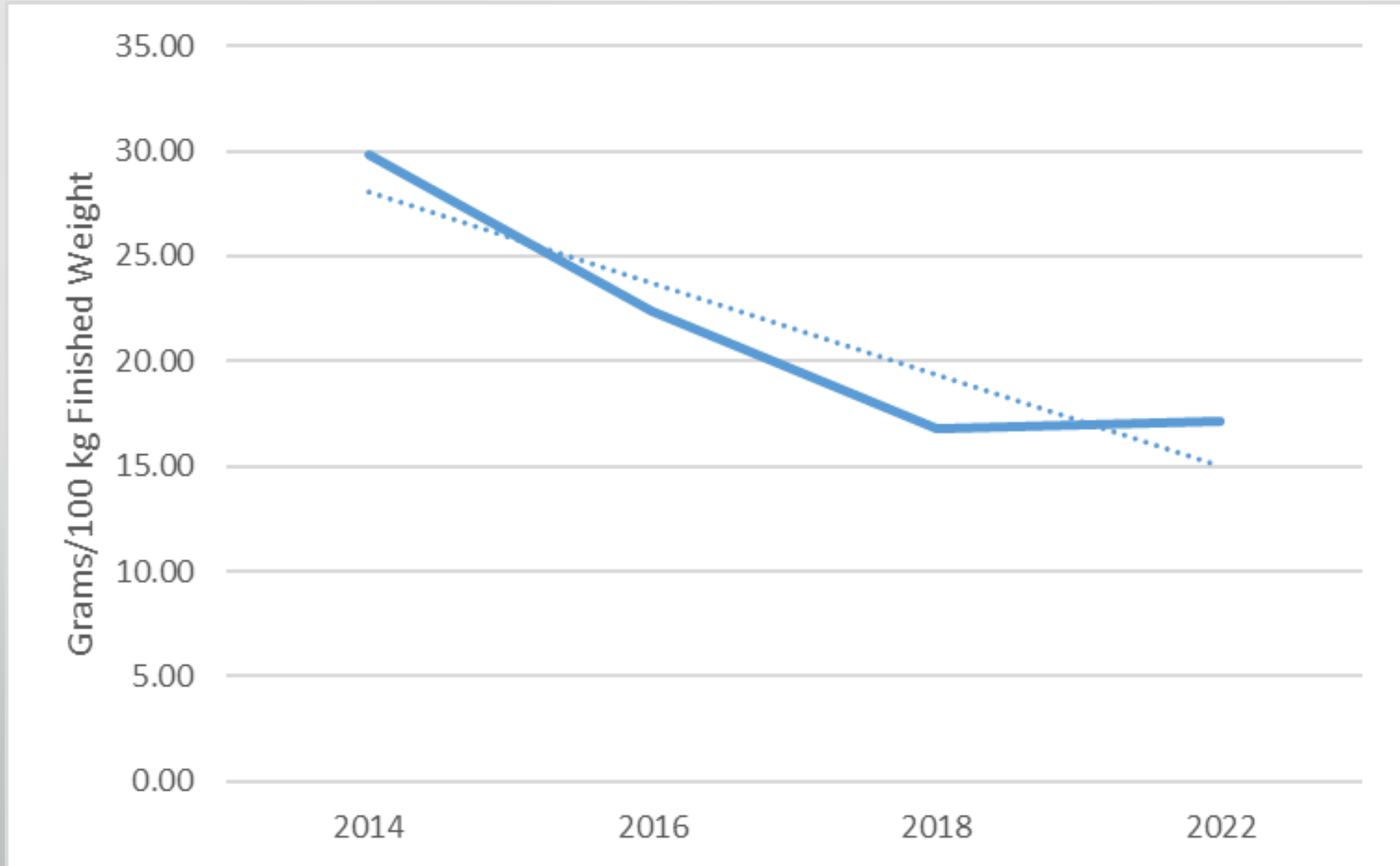
# Average Dose (Daily Dose/100 Days)



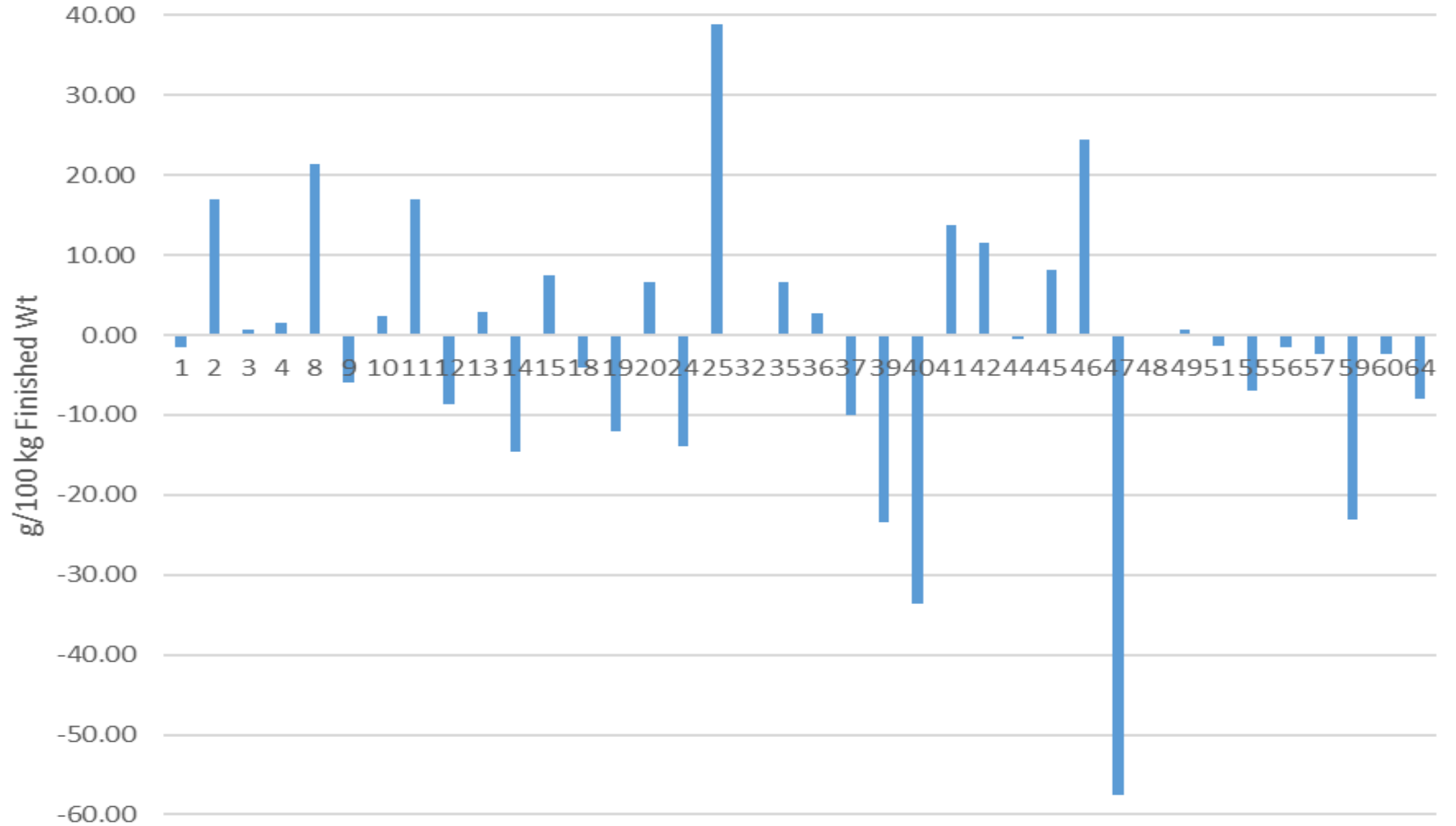
# AMU v. KG Produced

	2014	2016	2018	2022	% Change 2018-2022
Quantity of Antimicrobials Used (kg)	23,425	32,201	29,755	42,668	43.40%
Live Pigs Produced (kg)	78,515,665	144,170,350	176,916,466	248,424,525	40.42%
Antimicrobials per Pig (g/100 kg)	29.84	22.34	16.82	17.18	2.12%

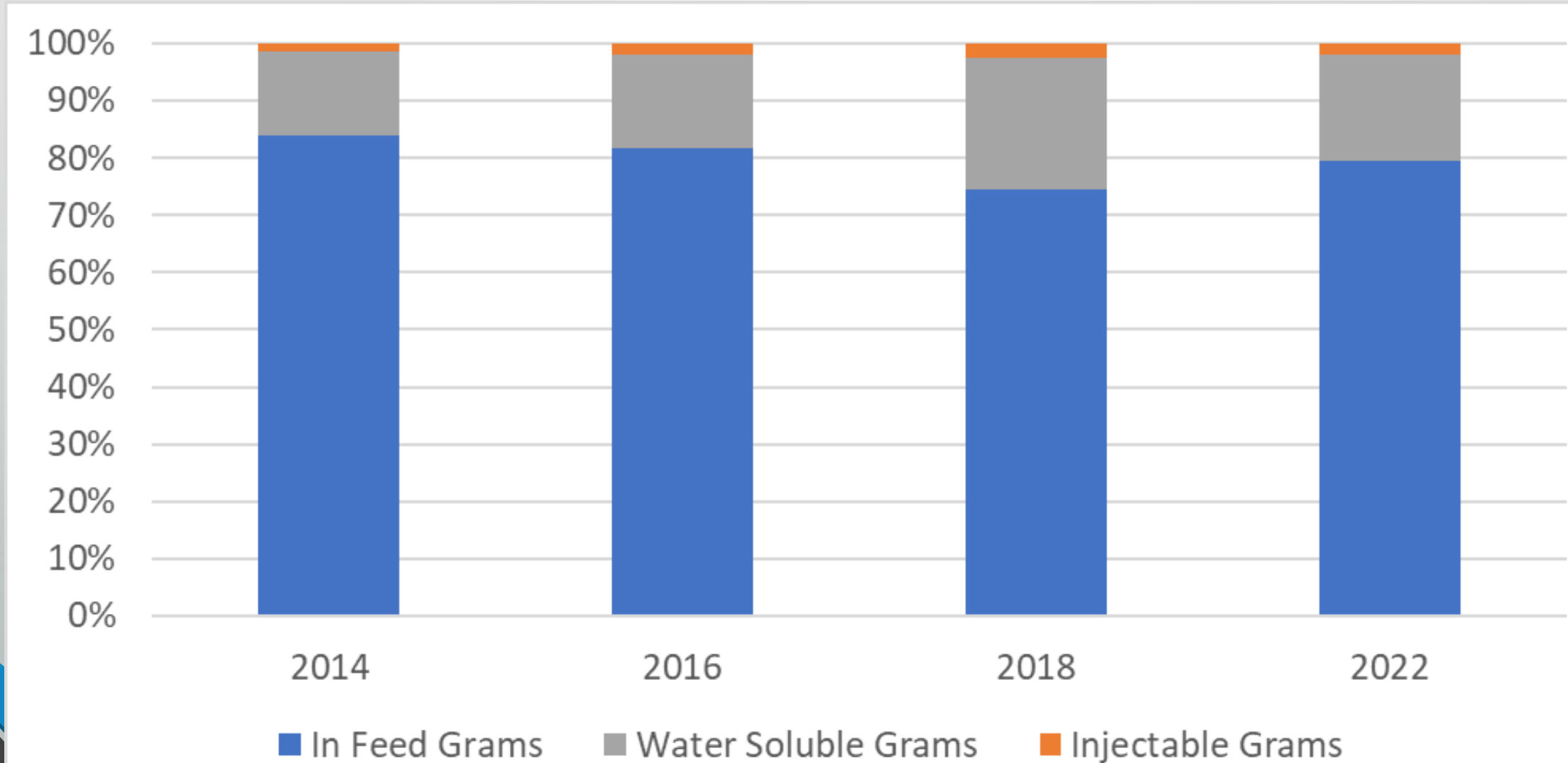
# AMU v. KG Finished Wt Produced



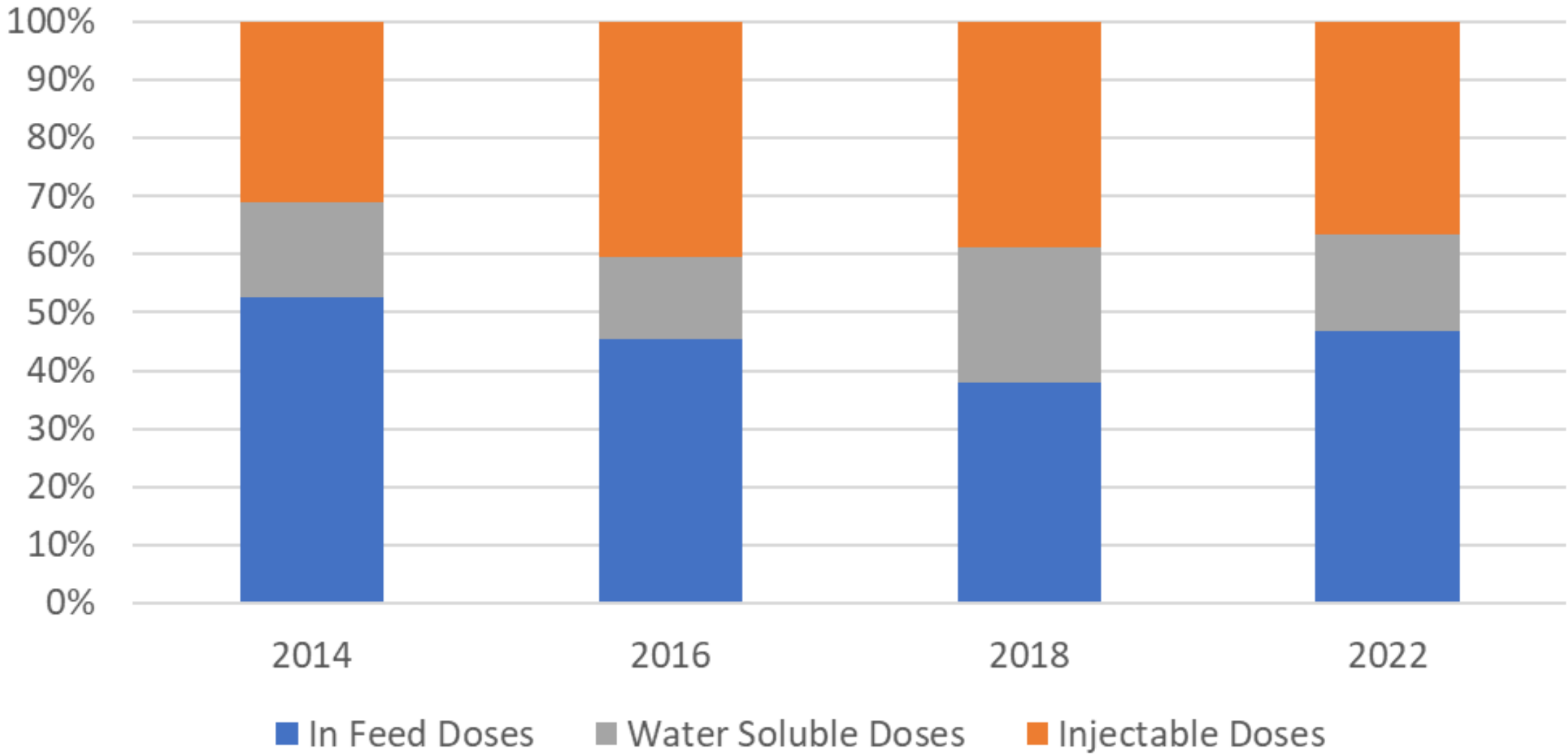
# Difference by Farm in g/100kg Finished Wt 2018-2022



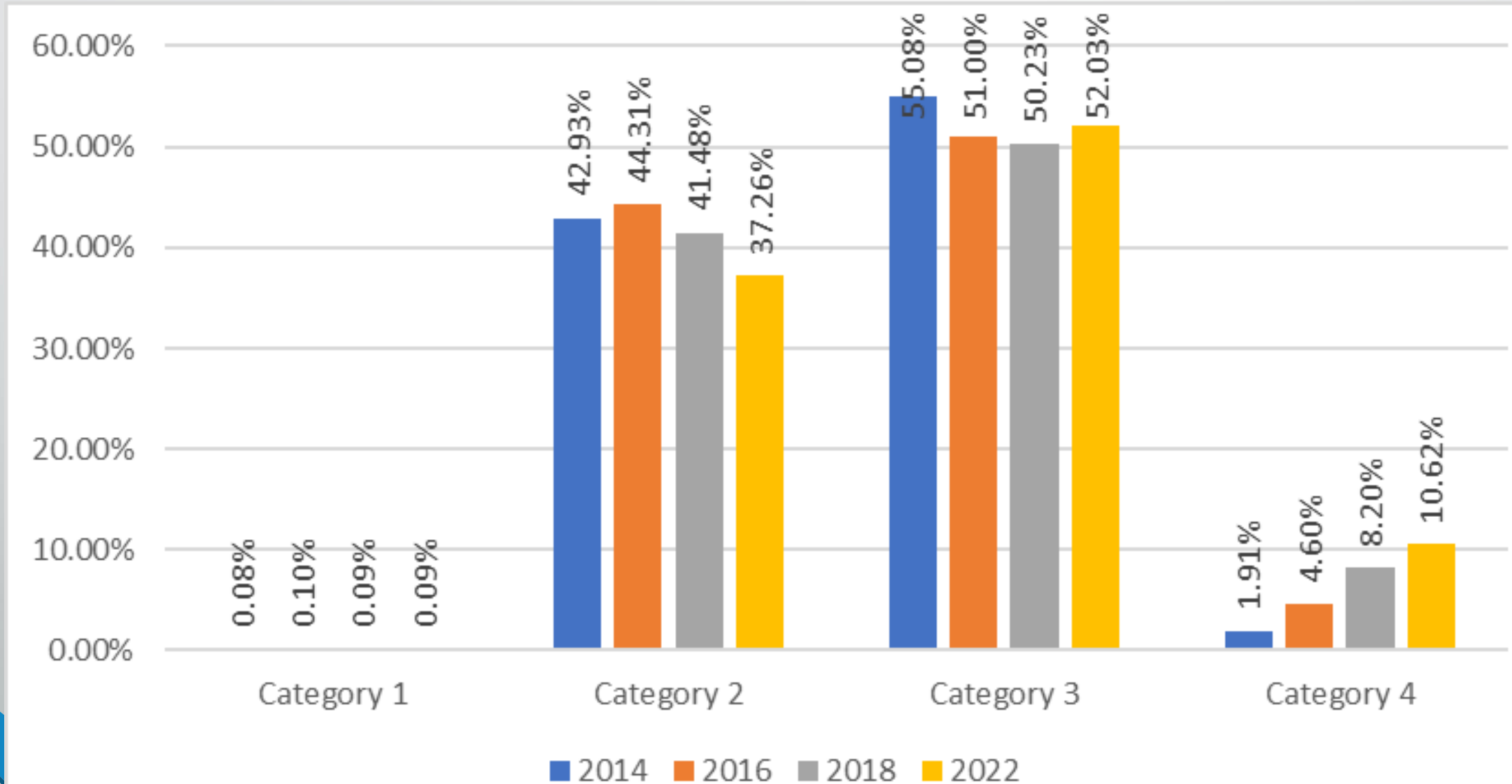
# Percent of Grams by Treatment Type



# Percent of Doses by Treatment Type

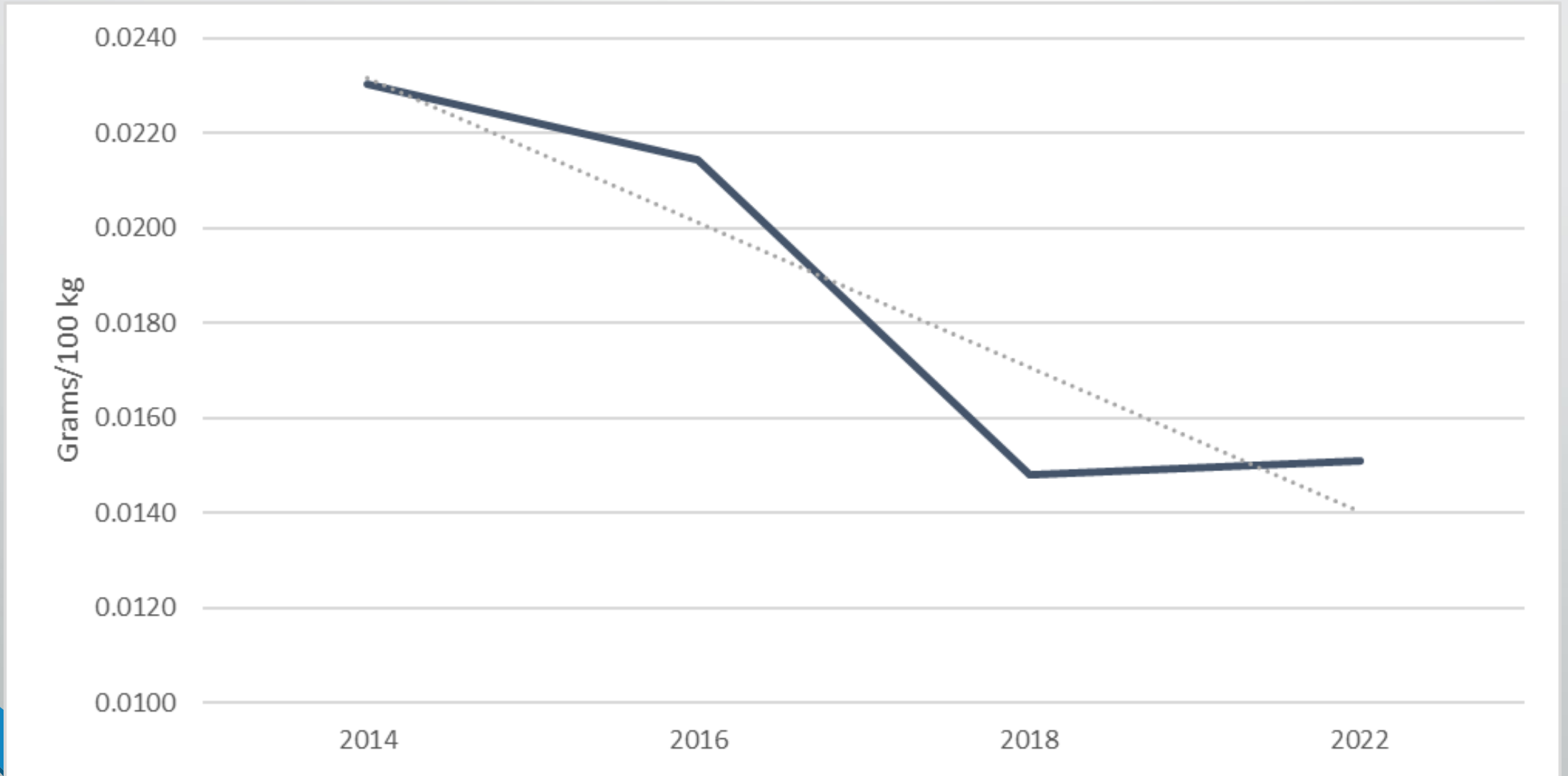


# % Grams by Antimicrobial Category





# Category 1 AMU (g/100kg Finished Wt)



# Average Spent/Pig

	2014	2016	2018	2022	Difference, 2018-2022	
Sows	\$ 13.14	\$ 8.92	\$ 9.49	\$ 6.14	-\$	3.36
Piglets	\$ 0.39	\$ 0.27	\$ 0.18	\$ 0.28	\$	0.10
Weaners	\$ 1.12	\$ 0.97	\$ 0.64	\$ 0.97	\$	0.33
Finishers	\$ 2.21	\$ 1.65	\$ 1.29	\$ 1.63	\$	0.34

# Conclusions

- AMU appears to have mostly levelled off (just a 2.12% increase in g/100kg finished weight)
- Of the 39 farms that participated in both 2018 and 2022, 51% of farms reported a total decrease in AMU (g/100 kg finished weight)
  - Main drivers of change in usage were changing health status (new breaks of disease (primarily PRRS) or resolving of issues in play during previous iterations)
- Continued low use of category 1 antimicrobials and a shift towards use of category 3 and 4 antimicrobials (with lower relative importance) in Ontario remains encouraging

# Conclusions

- While it may appear that the industry is hitting a plateau in reduction, factors such as supply chain disruptions from COVID-19 continuing into 2022 (adding pressure to hog flows) and variations in disease load in the province may have also impacted usage within this study iteration
- Producers should routinely review medication plans with their veterinarian to ensure judicious use at all stages to maintain animal health and welfare while considering cost implications

# Thank You!

- Producer Participants
- Vet Clinics and Feed Companies
- AMU Working Group Volunteers
- Ontario Pork
- B-I Compass Support