



Commercial Feed Surveillance Sampling

Wisconsin Agri-Business Classic, January 16, 2019

Presented by Heather Bartley, Feed Specialist

Agenda

- Introduction and background
- Sampling Data
- Thoughts
- Future plans

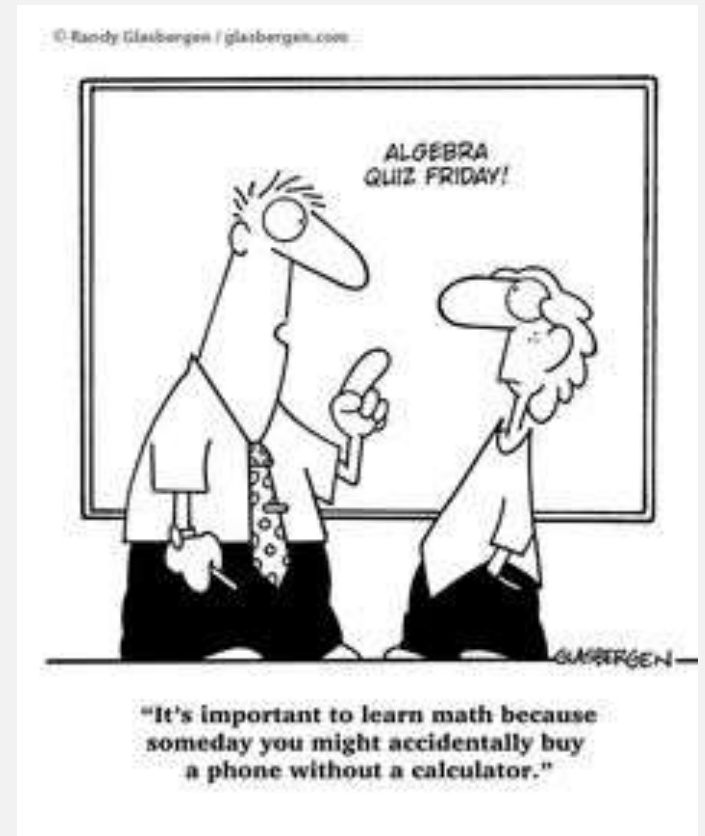
Pet Food



- No pet (dog/cat) food samples are included within the data in this presentation.
- Pet Food sampling project was conducted in 2017
 - Number of samples collected: 100
 - Pass/Fail: 85/15
 - Pass percentage: 85%
- Number of analytes for each sample: 25-27

Why

- Label represents what is in the container
- Judicious use of antimicrobials
- Supports production of food supply
- Low-cost QA (inspection fees)



Sampling History

- Sample quantities were not representative in the past
- Conducted Six Sigma project to review quantities and goals to determine “knobs to turn” for representative samples
- 2015 - Now:
 - 2015 – approx. 370 samples
 - 2016 – approx. 600 samples
 - 2017 – approx. 600 samples
 - 2018 – approx. 600 samples
 - 2019 – tentatively 600 samples



Sampling Strategy



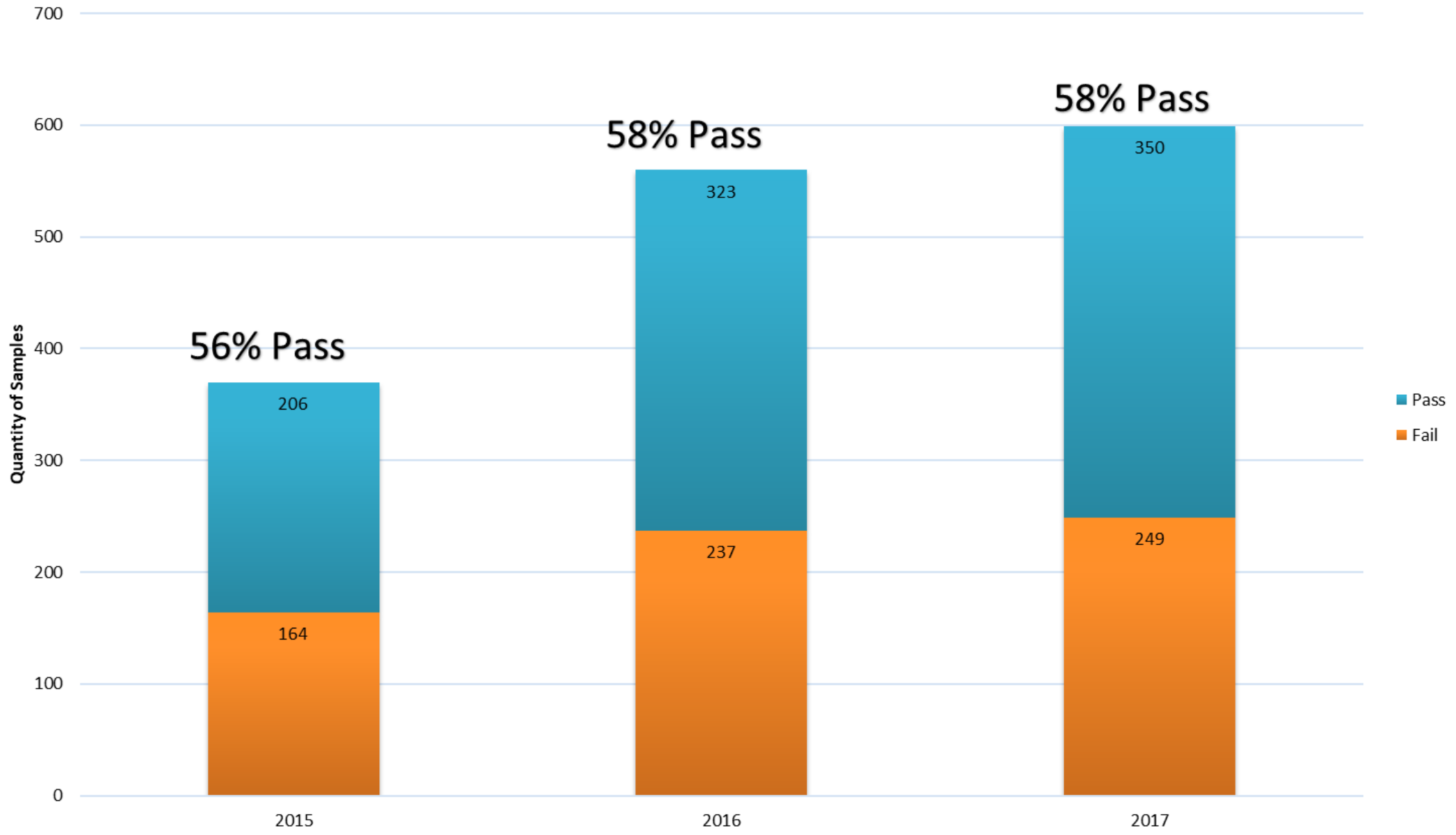
- Goal:
 - Sample every complete feed license holder in Wisconsin over a five year cycle.
- Objective:
 - Collect surveillance sample(s) of products being manufactured/mixed.
- Difficulties:
 - Sampling sometimes occurs when feed is not being mixed/manufactured.
 - A lot of firms use the same premixes in their complete feeds.



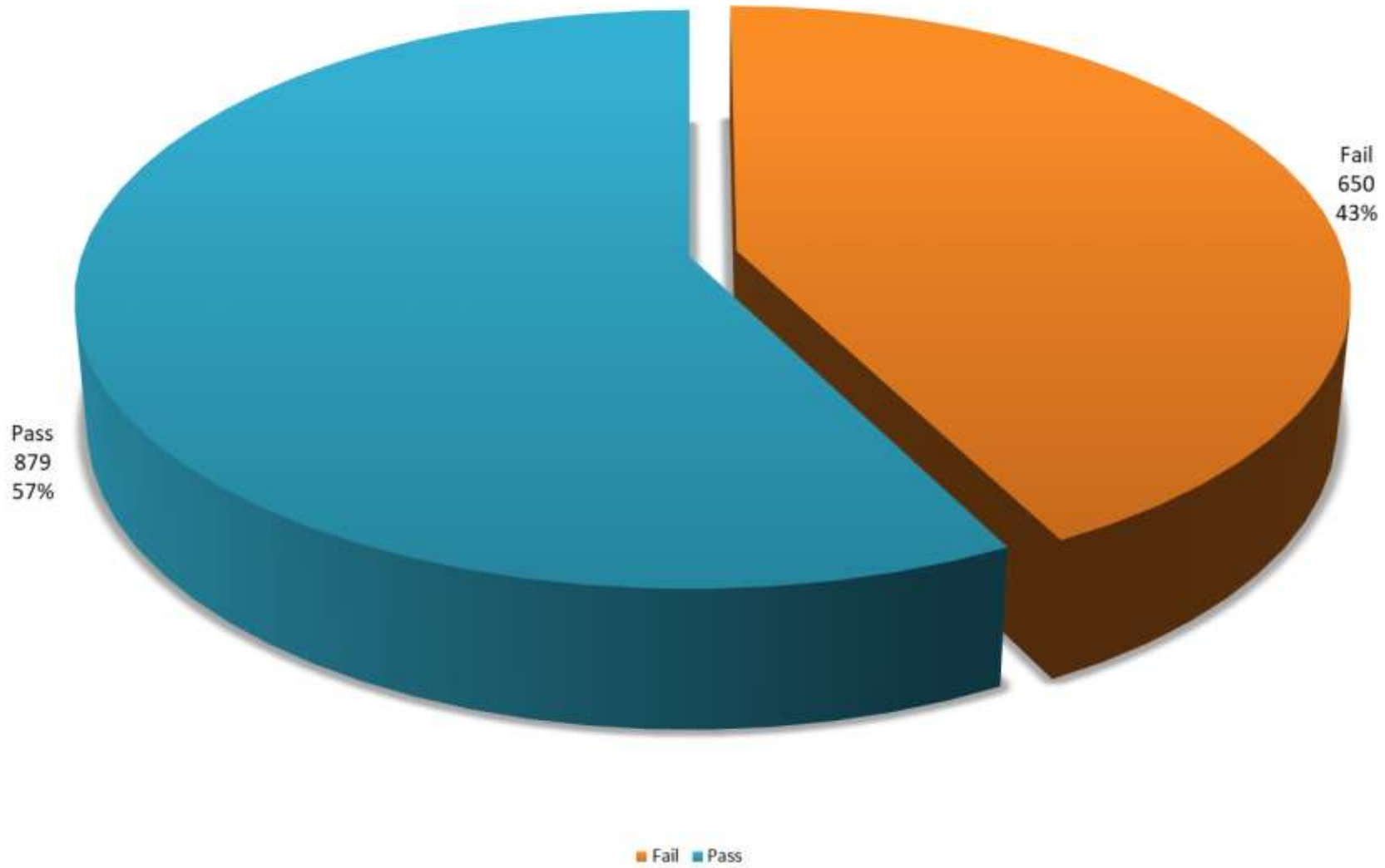
Future Plans

- Improve overall sample results
- Assemble and distribute outreach on the data and possible ways to better the results
- Develop intermediate non-punitive enforcement actions

FEED SURVEILLANCE SAMPLE COUNTS, 2015-2017



2015-2017 OVERALL RESULT PER SAMPLE



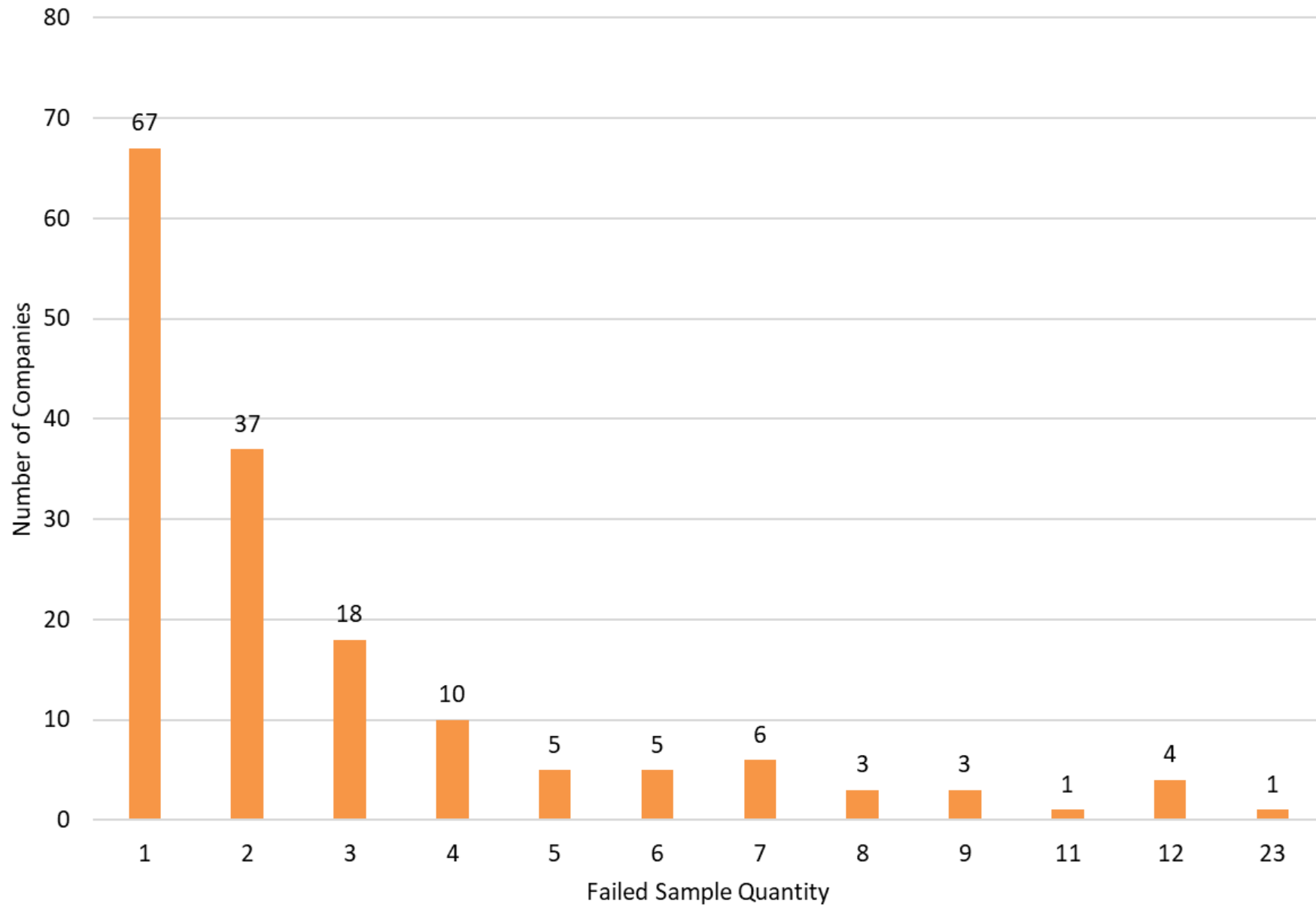
State	Passed Samples	Failed Samples	Grand Total
AZ	9	2	11
CA	6	0	6
FL	1	0	1
GA	1	0	1
IA	35	4	39
IL	13	1	14
IN	3	3	6
KS	2	0	2
KY	4	1	5
LA	3	0	3
MA	0	3	3
Manitoba, Canada	1	0	1
MD	1	0	1
MI	3	0	3
MN	133	38	171
MO	40	8	48
ND	1	0	1
NE	11	1	12
NH	2	0	2
NJ	2	0	2
NY	4	1	5
OH	16	4	20
PA	4	1	5
SC	0	1	1
SD	1	1	2
TN	10	0	10
TX	2	1	3
VA	10	3	13
WA	2	0	2
WI	744	392	1136
Grand Total	1064	465	1529

Firm Statistics

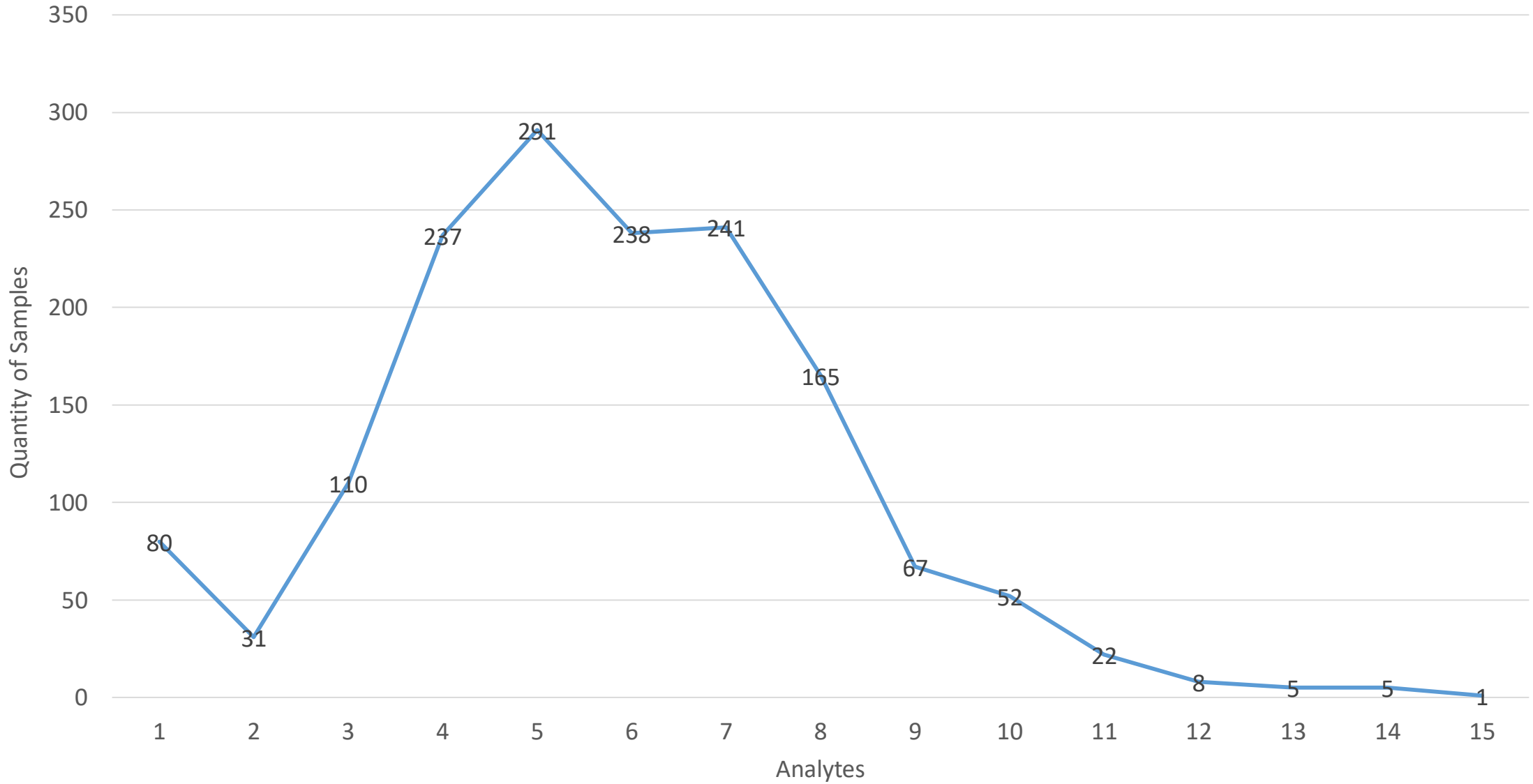
- Total samples collected: 1,553
 - 24 not analyzed
- Total firms sampled: 277
- Total firms with failures: 160
- Total firms with passes: 245

- Wisconsin firms sampled: 202
 - Fails: 392
 - Passes: 744
- Out of state firms sampled: 89
 - Fails: 73
 - Passes: 320

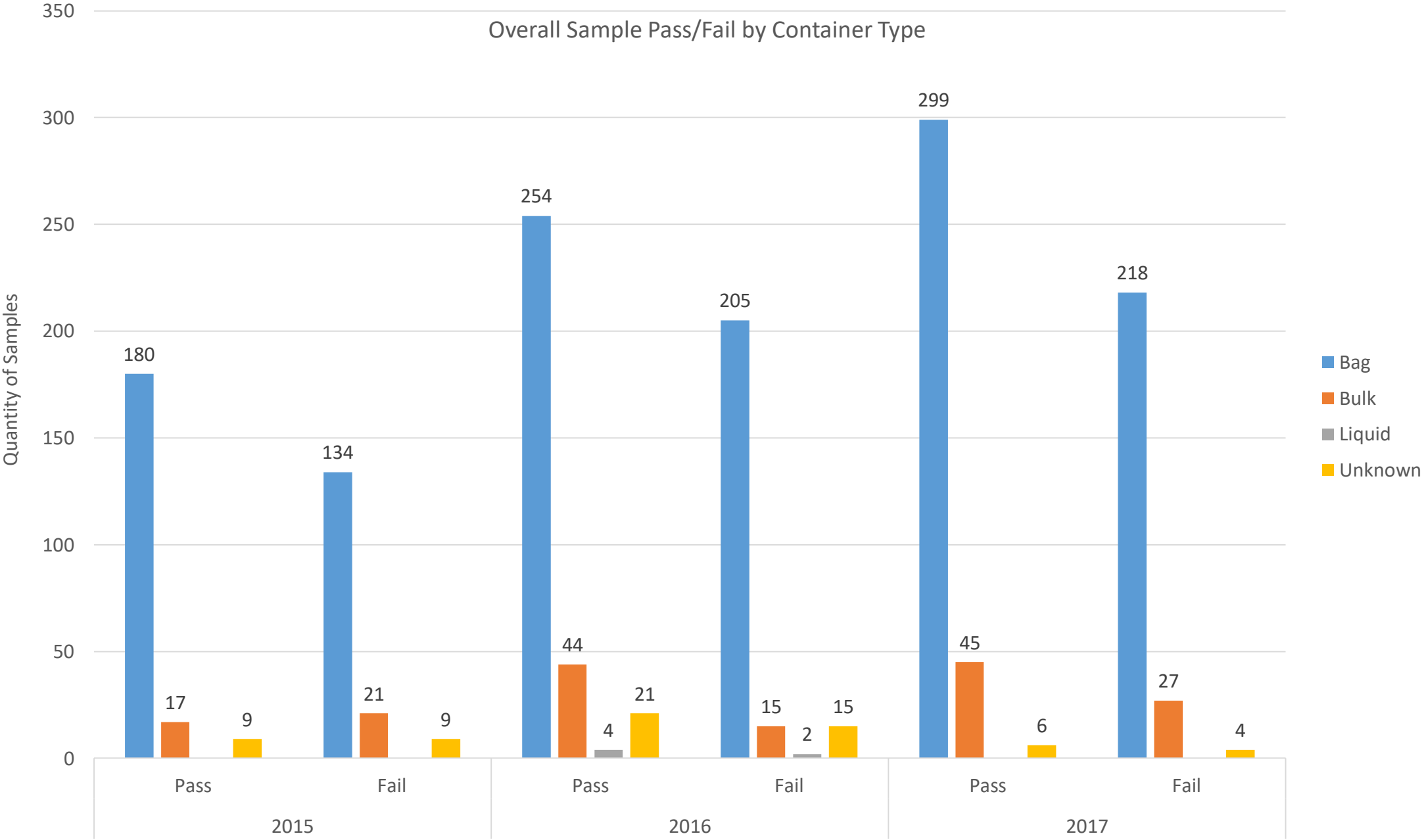
Total Quantity of Companies with Overall Sample Failures 2015-2017



Quantity of Analytes Run Per Sample 2015 - 2017

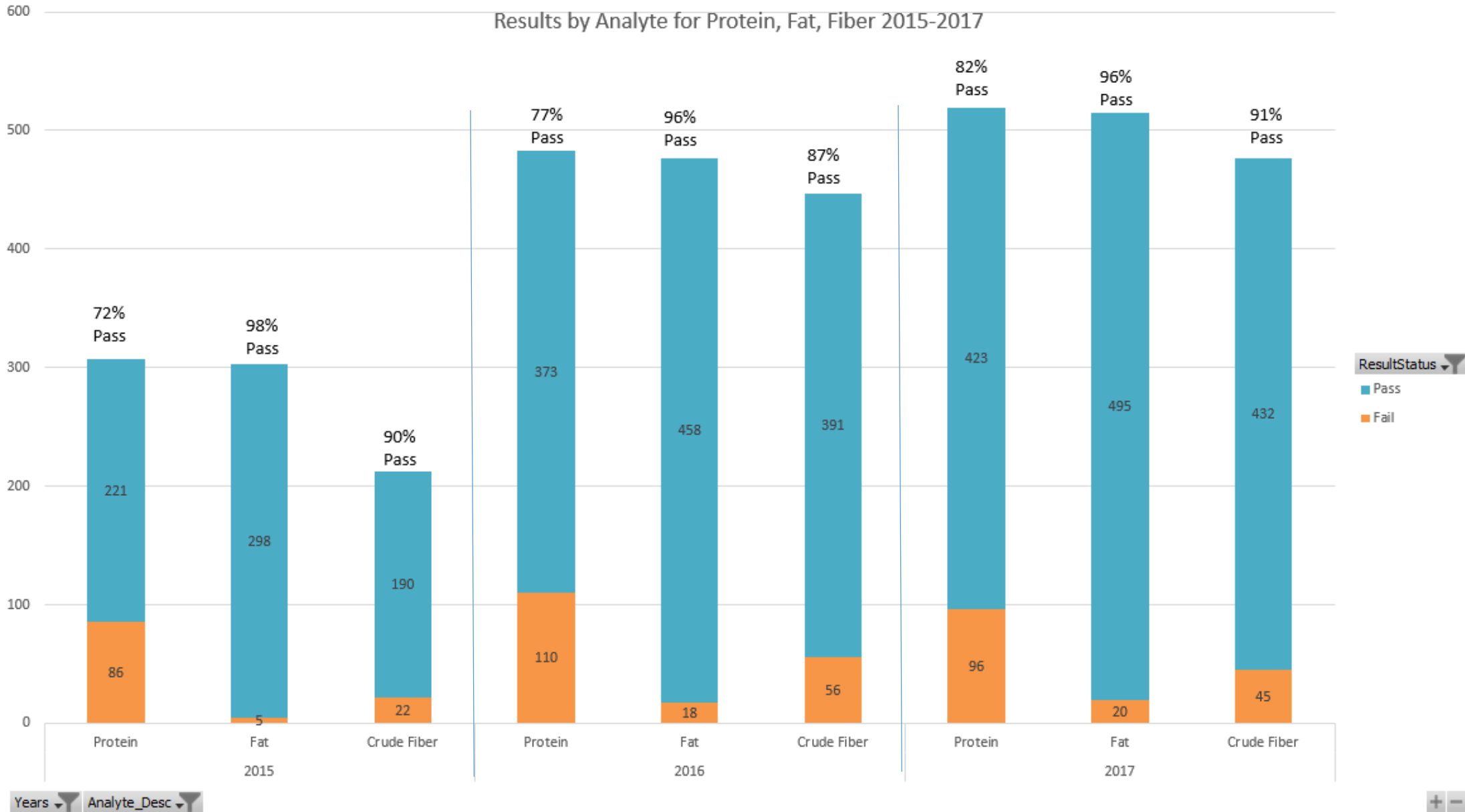


Overall Sample Pass/Fail by Container Type



Count of ResultStatus

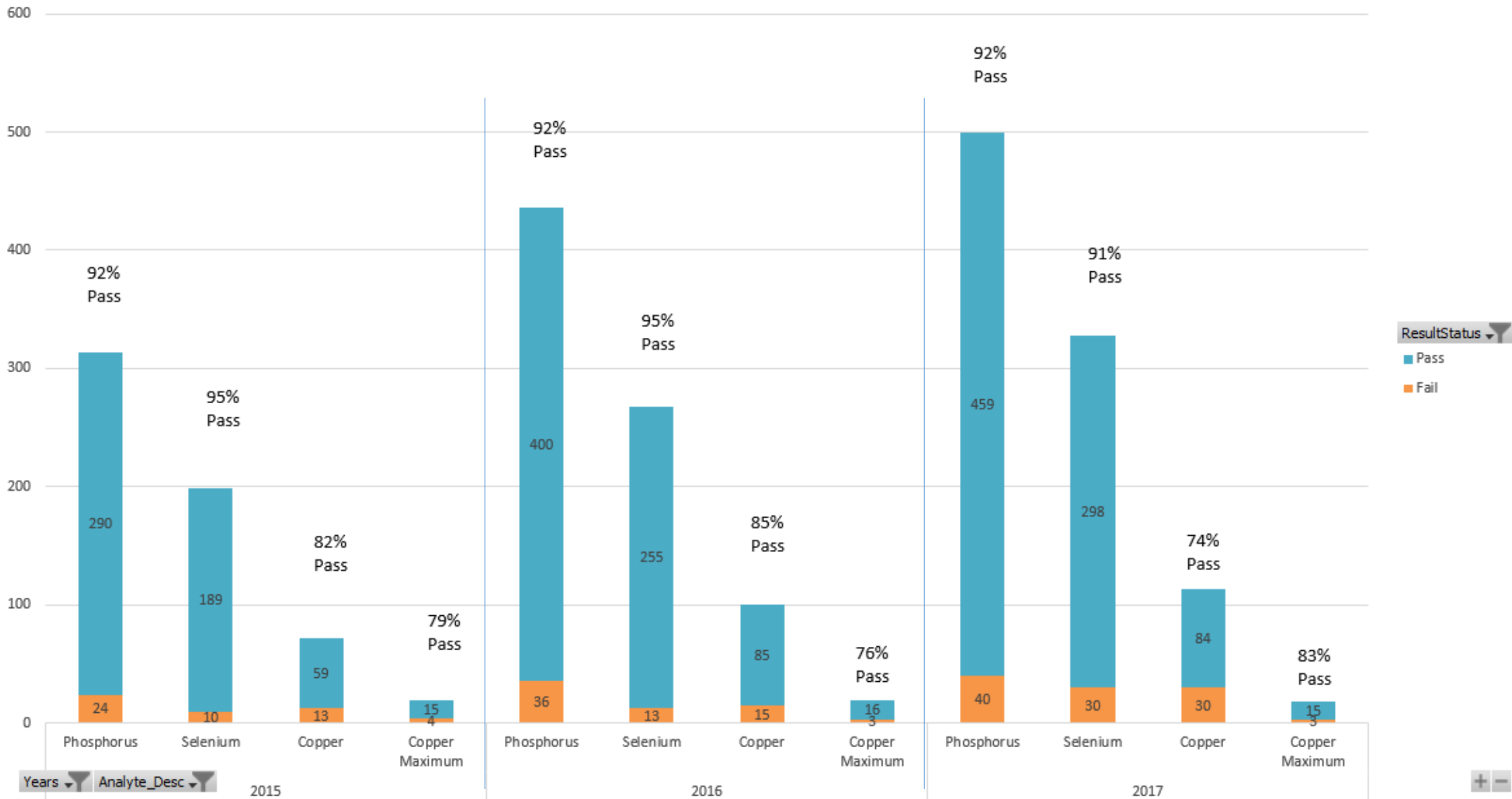
Results by Analyte for Protein, Fat, Fiber 2015-2017



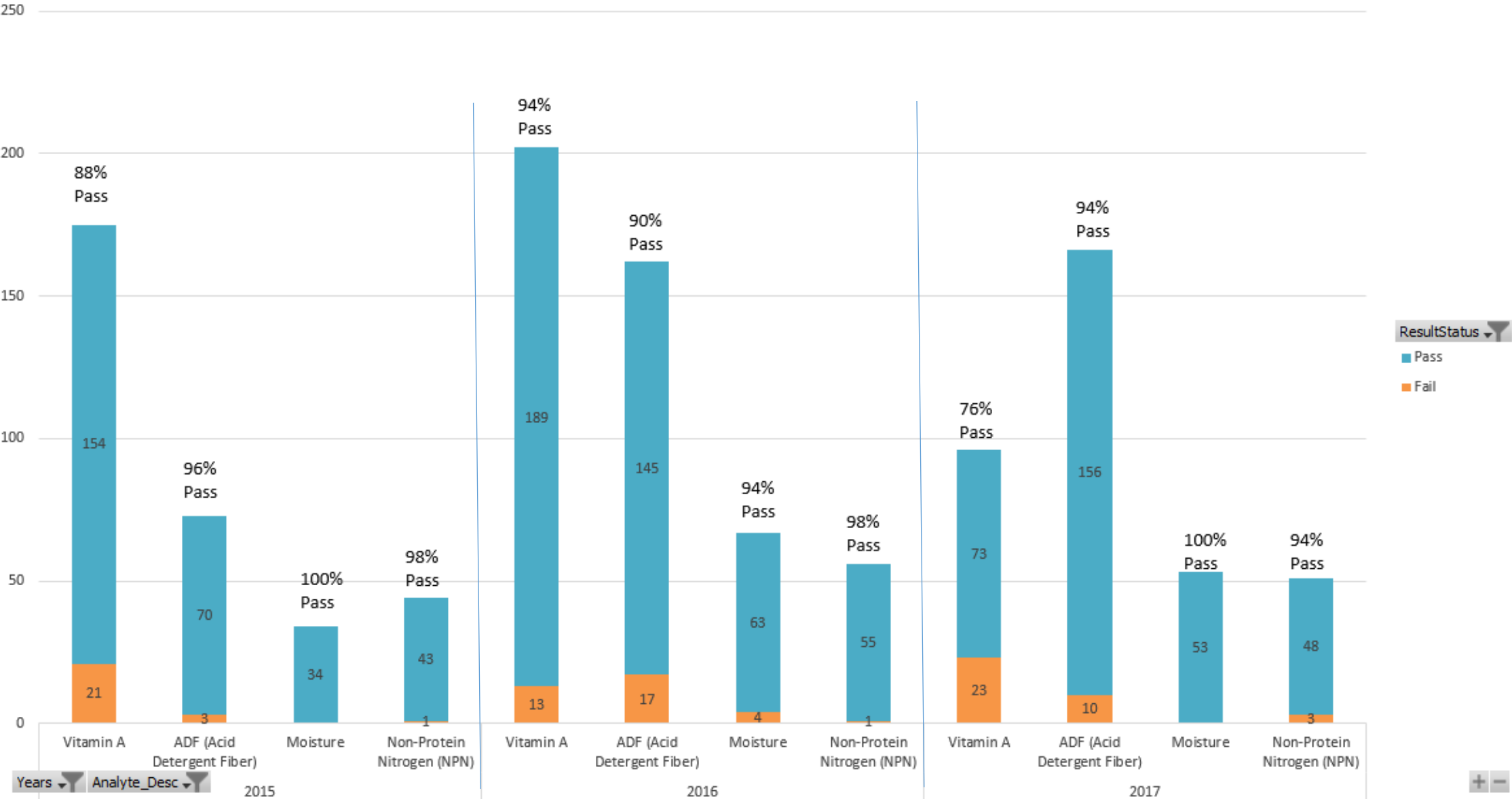
Years ▾ Analyte_Desc ▾

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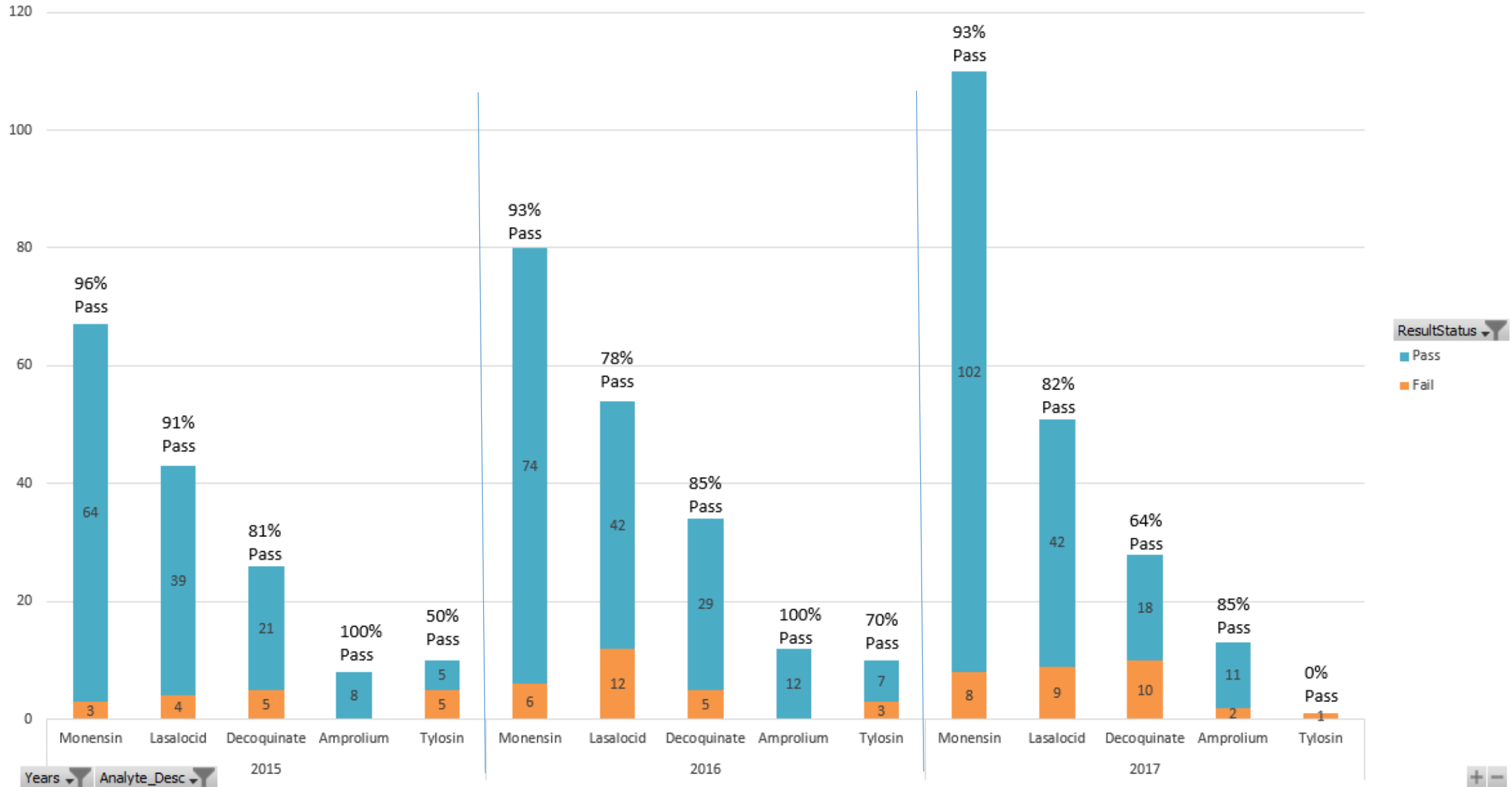
Results by Analyte for Minerals 2015-2017



Results by Analyte for Miscellaneous 2015-2017



Results by Analyte for Feed Through Drugs 2015-2017



Analytes With Passing Rates Below 85%

Sorted by lowest pass rate to highest pass rate

Analyte	Pass	Total Samples Analyzed	Pass Rate
Sulfathiazole		1	0.0%
Chlortetracycline	2	12	16.7%
Sulfamethazine	1	2	50.0%
Tylosin	12	22	54.5%
Bacitracin	4	6	66.7%
Cobalt	6	9	66.7%
Protein	1,033	1,331	77.6%
Copper	232	290	80.0%
Copper Maximum	47	57	82.5%
Lasalocid	126	152	82.9%

Variances of Analytes With Passing Rates Below 85%

	AVERAGE VARIANCE	MIN	MAX	SAMPLE SIZE
LASALOCID	-22.0%	-91.0%	106.0%	26
COPPER MAXIMUM	49.0%	12.0%	222.0%	10
COPPER	-46.9%	-100.0%	-25.9%	58
PROTEIN	-9.3%	-84.7%	-2.8%	298
COBALT	-60.0%	-100.0%	-31.0%	3
BACITRACIN	-58.3%	-58.7%	-58.0%	2
TYLOSIN	-46.8%	-84.7%	-32.1%	10
SULFAMETHAZINE	-90.3%	-90.3%	-90.3%	1
CTC	-48.8%	-100.0%	-31.3%	10
SULFATHIAZOLE	-21.4%	-21.4%	-21.4%	1

Manufacturer's Report of Investigational Findings (MRIFs)

- MRIF documents possible reason(s) for failed sample(s)
- Demonstrates the facility has reviewed the results
- Demonstrates something was learned, and will be integrated into facility(s) manufacturing/mixing process



MRIF Findings

- Revised tag
- Revised formula
- Mixer distribution inadequate/inadequate mixing time
- Will change to less concentrated drug source
- Premix did not meet label guarantees
- Used nutrient values from national average; did not update nutrient values from year to year
- Implementing a sampling QA/QC plan
- Pellets [from a premixed drug source] separate from the grain [usually corn]
- Incorrect inclusion of a specific ingredient

Communication Points



Handout

- Regularly check nutrient values against label guarantees of mill-formulated feeds
- Remember to update labels when updating formulas
- Review mixing SOPs
 - Are the times adequate for a homogenous mixture?
 - Is the mixer in good working order?
 - Is it outdated for today's ingredient types, premixes and formulations?
- Regularly update nutrient values in ration software
- Check expiration dates – especially on feed-through medications and direct-fed microorganisms
 - Destroy expired products
- Check inclusion rates to factor in degradation by time, temperature and processing

2018 Partial Statistics

- As of January 16, 2019, 308 samples analyzed and 553 collected
 - 59% pass
 - 41% fail
 - 245 undergoing analysis



Moving Forward

- Face value: 57%-ish of samples collected pass
- Current Process:
 - Failed samples receive warning notices, and are resampled the following year
- Strategies to develop guidance
 - DATCP coordinating with CoopNet and WABA

Questions?

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