



REAL DATA IN REAL TIME



*THE ANIMAL HEALTH INDUSTRY'S LEADING SUPPLIER OF
"ACTIONABLE" BUSINESS INTELLIGENCE*

US Animal Health Industry Overview for the Period JAN – JUN 2023

Presented AUG 10, 2023

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Data for today's presentation provided by :

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\$200,000+ and counting...

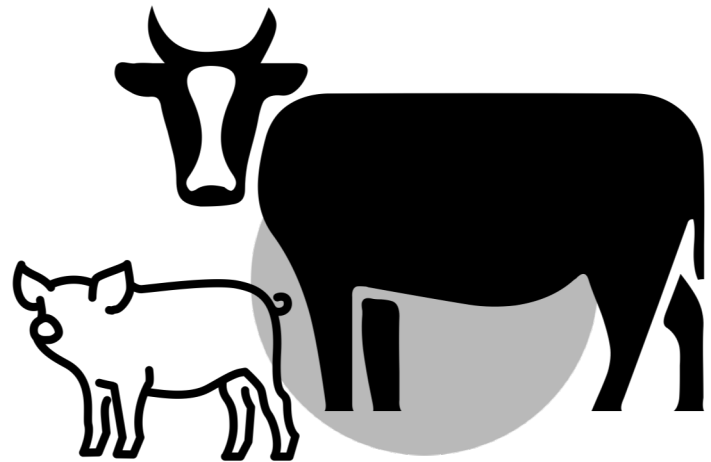
About Animalytix (ALX) ...

- ALX is the leading provider of aggregated, anonymized and geo-located sales information for the veterinary, shelter, feedlot, cow-calf, dairy, ag retail, equine tack and integrated swine production sectors
- ALX data partners provided 80+ million sales transactions and \$11.7B in sales for a universe of 700,000+ unique customers in 2022
- ALX produces more than 30,000 annual sales territory, brand and custom insight reports for its 100+ subscribers and data partners
- The ALX database is a “census” of the US animal health market and does not include any projections or extrapolations for non-reported sales
- ***Notes for using today’s insights:***
 - These following materials reflect detailed coverage of the US veterinary, ag retail and major livestock markets (e.g. feedlot, dairy, cow/calf and swine)
 - Omnichannel, prescription management, commercial feed milling, aquaculture, poultry and selected companion animal direct / agency sales items are not included



Animalytix by the Numbers ...

- 30,000 sales territory, brand and custom reports published annually
- \$ 90,000,000,000+ in historical sales data for the US & Canada
- \$ 11,700,000,000+ in moving annual total sales reported ('22)
- 26 Smart Sort™ customer segmentation categories
- 85,000,000+ transactions processed annually
- 2,250,000+ unique “ship_to” locations
- 15,000+ unique products reported
- 800+ manufacturers represented
- 70+ total sales data providers
- 70+ reporting categories



Smart Sort™ Market Segmentation Services ... Only from Animalytix

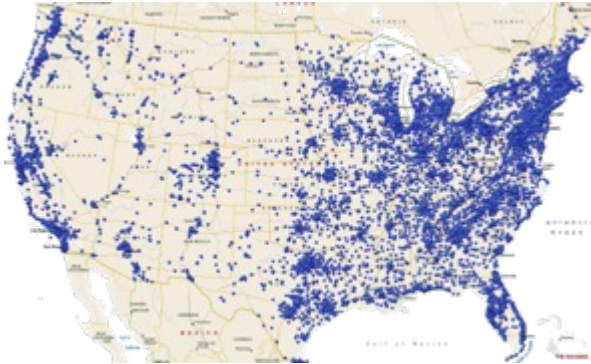
Share of market activity

Changes in the activity of the active and passive market is uncertain. Established positive trends in various market con...

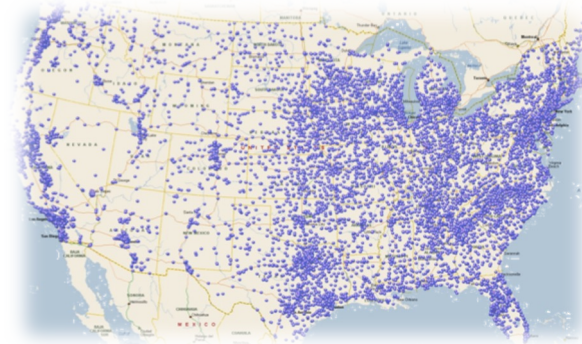
Distribution of the securities market key players

The Smart Sort™ Channel Information is Derived from a Robust Universe of Underlying Customers by Segment

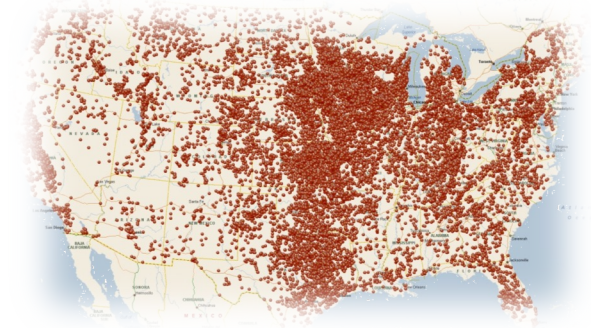
34,000+ DVM
Small Animal
Specialty,
Urgent Care,
Referral Practices



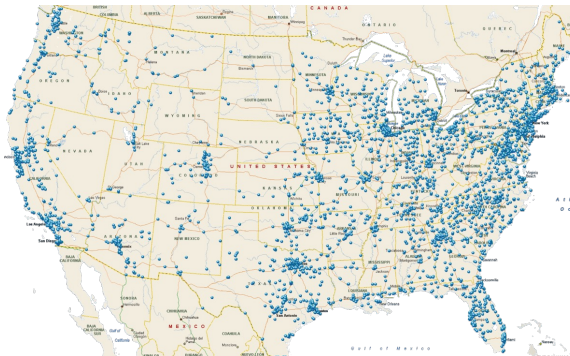
14,000+ Farm &
Fleet, Ag Specialty,
Pet and Equine Tack
Shops



40,000+
Cow-Calf,
Heifer Grower,
Stocker,
& Mixed
Livestock
Operations



6,000+ Pet Shelters,
Rescues and Spay /
Neuter Facilities



Animalytix is unique in its ability to geo-locate and categorize customer “ship_to” locations across multiple customer business class designations for livestock, veterinary and retail operations

Today's Program

1. Global Results Overview for 2022 (courtesy of Vetnosis)
2. US Sales Review of Key Therapeutic Categories, Customer Segments & Key Growth Drivers for the period of JAN – JUN '23
3. Mid-Year Price / Volume Analysis & Generics Review
4. VetWatch Practice Insights / Dr. Meredith

Vetnosis Animal Health Industry Review 2022

August 2023



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Delivering commercial insights to the global animal health industry
www.Vetnosis.com



2022 Animal Health Industry

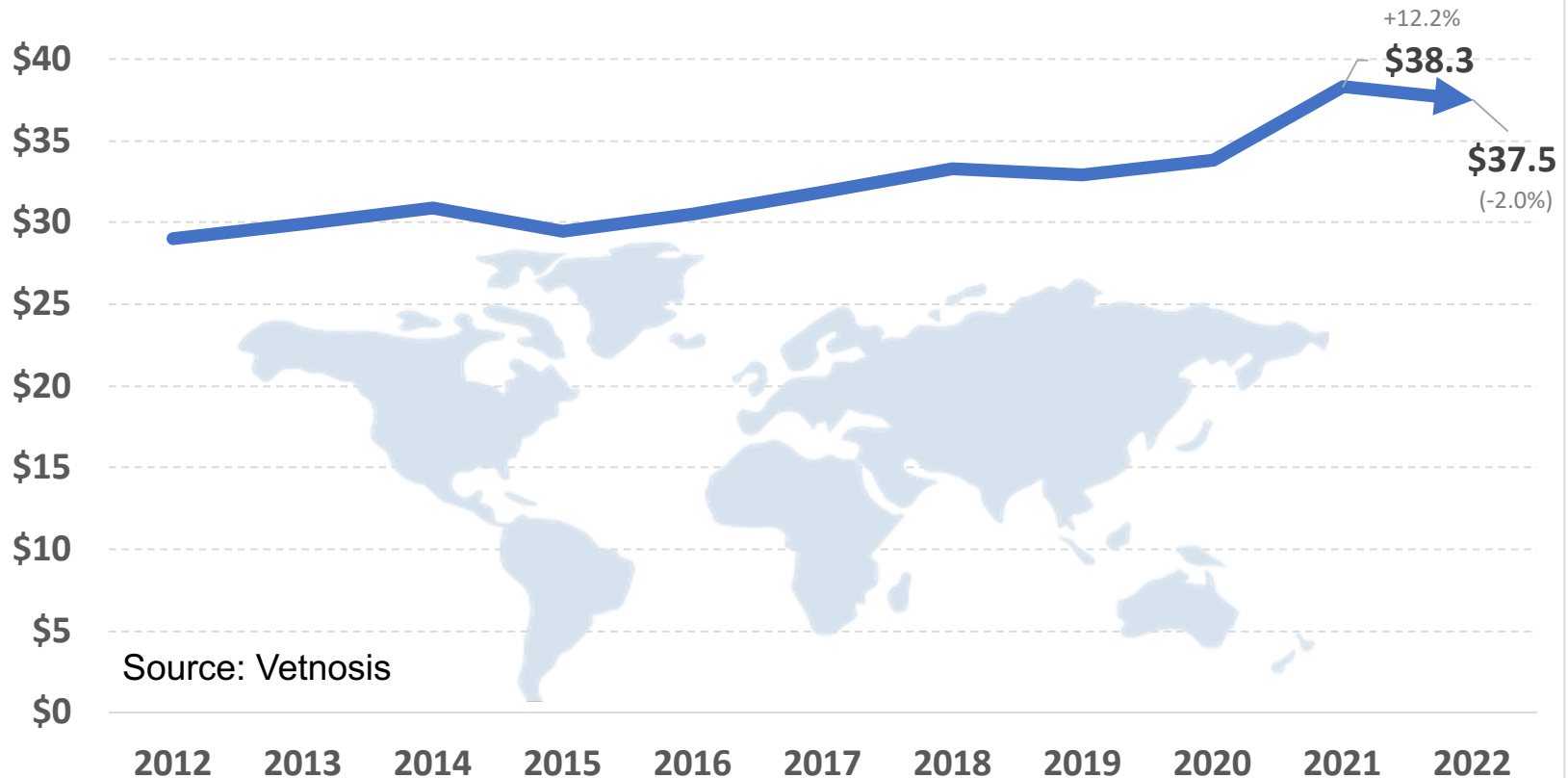
US\$ 37.5 billion

Nominal growth (-2.0%)

Source: Vetnosis

Global Animal Health Market

(ex-manufacturer net sales in Nominal US\$ terms)

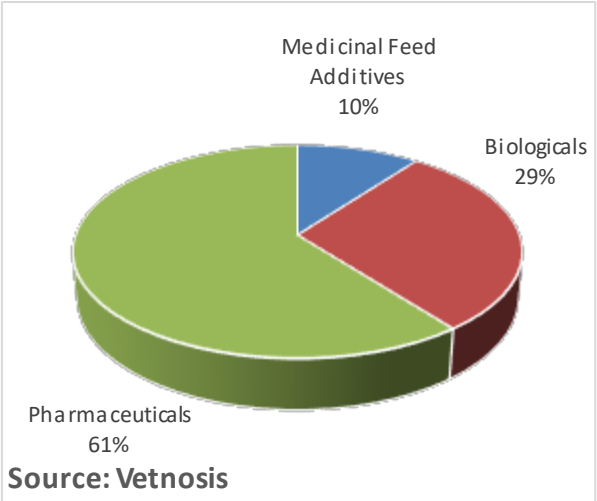


Preliminary Analysis: While price effects delivered net positive results globally, a combination of negative volume and FX impact resulted in a market decline of 2.0% in Nominal terms. This is the first volume decline reported for the global market for at least 10 years. Regionally, only Latin America and “Rest of World” grew in volume terms. Among species, volume growth was limited to Companion Animal.

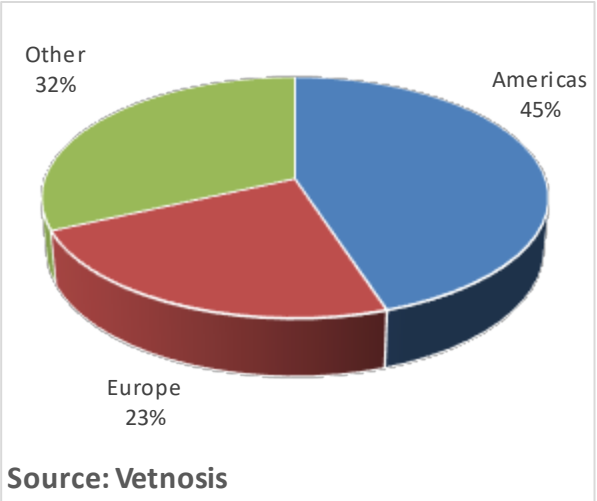


Among therapeutic categories, Parasiticides and “Other Pharmaceuticals” posted positive results while all other therapeutic areas were in decline.

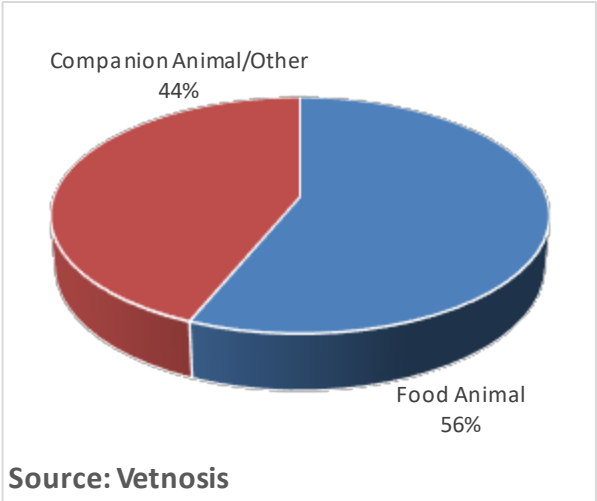
Animal Health Market by Product Group, Region & Species



Pharmaceuticals +1%;
Bios & MFAs (-1%)



Americas +3%; Europe (-2%);
Other (-1%)



Companion Animal
/ Other + 2%

Vetnosis Animal Health Industry Review 2021

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Review of Key Therapeutic Segments by Species

JAN – JUN 2023 vs PY

The “Headlines” From Across the US Animal Health Industry for the Period JAN – JUN 2023

“3.9% Market Growth Driven Strictly by Price; Negative Volume Effect”

“Adj. Pharmaceutical Growth Modest at +2.3%; Vaccines Stronger at +4.7%”

“In Pet Spending, Feline Sales Growth Out-indexing Canine”

“Supply Category Sales Growth Slows to +1.4%”

“Small Animal Vet Sales Up +3.5% growth; Ag Retail sales growth similar at +4.0%”

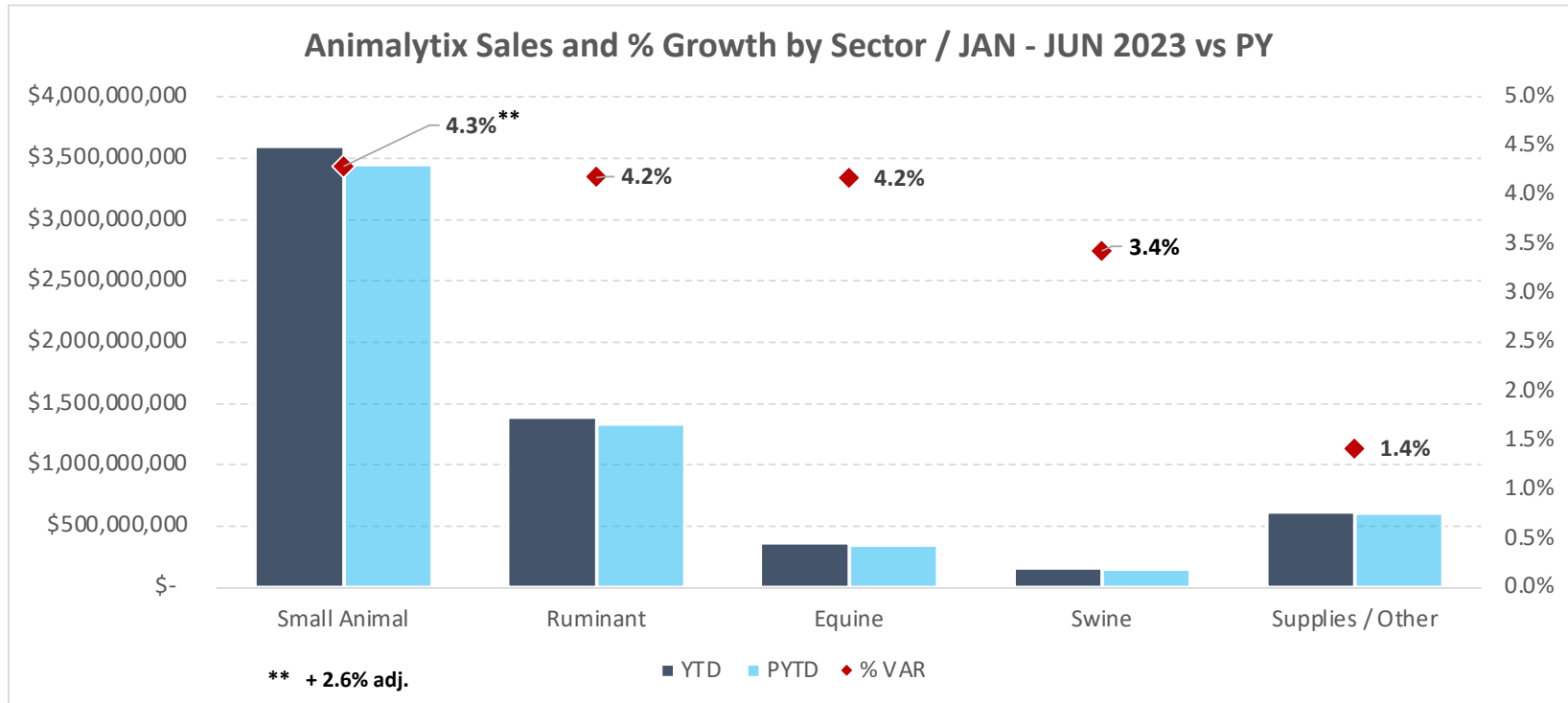
“Swine Sales Turn Favorable with Growth of +3.4%”

“Non-Confined and Ag Retail Drive Ruminant Growth +4.2% Growth

“Small Animal Veterinary Patient Visits Down 1% vs PY”

“Equine Product Sales Growth Steady at +4.2%”

Sales Across Segments Expanded +3.9%*; Small Animal Products Delivered 58% of Total Sales Growth



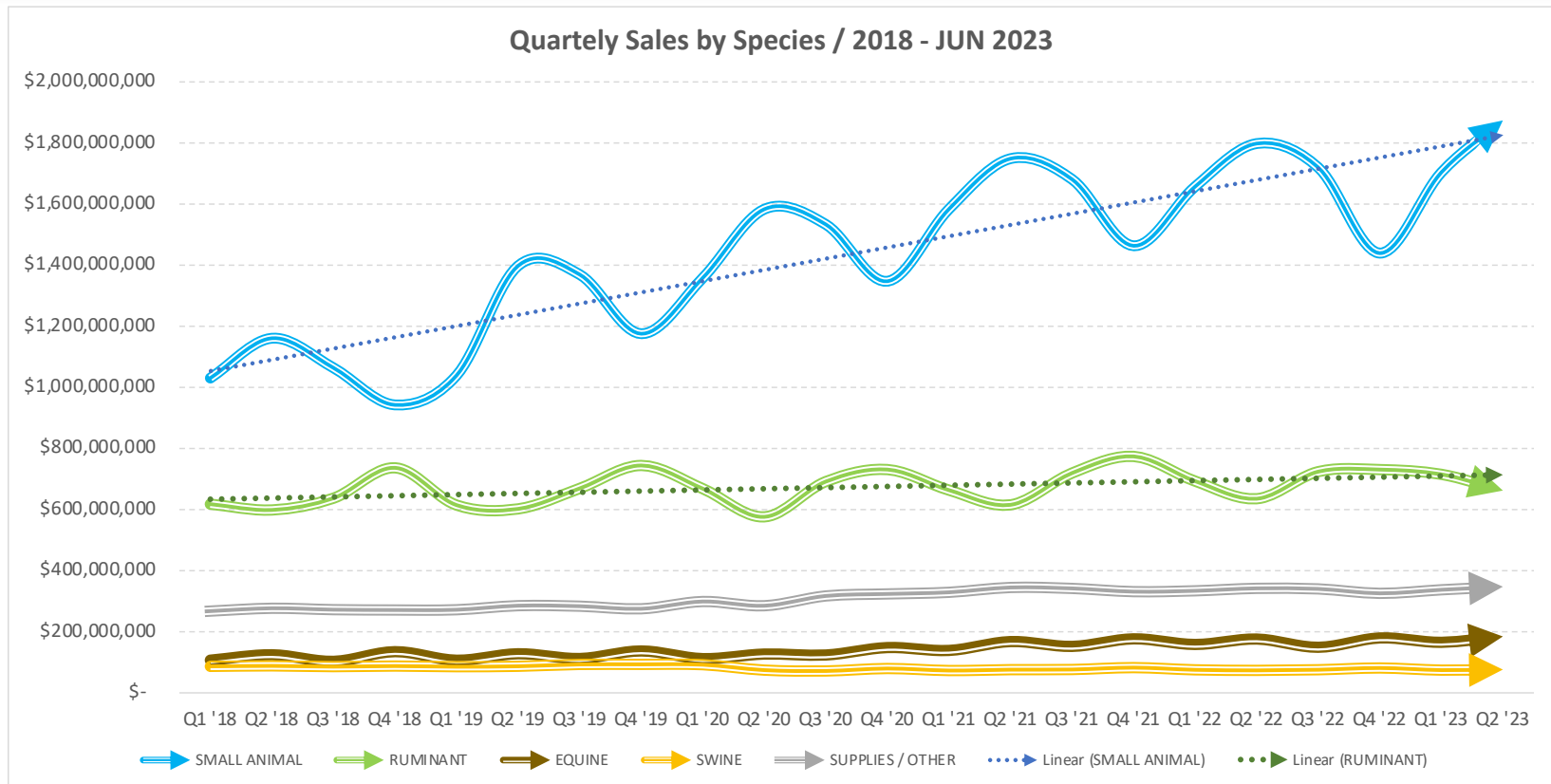
Period sales of \$6.1B were driven by \$3.6B in small animal, \$1.4B in ruminant, \$0.6B in supplies, \$0.36B in equine, and \$0.16B in swine products

Market growth of \$230M+ was driven by ~\$150M for pets, >\$50M from ruminants, ~\$15M from equine, ~\$10M in supplies.

** +2.9% when adjusted for changes in distribution strategies for existing products*

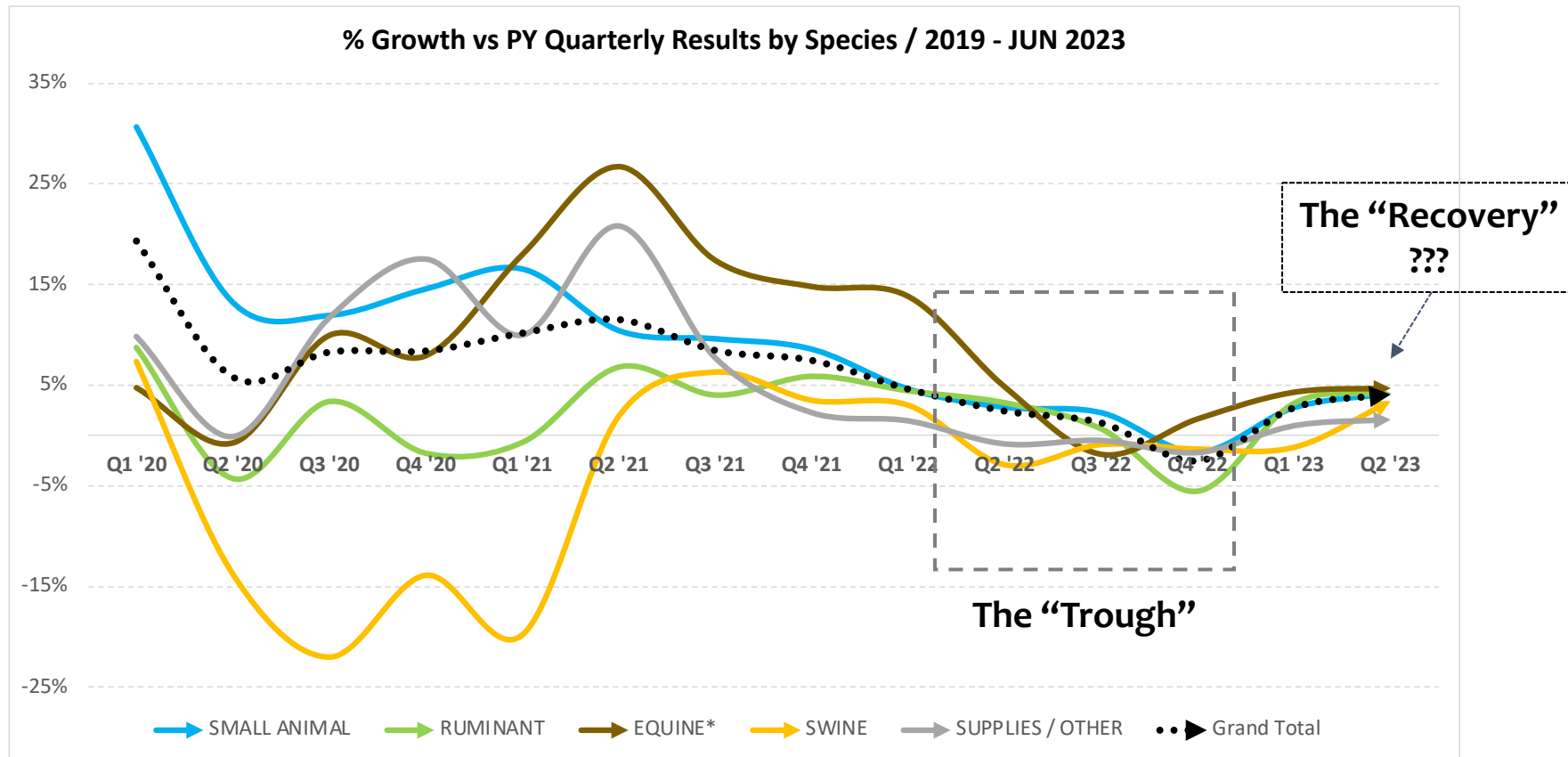


The Companion Animal “Energy Monster” A Growth Engine Powering an Entire Industry



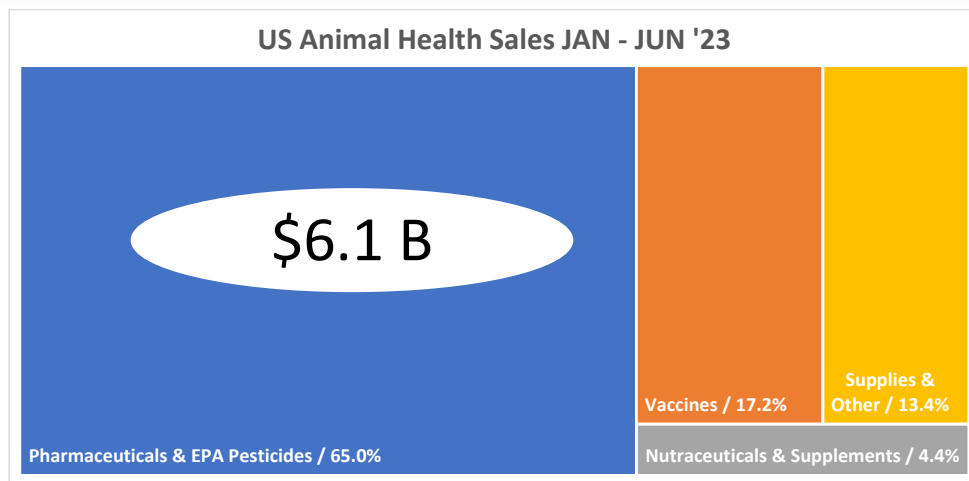
Expanding consumer demand, technology advances in drug development; intensifying direct to consumer marketing; and hyper-competitive conditions among corporate veterinary, retail, and on-line vendors promoting pet products have delivered extraordinary growth for the pet sector

While the Economy “Stalled” the Engine in 2H 2022, a Modest Recovery is Underway Through 1H 2023

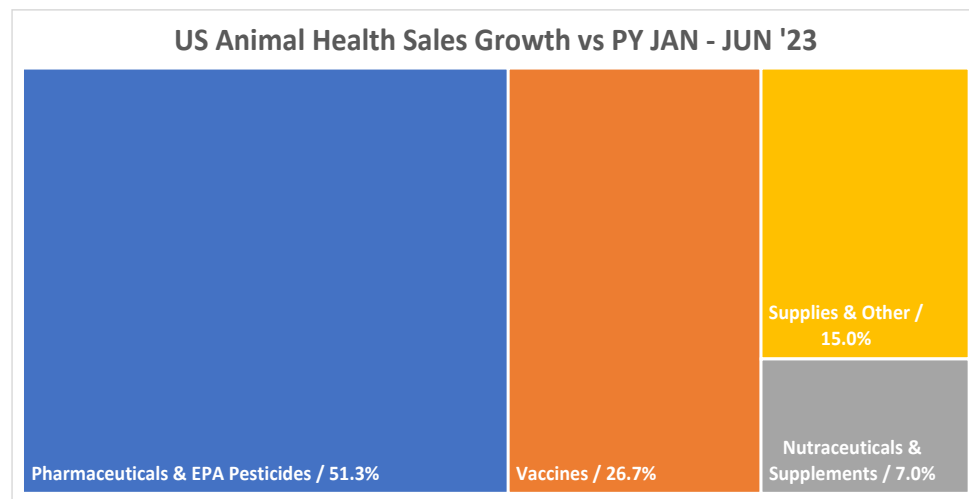


The weak results for pet, ruminant, and swine spending in 2H 2022 have each improved significantly through 1H 2023. Equine results have rebounded from low in Q3 '22 to hold steady at ~4% growth.

Sales Growth of Pharmaceuticals Heavily Under-Indexed vs Historical Performance Largely Due to Parasiticides



Pharmaceuticals (*w/EPA regulated pesticides*) were 65% of sales followed by vaccines with 17.2%, supplies at 13.4% & nutraceuticals / supplements at 4.4%.



Adjusted market growth of 2.9%* was tempered by lackluster results for pharmaceuticals with +2.3%* growth; vaccines & nutraceuticals posted performance within traditional growth ranges at +4.7%.

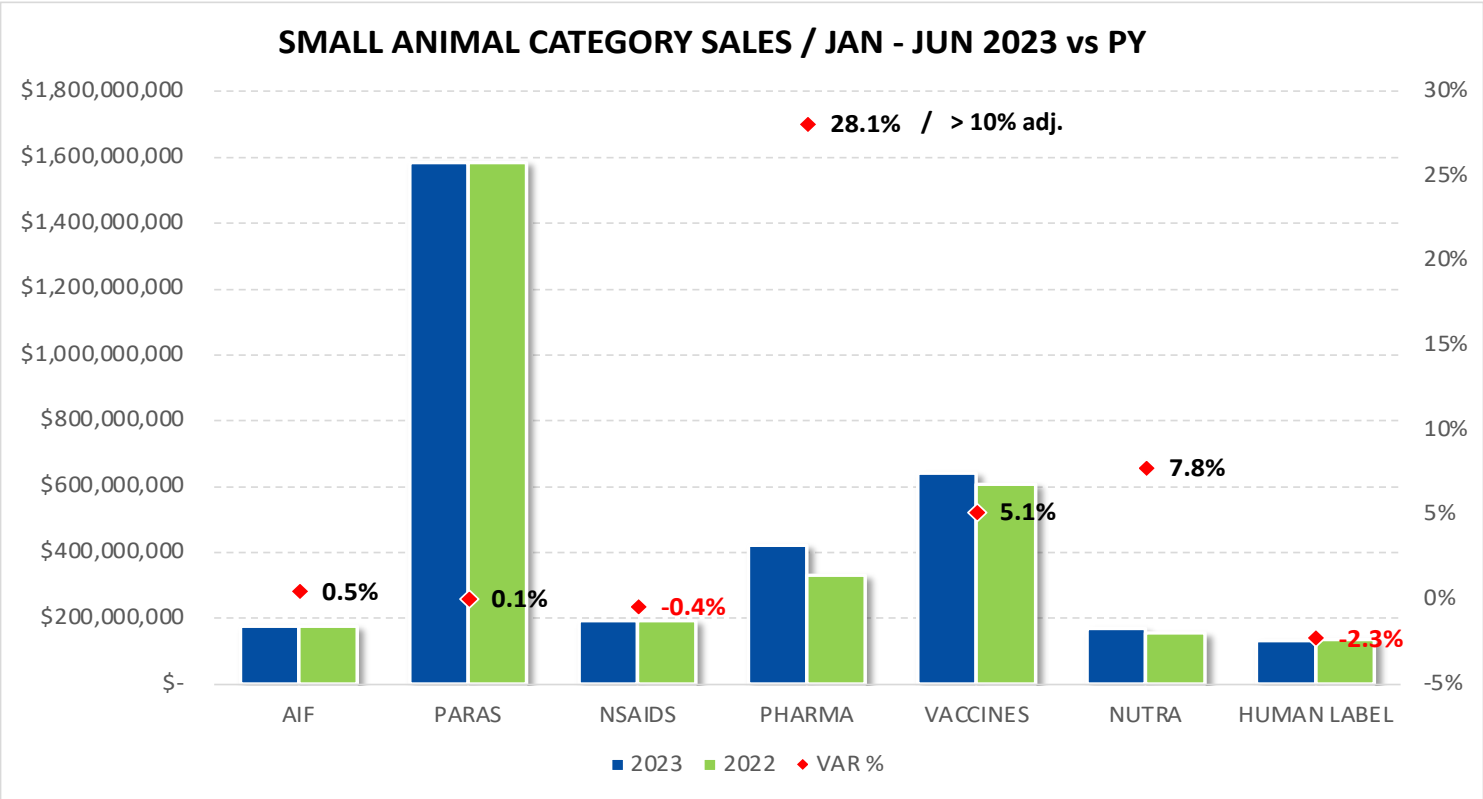
■ Nutraceuticals ■ Pharma ■ Supplies / Other ■ Vaccines

* When adjusted for changes in distribution strategies for existing products



Animal Health Industry Analysis JAN – JUN 2023 YTD

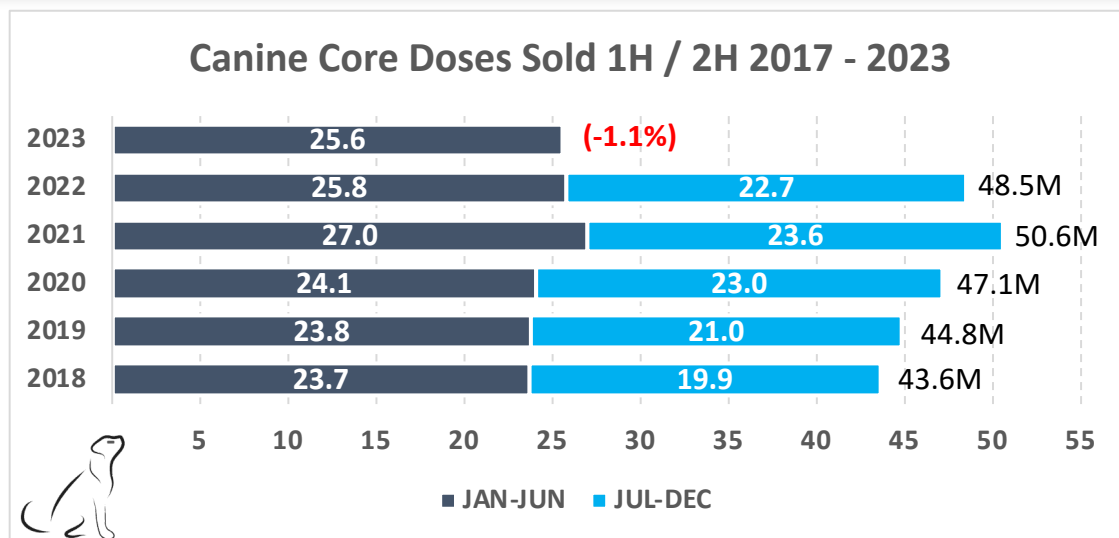
Companion Animal Sales Growth Hits +2.6%; Unit Volume Down for Pharmaceuticals; Up for Vaccines & Nutraceuticals +1%



The small animal sector struggled to +2.6% sales growth (*adj.*) with parasiticides as a primary drag at +0.1% growth. Human pharmaceuticals & NSAIDs also posted negative results due to declining volumes. Specialty pharmaceuticals, vaccines, & nutraceuticals each improved and delivered ~\$ 80M (*adj.*) in combined incremental growth.

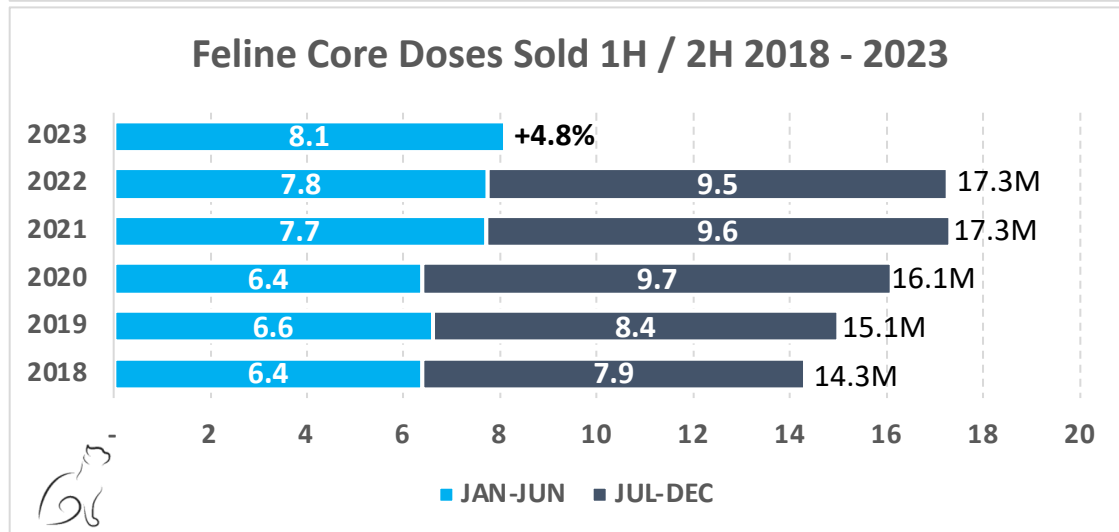


1H 2023 Canine Wellness Vaccine Doses Purchased Declined by (-1.1%); Feline Doses Grew by +4.8%



Canine and feline wellness doses (DAP / RCP) are useful as proxies for annual wellness patient volumes.

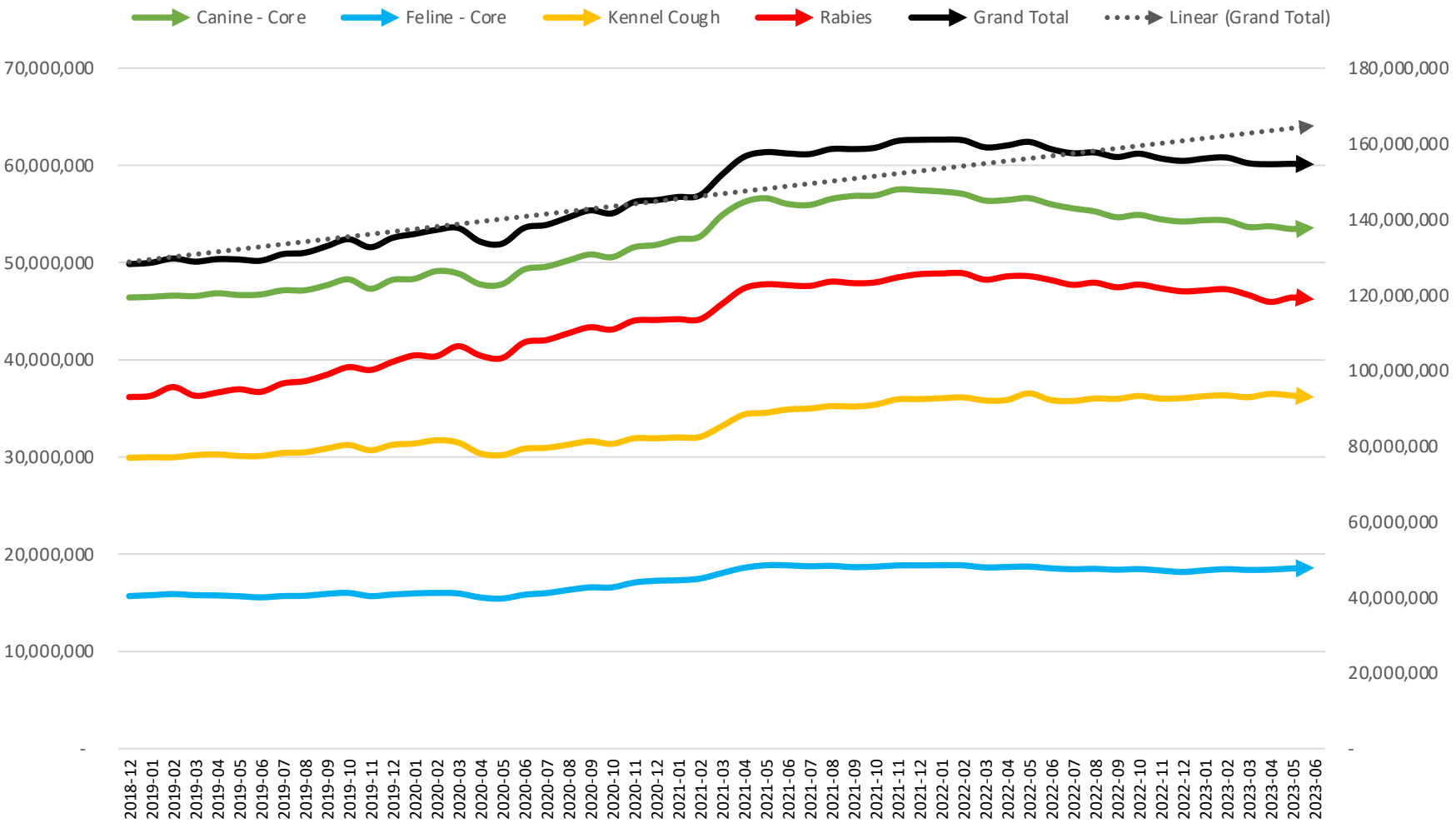
Following record results in 2021, annual canine wellness vaccinations have steadily declined, down (-1.1%) for 1H '23 vs. JAN-JUN '22 results.



Feline wellness vaccination rates over-indexed vs. canine, with no loss in doses for 2022 vs PY and +4.8% growth in 1H 2023.

Source: ALYX-19 Market Survey Data for Small Animal Vaccines / export doses excluded from analysis

Pet Vaccine Dose Volumes Have Grown Significantly Since 2018 Despite some Canine Dose Moderation in 2022 / 2023



Vaccine Dose Volume - Moving Annual Total 2018 – June 2023



Pet Parasiticide Revenue Flat at \$1.6B; Dose Volume Contractions for Canine F/T & HW; Growth for Feline

A review of parasiticide purchases for 32,800+ DVM and shelter locations with 100+ para doses purchased was discouraging as canine flea and heartworm preventatives declined by (-6.5%) and (-6.7%) respectively vs PYTD. Feline parasiticides followed the vaccination trends and actually improved by +1.4%.

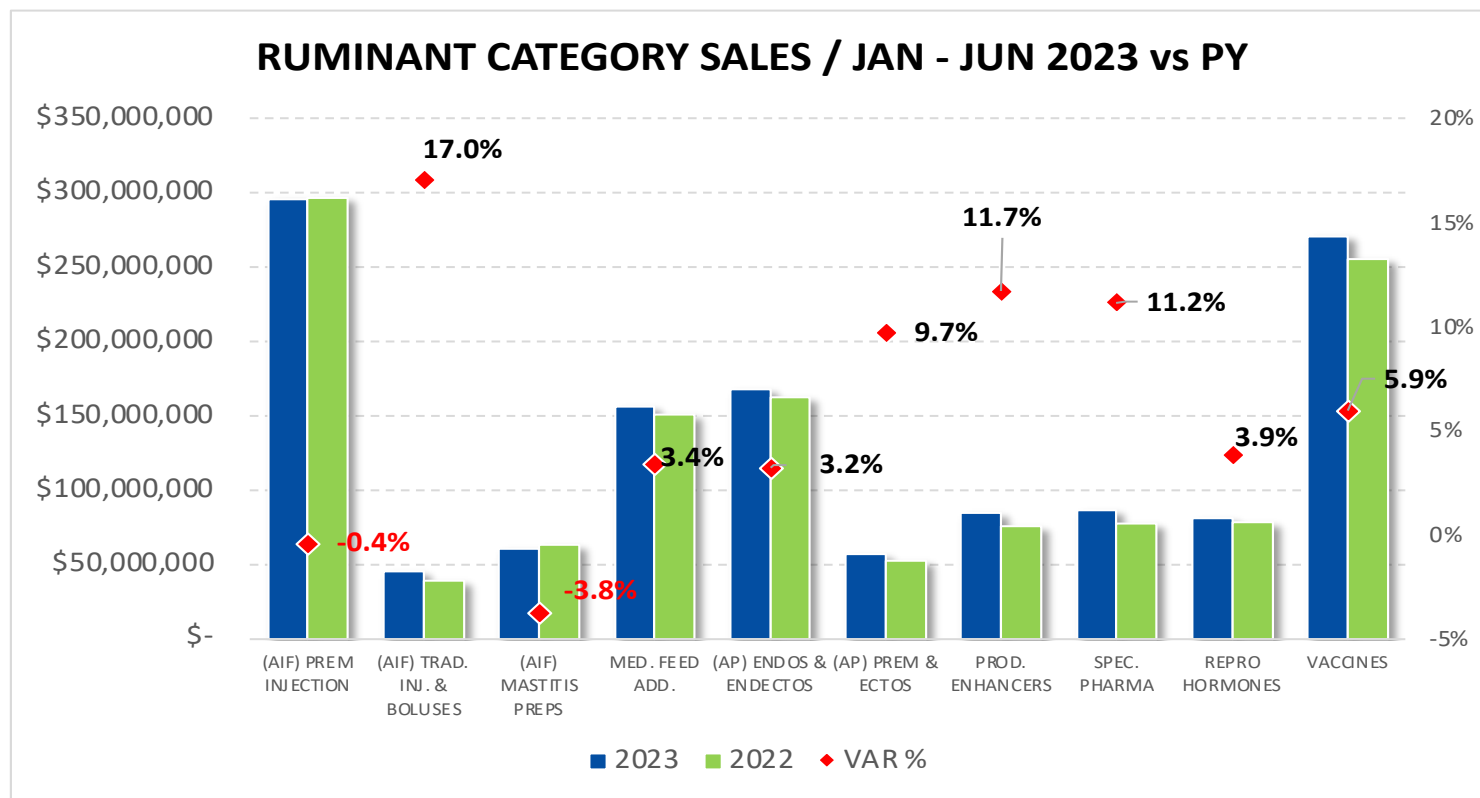
Isoxazoline (ISOX) formulations had modest market share gains, improving by < 2% for canine F/T & HW. Isox brands lost (-0.5%) share in the feline category.

Small Animal Parasiticides * / All DVM & Shelter / Rescues	JAN-JUN '23	JAN-JUN '22	% VAR ('23 vs '22)
Canine Flea Doses	81.3M	87.1M	-6.5%
Canine Heartworm Doses	92.3M	99.0M	-6.7%
Feline Total Parasiticide Doses	10.6M	10.5M	+1.4%
<i>ISOX as % of Canine Flea Doses</i>	82.8%	80.8%	+2.0%
<i>ISOX as % of Canine Heartworm Doses</i>	21.4%	20.3%	+1.2%
<i>ISOX as % of Feline Flea Doses</i>	25.8%	26.3%	-0.5%

* monthly dose equivalents

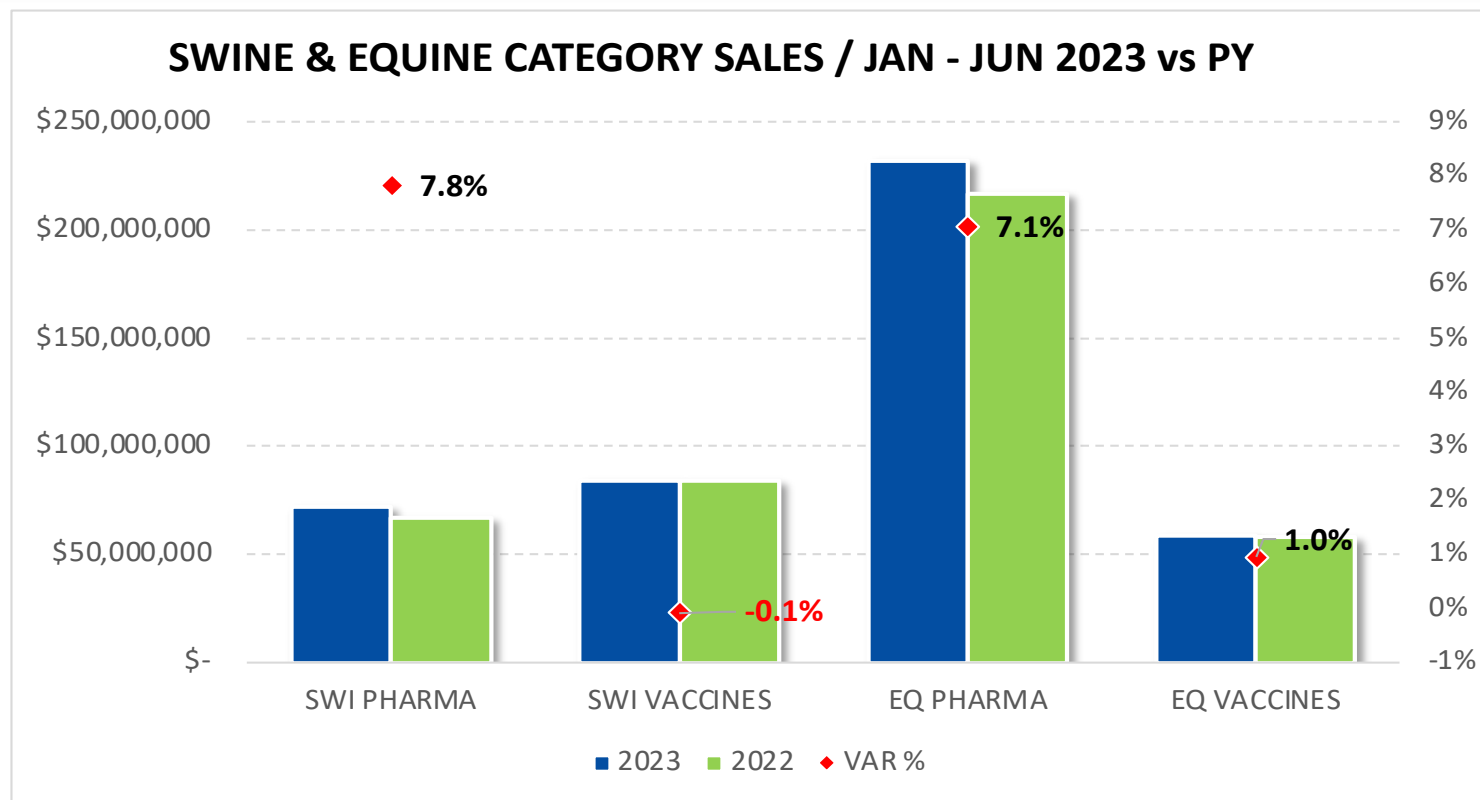
Practices with 100+ Para Doses Purchased	Locations
DVM - Small Animal	27,645
Shelter/Rescue	2,000
Emergency/Specialty	960
DVM - Mixed / Misc	925
DVM - Lg Animal	600
DVM - Equine	385
Spay/Neuter	320
Grand Total	32,835

Ruminant Sales Grow by +4.2% Despite Shrinking Beef Cow Herd and Continued Downward Generic Pressure



Losses in the premium anti-infectives sector have slowed to (-0.4%) vs PY while specialty pharma (*e.g., injectable vitamins and supplements*) and productivity enhancer sales grew by double digits. The strong performance in traditional anti-infectives was driven by a one-time purchasing event as producers loaded inventory prior to the June implementation of FDA's GFI #263 (*oxytet / penicillin*).

Solid Equine Pharma Growth Offset Weak Vaccine Sales; Swine Sector Growth Markedly Improved at +3.4%



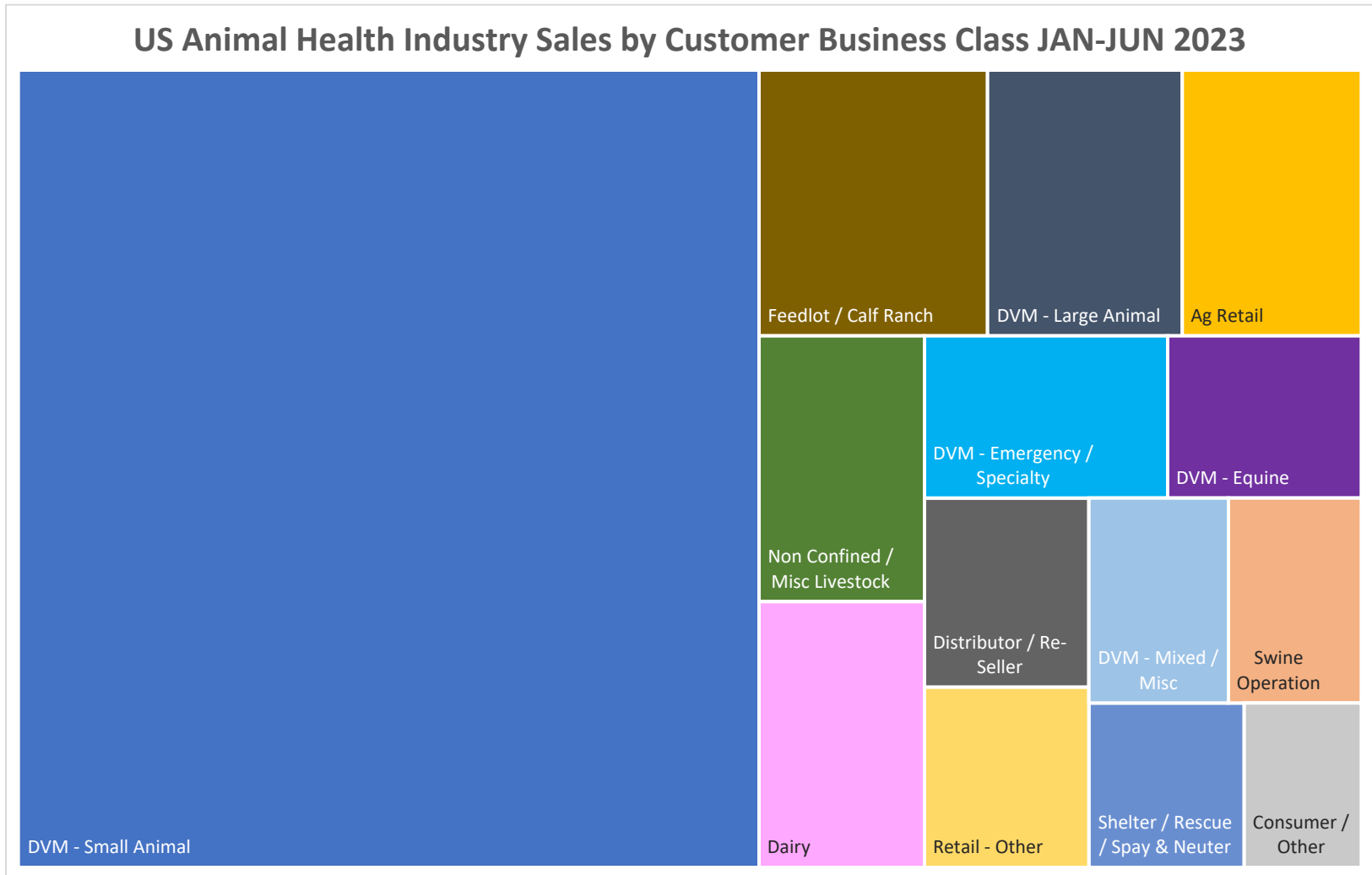
Equine sales growth of +7.1% resulted primarily from stronger joint / mobility product sales as unit volume for parasiticides and anti-infectives contracted. Vaccine growth was soft at +1.0% again due to unit volume declines. Swine pharmaceutical sales growth of +7.8% was driven by anti-infective sales while swine vaccines held relatively flat due to continuing pricing pressure.



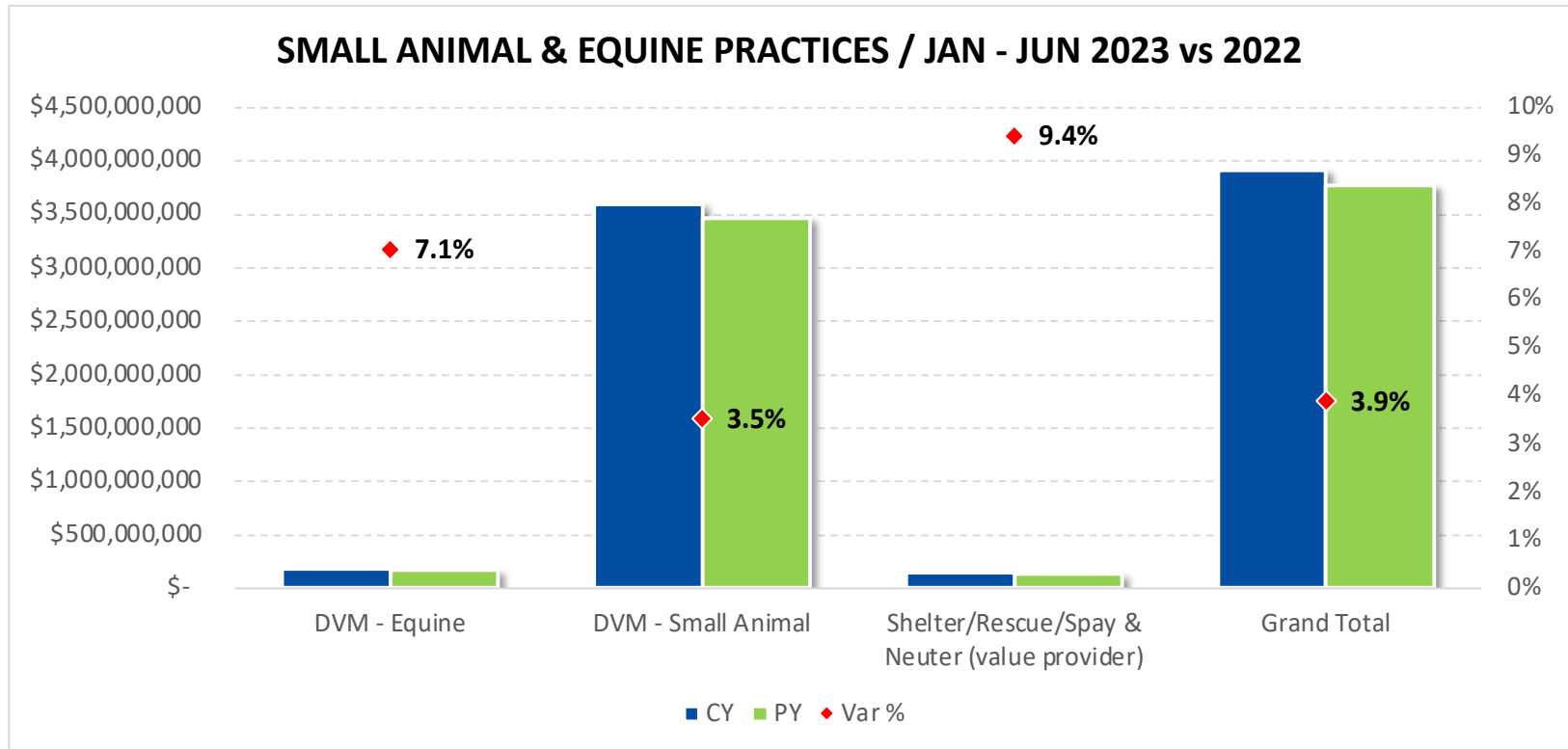
Smart Sort™ Customer Segmentation Analysis



Sales by Business Class Reported to ALX: 72% DVM, 16% Livestock, and 7% Retail for JAN-JUN 2023

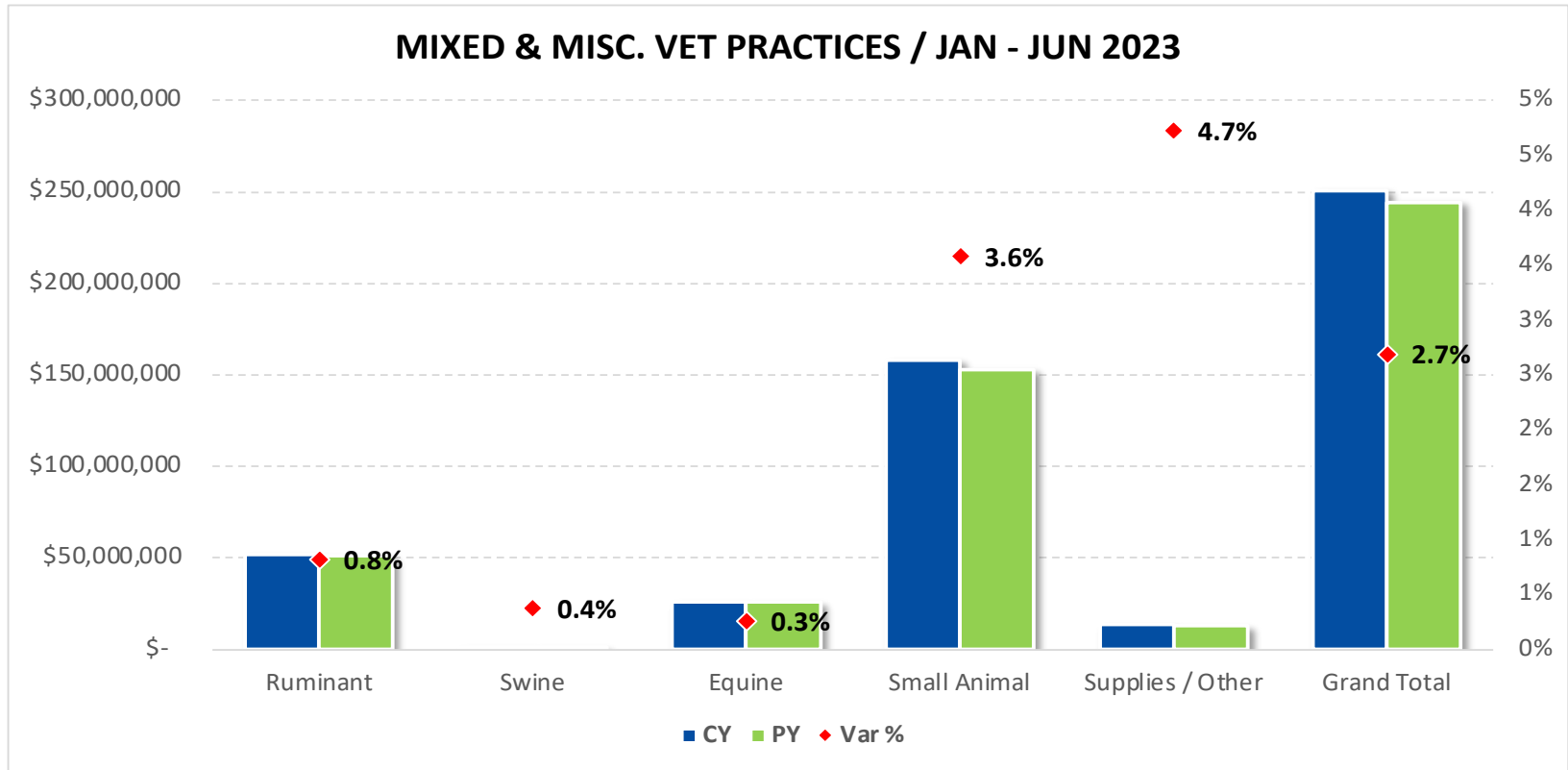


Small Animal Hospital Growth Improving; Equine Practices & Shelters Continue to Prove More Robust



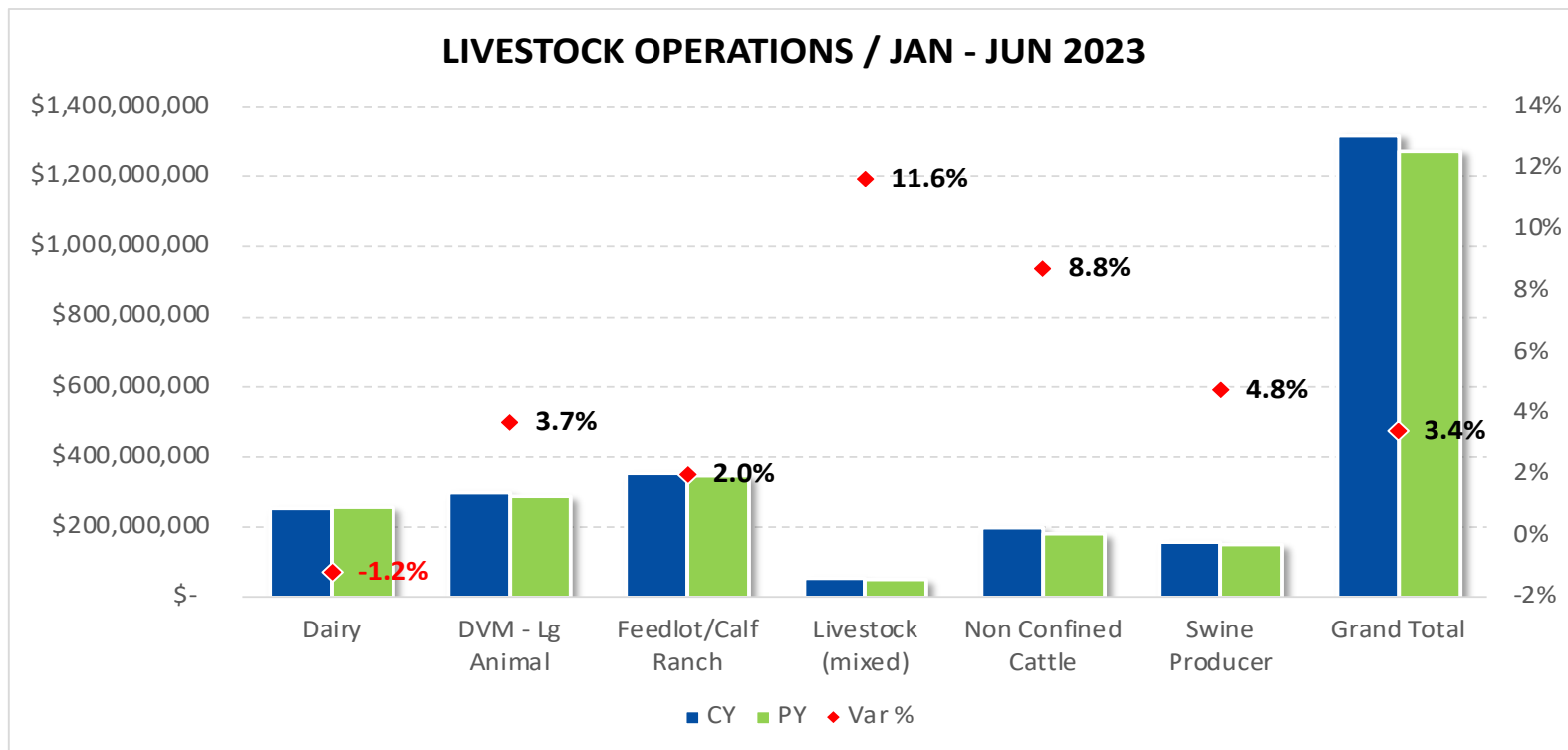
Despite declining patient visits, small animal hospital purchasing growth improved from PY by +3.5%; equine practices and shelters were more robust by comparison at +7.1% and +9.4% respectively.

Mixed Practice Growth Modest at +2.7% Due to Stagnant Ruminant / Equine Volumes & Slowing Pet Visits



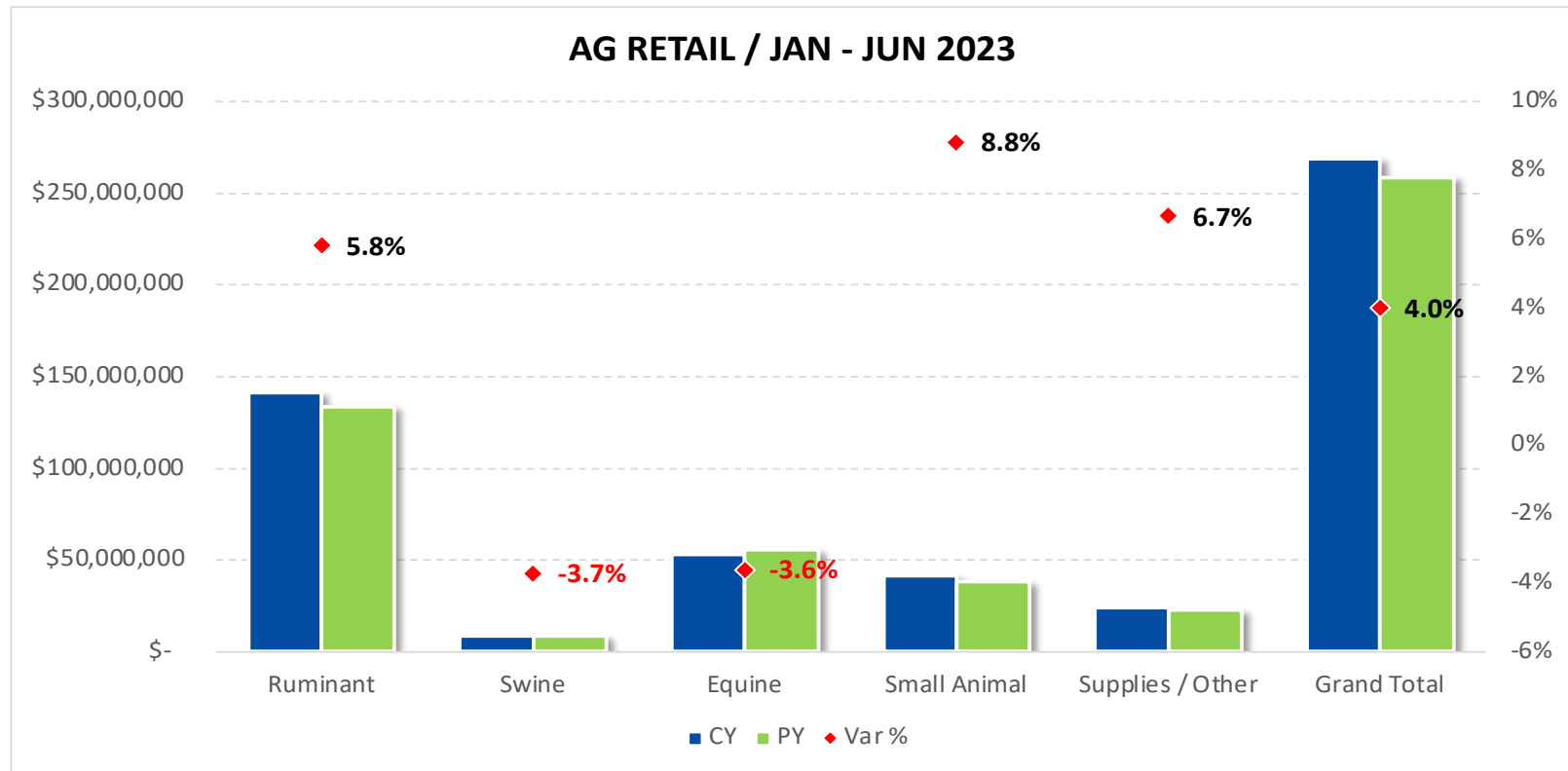
Modest small animal sales growth of +3.6% was diluted by <1% growth in ruminant and equine sales; slowing pet patient visits, small herd liquidation and economic pressure on horse owners are all concerns for this sector.

Livestock Growth of +3.4% Driven by Mixed Sector Results; Weaker Dairy / Feedlot Offset by Non-Confined & Swine



Swine producer sales posted their best 6 month sales period results in years with +4.8% growth while dairy sales delivered negative growth at (-1.2%). Feedlot growth was tepid at +2.0% while non-confined cattle operations over-indexed market growth at +8.8%.

Sales Growth Among 10K+ Ag Retailers was Improved at +4.0%; Driven by Pet and Ruminant Spending



Ag retail pet sales growth was robust at +8.8% but overall results were tempered by declining equine spending. Ruminant sales growth of +5.8% is expected to be somewhat transient as producers made one-off anti-infectives purchases ahead of FDA's JUNE deadline for implementation of GFI # 263.

Animalytix Price Volume Analysis

JAN – JUN 2023 vs Same Period PY

Relative Impact of Changes in Price and Volume Were Determined by Species and Therapeutic Category

Sales for \$5.9B in vaccines, pharmaceuticals, nutraceuticals, and supplies of more than 20,000 unique products and pack size combinations were included in the analysis; where appropriate, selected supply categories were associated with species groups (e.g., ear tags, grooming products, etc...).

The analysis was done on a “like-unit” basis based upon invoice pricing to the veterinarian, retailer, livestock producer, and other purchasers and EXCLUDES the impact of manufacturer rebates .

The full sales impact for newly introduced (within the current fiscal year) or discontinued items (vs previous fiscal YTD) were included as VOLUME effects.

PLEASE NOTE: These results have been updated from the original presentation deck to EXCLUDE sales resulting from changes in distribution strategies for existing products.

Aggregate results for the 6-month period were as follows:

- Net pricing variance + 4.2%
- Net volume variance - 1.1%
- Net total variance + 3.1%

Pricing for Equine & Pet Combined with Improved Volume for Livestock Drove +3.1% Growth in 1H 2023

Mid Year US Animal Health Industry Price / Volume Analysis / JAN - JUN 2023

2023 Segment / Species	Factor	Small Animal	Equine	Ruminant	Swine	Other	Grand Total
Total Sales by Species		\$3.6 B	\$0.36 B	\$1.40 B	\$0.15 B	\$0.40 B	\$5.9 B
Anti-infectives	PRICE EFFECT	3.7%	5.5%	-5.6%	0.2%	-	-2.5%
Parasiticides		5.2%	4.9%	5.5%	7.4%	-	5.2%
Pharmaceuticals		6.4%	5.4%	3.4%	1.4%	-	10.7%
Vaccines		4.3%	4.0%	6.0%	-1.4%	-	4.2%
Nutraceuticals & Supplements		6.7%	6.3%	7.9%	-2.0%	-	7.1%
Hospital Supplies		8.2%	-	-	-	3.5%	4.6%
Misc. Supplies		2.5%	3.8%	7.2%	-	9.5%	7.4%
Sub-Total Price		5.4%	5.0%	1.5%	-0.5%	4.4%	4.2%
Anti-infectives	VOLUME EFFECT	-3.3%	-4.5%	7.8%	6.2%	-	4.5%
Parasiticides		-5.3%	-8.8%	-0.5%	5.4%	-	-4.9%
Pharmaceuticals		-1.7%	4.5%	2.7%	12.2%	-	0.2%
Vaccines		0.9%	-3.0%	0.2%	1.3%	-	0.5%
Nutraceuticals & Supplements		1.1%	-1.7%	-2.9%	6.0%	-	-0.9%
Hospital Consumables		3.2%	-	-	-	-2.8%	-1.5%
Misc. Supplies		-5.4%	-9.1%	3.3%	-	-4.2%	-3.3%
Sub-Total Volume Effect		-2.8%	-0.9%	3.0%	3.9%	-3.0%	-1.1%
Total Price & Volume		2.6%	4.2%	4.5%	3.5%	1.3%	3.1%

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Pet food, treats, and selected other supply items are excluded from this analysis. Medicated feed additives are aligned with therapeutic categories (e.g., Rumensin / Tylan, included in Ruminant Anti-infectives; Denagard & Lincomix in swine anti-infectives)



Focused Insights: The US Market for Veterinary Generics

Generic Portfolio Expansion Continues; ANADA Sales Increase while Human Generics Contract

Veterinary Generic Drug Sales (as reported to ALX)	JAN - JUN 2023	JAN - JUN 2022	% VAR
FDA NADA (Pioneer) Brands	\$ 3,087.8 M	\$ 2,967.1 M	+4.0%
FDA ANADA (Generic) Brands	\$ 519.8 M	\$ 489.1 M	+6.3%
CDER Human Labeled Pharmaceuticals (Generics)	\$ 130.9 M	\$ 134.1 M	-2.3%
Total FDA / CDER Approved Pharmaceuticals	\$ 3,737.5 M	\$ 3,490.3 M	+4.1%
% of Total Veterinary Drug Sales by Type	JAN - JUN 2023	JAN - JUN 2022	VAR
FDA NADA (Pioneer) Brands	82.6%	82.6%	-0.1%
FDA ANADA (Generic) Brands	13.9%	13.6%	0.3%
CDER Human Labeled Pharmaceuticals (Generics)	3.5%	3.7%	-0.2%
Sub-total Generic Products	17.41%	17.36%	0.1%

- ANADA generic sales growth in 1H 2023 was strong at +6.3% and driven across multiple sectors (e.g., sedation, NSAIDs, small animal & traditional ruminant anti-infectives)
- Ruminant generic sales for premium anti-infectives contracted as enrofloxacin and ceftiofur losses outpaced continued gains for tulathromycin brands; ivermectin injectable sales also declined sharply



Animalytix

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