



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

US Animal Health Industry Overview for JAN-DEC 2023

Presented FEB 15, 2024

Data for today's presentation provided by:

Animalytix LLC

Vetnosis

24 PetWatch

VetWatch.com & partners

- Animal Care Technologies
- Antelligence, LLC
- Packaged Facts

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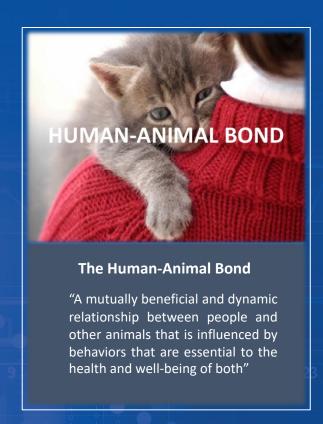






Thanks to each of you for your support of the KC Animal Health Corridor's Spirit of Service Award





\$200,000+ and counting ...

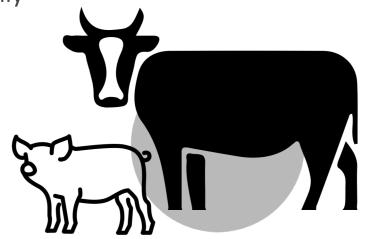
What is Animalytix?

- Animalytix 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.
- The company's network of data partners provided 90+ million sales transactions reflecting sales of \$12.1B for a universe of 800,000+ unique customers for the moving annual total period ending DEC 2023.
- The Animalytix database is a "census" of the US animal health market from which the company produces more than 30,000 annual sales territory, brand and custom insight reports for its 100+ subscribers and data partners.
- 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 for 2023

- 30,000 sales territory, brand and custom reports published annually
- \$ 100,000,000,000+ in historical sales data for the US & Canada
- \$ 12,100,000,000+ in US moving annual total sales reported
- 300,000+ distributor SKU cross –references established
- 20+ Smart Sort[™] customer segmentation categories
- 90,000,000+ transactions processed annually
- 2,500,000+ unique "ship_to" locations*
- 15,000+ unique products reported
- 800+ manufacturers represented
- 80+ total sales data providers
- 70+ reporting categories









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

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

40,000+ DVM Small Animal Specialty, Urgent Care, Referral Practices





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

42,000+ 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.

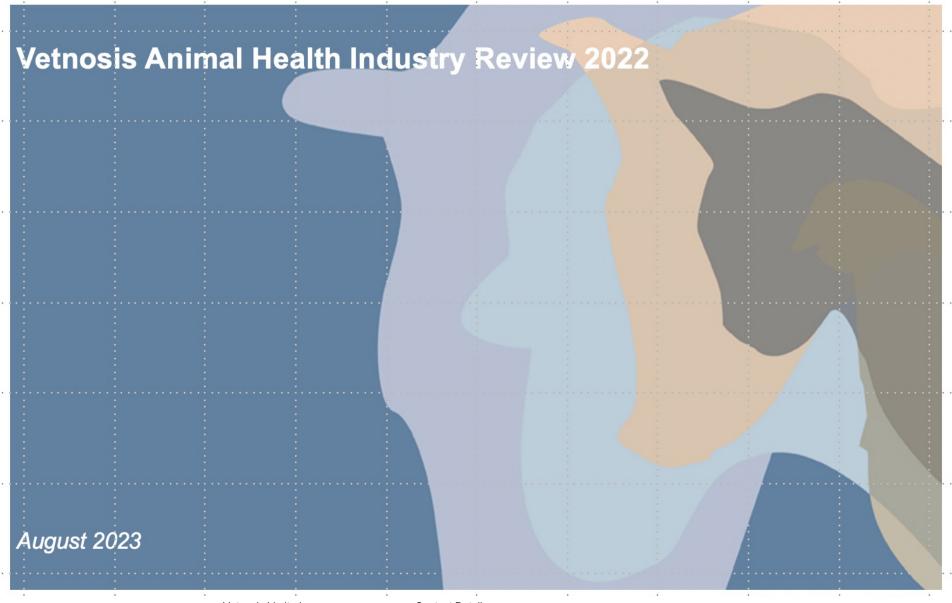






Today's Program

- 1. Global Results Overview for 2022 (courtesy of Vetnosis)
- 2. US Sales Review of Key Therapeutic Categories, Customer Segments and Key Growth Drivers for 2023
- 3. 2023 Price / Volume Analysis
- 4. Focused Insights





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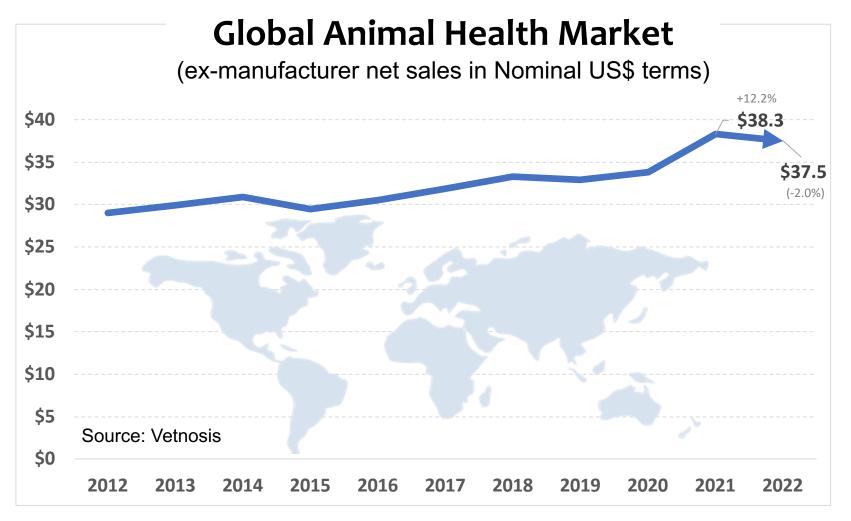
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Delivering commercial insights to the global animal health industry www.Vetnosis.com

2022 Animal Health Industry US\$ 37.5 billion Nominal growth (-2.0%)

Source: Vetnosis



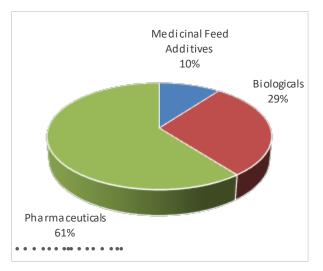


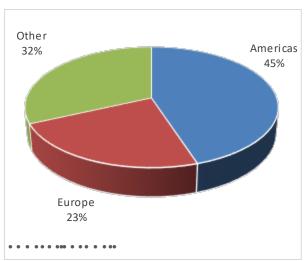
Comments: While price effects delivered net positive results globally, a combination of negative volume and FX impact resulted in a market decline of 2.0% in Nominal terms. This is the first volume decline reported for the global market for at least 10 years. Regionally, only Latin America and "Rest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

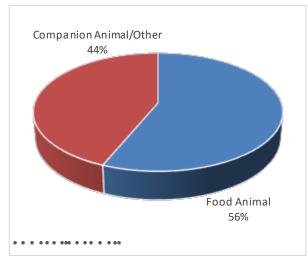


Among therapeutic categories, Parasiticides and "Other Pharmaceuticals" posted positive results while all other therapeutic areas were in decline.

Animal Health Market by Product Group, Region & Species







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

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

Companion Animal / Other + 2%

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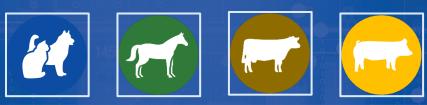


Review of Key Therapeutic **Segments by Species**

JAN – DEC 2023 vs Same Period PY









The "Headlines" From Across the US Animal Health Industry for the Year 2023

"Pet and Equine Price Effects Primary Driver for Industry Growth" "Annual Pharmaceutical & Vaccine Sector Growth Modest at +2-3%"

"Increased Pet Spending Delivers < 50% of Total Market Growth"

"AIFs and Iron
Supplements Drive
Swine to +1.8% in face
of lower pork demand"

"Volume Still a Drag on the Market with net negative (-0.2%) effects for 2023"

"Small Animal Vet Sales
Tepid at +1.2% growth; Ag
Retail sales improve to
+4.2% growth"

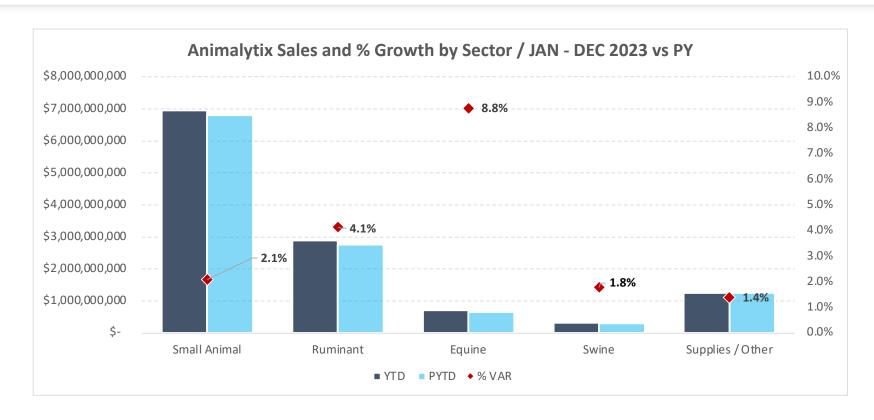
"Q4 Market Corrects for Weak Q3 results with +6.1% Growth; YE Revenues +2.7%" "Strong Q4 Pushes
Cattle Growth to +4.1%
Despite Record Low
Cowherd"

"Equine Products Finish +15% in Q4; Top Sector AGAIN for 2023"

"Small Animal Veterinary Patient Visits Fall Again and Finish the Year (-0.8%) vs PY ... Revenue Growth Only +5.6%"



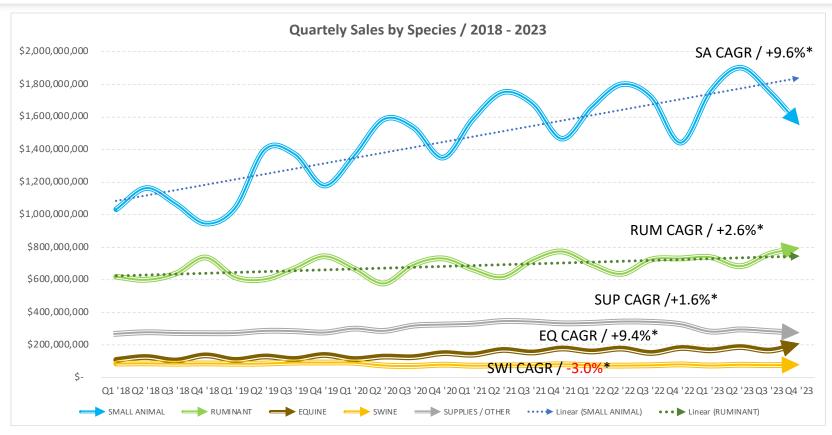
US Sales Up by +2.7%; Small Animal Under-Indexed at +2.1% and Delivered Only 45% of Total Sales Growth



Sales of \$12.1B was driven by \$7.0B in small animal, $^{53.0B}$ in ruminant, \$1.1B in supplies, \$0.7B in equine, and \$0.3B in swine products.

Market growth of ~\$320M was driven by pets with +\$142M, ruminants at +\$114M, and +\$57M from equine product sales.

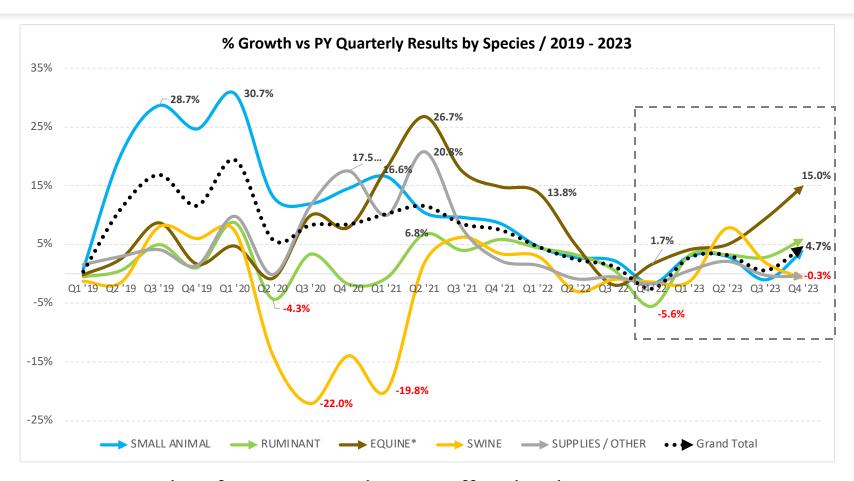
CAGR Results by Species from 2019 Show Strong Performance for Both Pet & Equine Sectors at +9%



Quarterly sales by species reflect the continued dominance of pet and ruminant spending versus other sectors; in terms of growth rates, equine spending CAGR at +9.4% has closely paced the pet sector's CAGR of +9.6%.

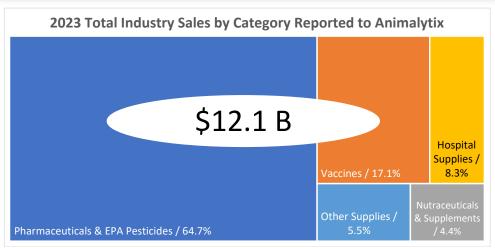


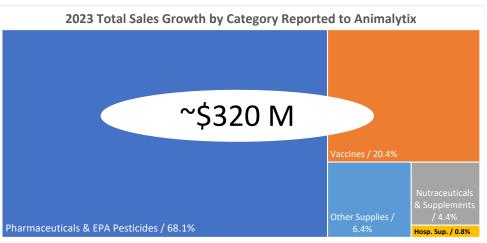
Market Volatility Continued in 2023 as Disappointing Q3 Results Were Offset by Stronger Q4 Performance



Poor Q3 results of +0.6% growth were offset by sharp improvements in Q4, most notably pet +4.1%, ruminant +6%, and equine +15%, which brought the quarterly growth to +4.7% and annual growth to +2.8%.

Sales Growth for Pharmaceuticals & Vaccines Improved vs 2022; Total \$ Growth Nearly 2X 2022 Results





2023 Sales % by Category

 Pharmaceuticals* 	64.7%
Vaccines	17.1%
 Hospital Supplies 	8.3%
 Nutraceuticals** 	4.4%
 Other Supplies 	5.5%

Pharmaceutical and vaccine growth slightly over-indexed for the year as a % of total market sales.

Sales growth of ~\$320M was nearly double the \$168M results posted by the industry in 2022.

^{**} Includes vitamins & supplements

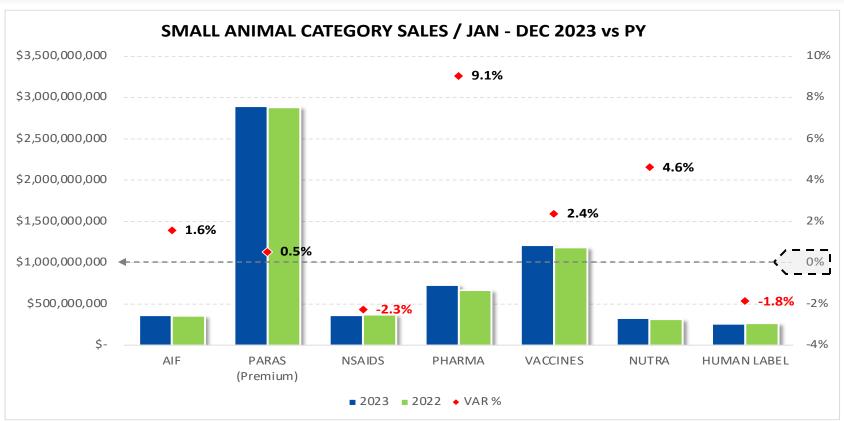


^{*} Includes pesticides



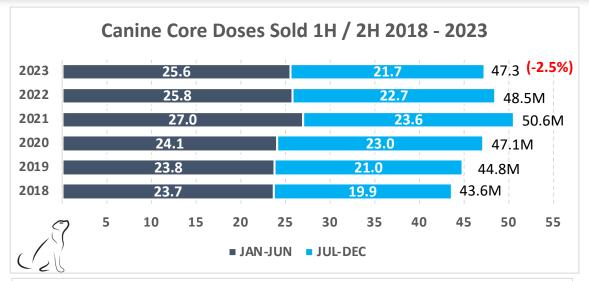
2023 Annual Review Key Segment Analysis For the period JAN-DEC 2023 vs Same Period PY

Companion Animal Sales Growth Struggled to +2.1%; Unit Volumes Declined for Multiple Drug Categories & Vaccines

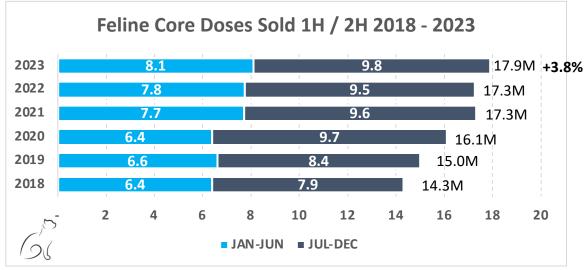


Small animal product sales struggled to +2.1% growth with mixed results across therapeutic categories. Anesthesia and other specialty products drove +9.1% growth in their category while NSAIDS and human pharmaceuticals each declined. Declining parasiticide volumes held the largest sector to nearly zero growth while vaccines revenues grew +2.2% despite a net loss in unit volume.

Annual Canine Wellness Vaccine Doses Purchased Declined by (-2.5%) while Feline Doses Grew by +3.8%



Canine wellness doses (DAP) continued their decline from 2022, falling a further (-2.5%) as patient visits continued to contract.



Feline wellness vaccination rates (HCP/RCP) over-indexed vs canine, posting net growth in doses of +3.8%

All doses intended for export were excluded from this analysis



Source: ALYX-19 Market Survey Data for Small Animal Vaccines

Pet Parasiticide Revenues Stagnant at +0.5% Growth; Doses Sold Were Lower for Canine (-5%) and Feline (-1%)

Parasiticide preventative doses retreated again this year across all sectors with canine F&T and Heartworm down more than (-5%), double the % losses in 2022. Feline doses also declined but at the lesser rate of (-0.9%).

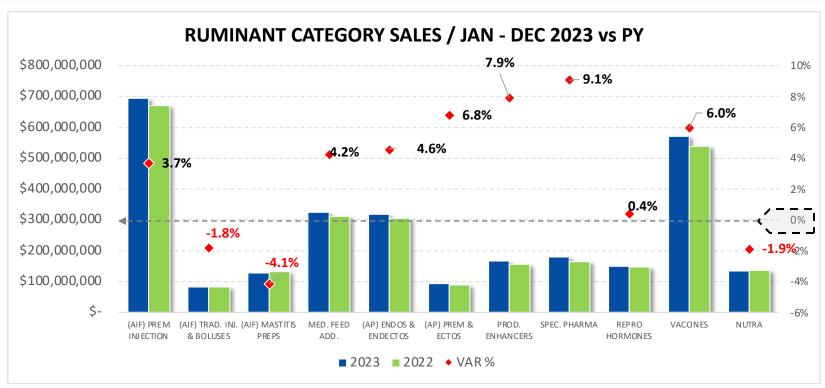
Market share for Isoxazoline (ISOX) formulations for cats improved slightly by +0.3%; canine ISOX performance was more significant with +2.3% improvement in the F&T sector and + 3.2% of Heartworm preventatives.

Small Animal Parasiticides * / All Accounts	2022	2023	% VAR ('23 vs '22)	
Canine Flea Doses	154.1M	145.8M	-5.4%	
Canine Heartworm Doses	192.1M	181.3M	-5.6%	
Feline Total Parasiticide Doses	22.1M	21.9M	-0.9%	
ISOX as % of Canine Flea Doses	85.7%	87.9%	+2.3%	
ISOX as % of Canine Heartworm Doses	20.6%	23.8%	+3.2%	
ISOX as % of Feline Flea Doses	24.8%	25.1%	+0.3%	

^{*} monthly dose equivalents

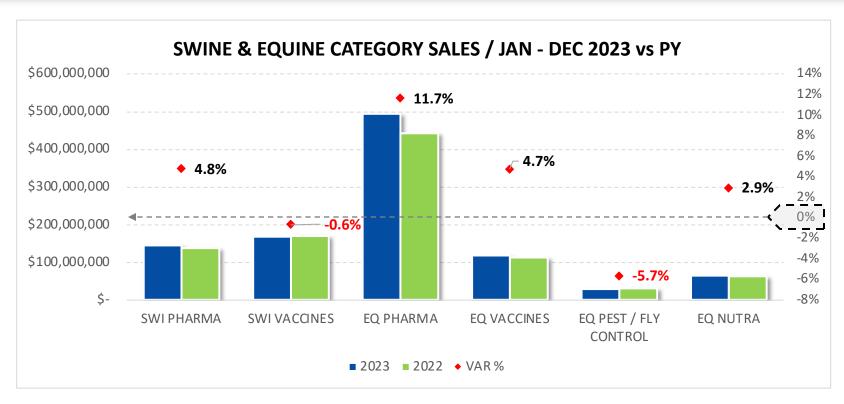


Strong Fed Cattle and Cow-Calf Performance Off-Set Weakness in the Dairy Markets to deliver +4.1% Growth



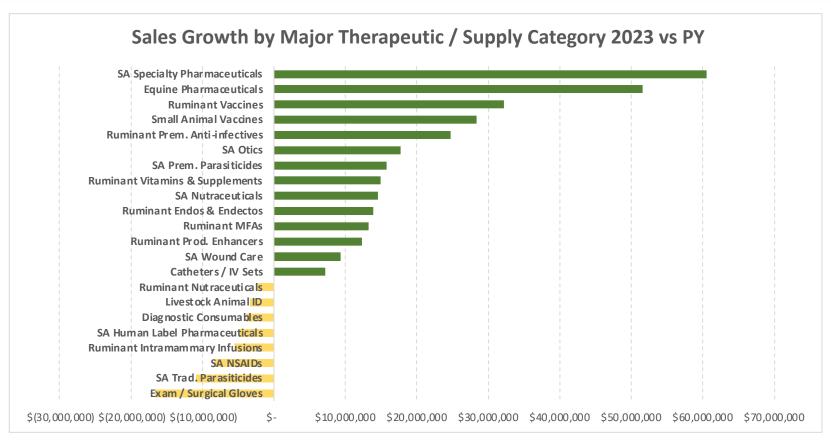
Cattle sales improved significantly over 2022's near zero growth levels, up +4.1% for the year. Results varied by sector as continued strength in the fed cattle markets bolstered injectable anti-infectives, productivity enhancers and MFAs. Parasiticide and vaccine sales were further buoyed by sales to the cow-calf sector. Dairy-related categories including mastitis preps, traditional anti-infectives, repro hormones, and milk replacers (nutra) all struggled.

Equine Lead All Sectors AGAIN; Swine Vaccine Pricing Pressure Offset by Strong AIF & Iron Supplement Sales



Equine again led all species in net growth up +8.8% vs PY. Joint / mobility, vaccines, GI, and dewormer products were all strong performers. Pricing pressure for swine vaccines overshadowed an increase in unit volume but this negative outcome was offset by a boost in anti-infectives and iron supplement sales which pushed net results to +1.8% growth for the year.

Market Growth of \$320M Driven by Pet / Equine Pharmaceuticals and Selected Ruminant Categories

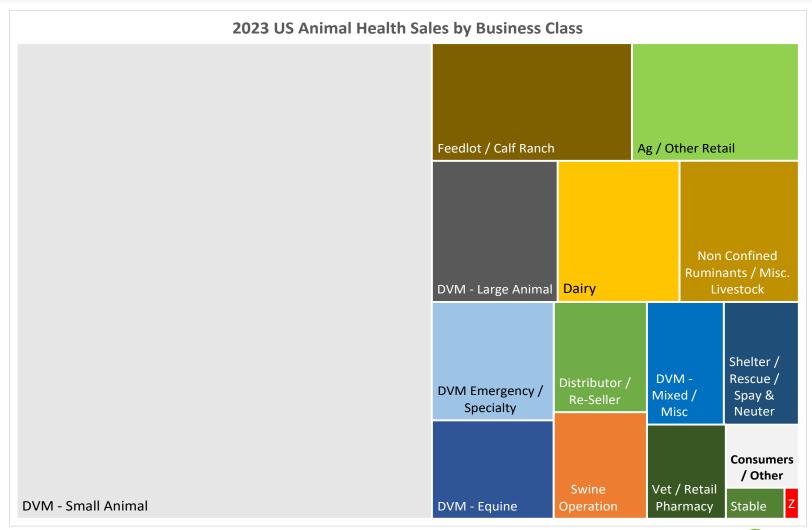


Small animal specialty and equine pharmaceuticals led all categories in \$ sales growth while sales for medical exam gloves, older SA parasiticides, and NSAIDs lagged the previous year.



Smart Sort™ Customer Segmentation Analysis

2023 Sales by Business Class Reported to ALX Were 53% DVM Small Animal; 18% Livestock; 17% Other DVM / Shelters



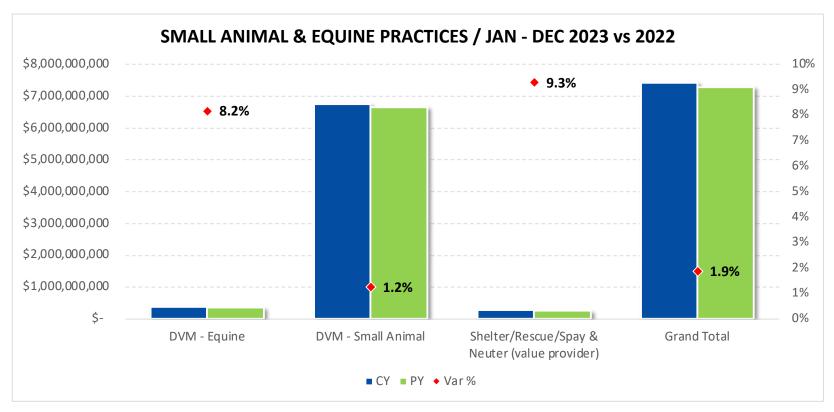
Today's Presentation Includes Customer Segmentation Data from the Proprietary Animalytix Smart Sort™ Platform

Business Class	Accounts **	2023 FY	2022 FY	% VAR
DVM - Small Animal	36 K+	\$6,569 M	\$6,396 M	+0.9%
*Emergency / Specialty	4 K+	\$476 M	\$425 M	+10.2%
DVM - Mixed / Misc	8 K+	\$315 M	\$292 M	+5.8%
DVM - Equine	4 K+	\$391 M	\$361 M	+8.3%
DVM - Large Animal	2 K+	\$578 M	\$547 M	+5.8%
*Shelter / Rescue / Spay & Neuter	6 K+	\$299 M	\$271 M	+10.3%
*Vet / Retail Pharmacy	1.1 K+	\$243 M	\$211 M	+15.3%
Feedlot / Calf Ranch	1.8 K+	\$770 M	\$742 M	+3.7%
Dairy	8 K+	\$560 M	\$574 M	-2.4%
*Non-Confined / Misc Livestock	42 K+	\$549 M	\$494 M	+11.1%
Swine Operation	8 K+	\$325 M	\$313 M	+3.8%
Ag / Equine / Pet Spec. Retail	14 K+	\$641 M	\$608 M	+5.3%
*Stable	13 K+	\$59 M	\$52 M	+12.1%
Distributor / Re-Seller / Exporter	700+	\$335 M	\$350 M	-4.2%
Other	100 K+	\$124 M	\$130 M	-4.6%
Grand Total	253 K+	\$12,232 M	\$11,765 M	2.8%

^{*} Customer class with double digit growth vs PY

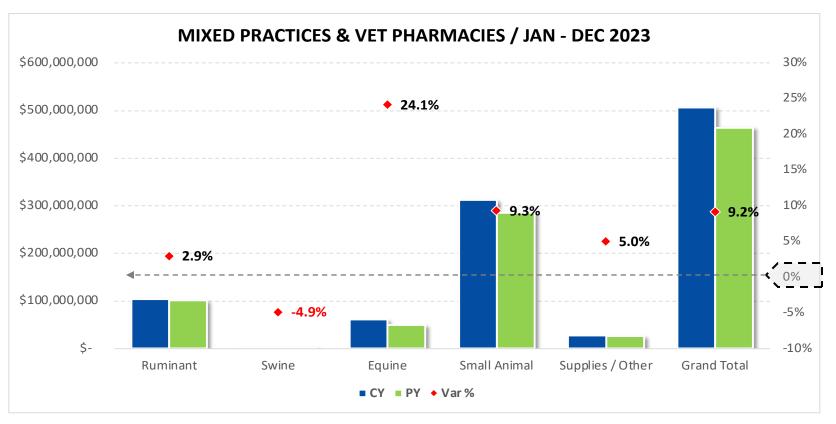
^{**} Results limited to customers purchasing \$500 or more in one or both reporting periods; results vary from charts which follow as those include all customers regardless of purchasing volumes as well as the impact of clients with negative sales (net returns)

Small Animal Hospital Growth Tepid at +1.2% as Patient Visits Stall; Strong Results for Equine Practices & Shelters



Equine practice growth was robust at +8.2% (vs +4% in '22) as was shelter growth at +9.3% (vs PY's +6.7%). Small animal practice results lagged the market at +1.2% (vs PY's +0.7%). Continued declining patient visits and lower medicalization rates are considered as key factors.

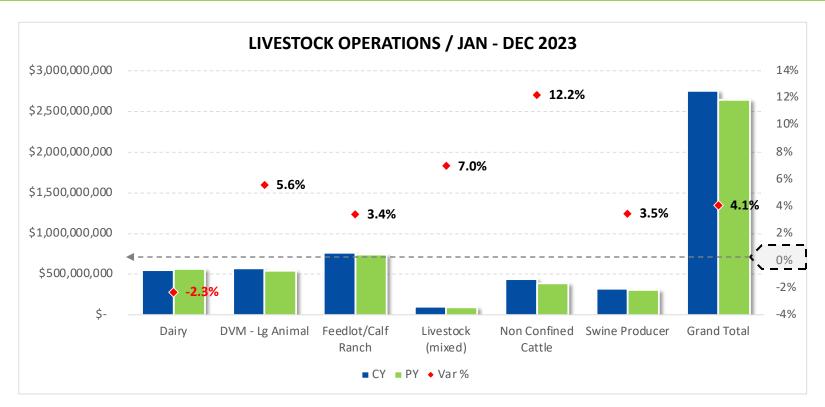
Mixed Practices & Vet Pharmacy Results Strong at +9.2% Growth; Benefitted from Both Equine and Pet Sales



Mixed practices and veterinary pharmacy growth out-paced total market growth at +9.2%. Exceptionally strong equine results at +24% were complimented by +9.3% improvement in small animal purchases.

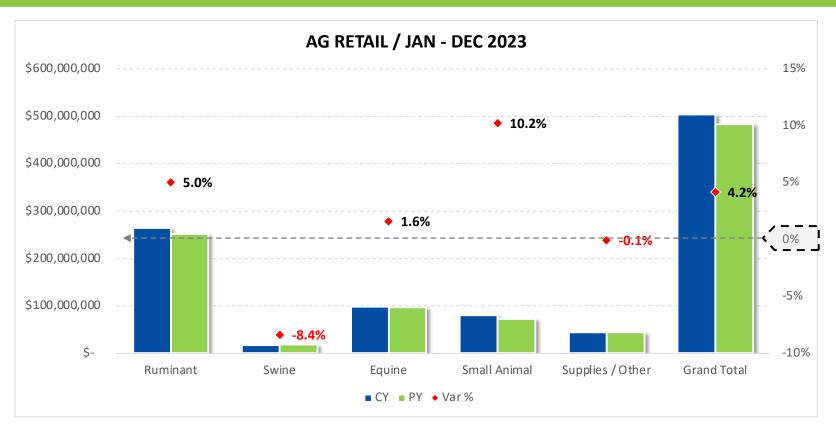
Ruminant results were modest at +2.9%.

Livestock Sales Growth of +4.1% Driven by Mixed Results Across Sectors; Non-Confined Soars as Dairy Falters



Non-confined (cow-calf / stocker) sales led all producer sectors based on the strength of the feeder calf markets. Large animal DVM and fed cattle sales were much improved vs 2022 at +3-5%. Dairy producer sales struggled throughout the year while swine producer purchases posted their strongest results in years at +3.5% growth.

Ag Retail Sales Moves from Flat Results in 2022 to +4.2% Based on Strong Pet and Ruminant Sales Growth



Ag retail sales rebounded from 2022 with +4.2% growth vs. +0.5% PY. Ruminant sales grew by +5% and pet sales led all sectors up +10.2%. Equine sales growth fell from +8% in PY to +1.6% for 2023 while the sales of ear tags and other supplies were nearly flat at (-0.1%) growth.



Animalytix Price Volume Analysis JAN - DEC 2023 vs PY

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

Sales for \$11.8B in vaccines, pharmaceuticals, nutraceuticals, and supplies of 9,000+ unique products and 20,000+ pack sizes were included in the analysis. Supplies, regardless of species focus, were aggregated into two groups, those used primarily in veterinary hospitals and all other supplies.

The analysis was done on a "like-unit" basis and based upon invoice pricing to the veterinarian, retailer, livestock producer, and other purchasers as reported to Animalytix.

The full sales impact for newly introduced (2023) or discontinued items (vs 2022) were included as VOLUME effects.

The analysis EXCLUDES the impact of manufacturer rebates paid directly to customers but does include free goods as reported to Animalytix.

Aggregate results for the 12 month period were as follows:

- Net pricing variance + 2.9%

- Net volume variance - 0.2%

Net total variance + 2.7%



Positive Pricing for Equine & Pet Combined with Volume Gains for Equine & Livestock to Drive Growth in 2023

2023 US Animal Health Industry Price / Volume Analysis							
2023 SEGMENT / SPECIES	FACTOR	Small Animal	Equine	Ruminant	Swine	Supplies	Grand Total
Parasiticides		4.0%	5.4%	4.4%	4.6%	-	4.1%
Pharmaceuticals 1,2		4.2%	3.6%	2.6%	-0.3%	-	3.8%
Vaccines	PRICE	2.6%	4.2%	5.4%	-2.7%	-	3.0%
Anti-infectives 1,3	EFFECT	3.6%	4.0%	-3.8%	-0.8%	-	-1.5%
Nutraceuticals & Supplements	Litter	2.8%	5.0%	5.0%	-6.4%	-	3.9%
Hospital Supplies		-	-	-	-	2.8%	2.8%
Misc Supplies		-	-	-	-	5.5%	5.5%
Sub-Total Price		3.7%	4.2%	1.1%	-1.7%	3.6%	2.9%
Parasiticides		-3.9%	0.6%	0.7%	-2.2%	-	-3.2%
Pharmaceuticals 1,2		0.0%	10.1%	1.1%	7.8%	-	1.7%
Vaccines	VOLUME	-0.2%	0.6%	0.4%	2.0%	-	0.2%
Anti-infectives 1,3	EFFECT 4	-2.2%	-7.5%	6.8%	5.3%	-	4.1%
Nutraceuticals & Supplements	LITECT	1.9%	-2.0%	-1.1%	6.1%	-	0.3%
Hospital Supplies		-	-	-	-	-0.3%	-0.3%
Misc Supplies		-	-	-	-	-4.2%	-4.2%
Sub-Total Volume		-1.9%	4.6%	2.9%	3.5%	-1.4%	-0.2%
Total Price & Volume Effect		2.1%	8.8%	4.1%	1.8%	2.2%	2.7%

¹ Includes impact of human labeled pharmaceuticals

⁴ Full sales impact of products introduced sold in only one period (e.g., 2022 or 2023) considered as "VOLUME" effect



² Period analysis for JAN - DEC 2023 vs PY EXCLUDING impact of existing products with changes in "go-to-market" strategies

³ Includes impact of medicated feed additive (MFA) anti-infectives, intramammaries, oral forms, and injections



Focused Insights:

- The US Market for Veterinary Generics
- Canine / Feline Specialty Practices
- Inflationary Effects and Pet Surrenders

Generic ANADA Sales Grew at nearly 2X the Rate of Pioneer Drug Sales Growth (+5.3% vs +2.8%)

Veterinary Generic Drug Sales (as reported to ALX)	JAN - DEC 2023	JAN - DEC 2022	VAR
FDA NADA (Pioneer) Brands	\$ 6,076.4 M	\$ 5,910.9 M	2.8%
FDA ANADA (Generic) Brands	\$ 1,075.7 M	\$ 1,021.4 M	5.3%
CDER Human Labeled Pharmaceuticals (Generics)*	\$ 297.7 M	\$ 303.4 M	<u>-1.9%</u>
Total FDA / CDER Approved Pharmaceuticals	\$ 7,449.8 M	\$ 7,235.8 M	3.0%
% of Total Veterinary Drug Sales by Type	JAN - DEC 2023	JAN - DEC 2022	VAR
FDA NADA (Pioneer) Brands	81.6%	81.7%	-0.1%
FDA ANADA (Generic) Brands	14.4%	14.1%	0.3%
CDER Human Labeled Pharmaceuticals (Generics)	4.0%	<u>4.2%</u>	-0.2%
Sub-total Generic Products	18.4%	18.3%	0.1%

^{*}Now includes human ophthalmics

- ANADA sales over-indexed in 2023 with +5.3% growth while human generic sales declined (-1.9%); generic growth was driven primarily by small animal sales of anesthetics / sedatives, NSAIDs, and anti-infectives.
- Generic drugs as a % of total pharmaceutical sales reported to ALX were relatively flat, increasing by only +0.1%.



Focused Insights:

- The US Market for Veterinary Generics
- Canine / Feline Specialty Practices
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Species "Focus Rate" of Veterinary Practices & Shelters Based on Ratio of Annual Wellness Vaccinations

DVM Practices & Shelters with 500 + DAP / HCP Doses Purchased in 2023							
ACCOUNTS*	Canine-Focused		Feline-Focused		Mixed-Focused		Grand Total
DVM - Small Animal	20,50	00		550	4,4	175	25,525
DVM - Mixed / Emergency / Specialty	<u> </u>	00		5	<u> </u>	75	680
Shelter / Rescue / Spay & Neuter	70	00	196	1,100	(26 6 1,3	350	3,150
Grand Total	22,02	25		1,675	6,0	000	29,700
Canine Core Doses	Canine-Focused		Feline-Foc	used	Mixed-Focused	1	Grand Total
DVM - Small Animal	31,900,00	00		60,000	3,900,0	000	35,860,000
DVM - Mixed / Emergency / Specialty	1,000,00	00		1,000	70,0	000	1,071,000
Shelter / Rescue / Spay & Neuter	1,700,00	00	500,000		2,350,0	000	4,550,000
Grand Total	34,600,00	00	5	561,000	6,320,0	000	41,481,000
Feline Core Doses	Canine-Focused	d	Feline-Fo	cused	Mixed-Focuse	ed	Grand Total
DVM - Small Animal	8,550,00	00	ϵ	500,000	2,650,0	000	11,800,000
DVM - Mixed / Emergency / Specialty	225,00	00		5,000	50,0	000	280,000
Shelter / Rescue / Spay & Neuter	500,00	00	2,1	100,000	2,375,0	000	4,975,000
Grand Total	9,275,00	00	2,7	705,000	5,075,0	000	17,055,000

Practices or shelters with 67% or more of total annual wellness doses associated with one species were designated as having a "focus" for that species.



^{*} Number of accounts reported as rounded values (nearest 25)



Focused Insights:

- The US Market for Veterinary Generics
- Canine / Feline Specialty Practices
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In the News ... The Impact of Inflation on US Pet Owners

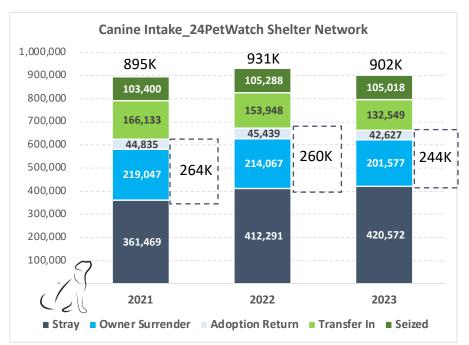
- Increased Pet Care Costs: The year 2023 saw a significant increase in veterinary service prices, with an inflation rate of 9.44%. ¹
- Alternative Shopping: Due to inflation, 50% of pet owners have had to shop for cheaper alternatives to pet food. ²
- Cancelled Subscriptions: 55% of pet owners have had to cancel their pet food subscription on Chewy.com, Amazon.com, or through a raw food/pre-cooked meal service due to inflation. ²
- **Delayed Veterinary Care**: 46% of pet owners have had to forego or delay veterinary procedures or treatments for their pet due to inflation. ²
- **Rehoming Considerations**: Nearly a quarter of respondents (24%) in a recent survey have, in the last 12 months, considered rehoming their pet or surrendering their pet to a shelter or rescue because of inflation. ²

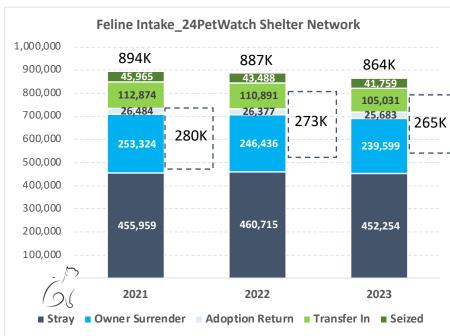


¹ https://www.in2013dollars.com/Veterinarian-services/price-inflation

² https://www.veterinarians.org/inflation-impact-on-pet-owners/

The Media is Reporting "Full Shelters" Due to Owner Surrenders or Adoption Returns ... Is that True?





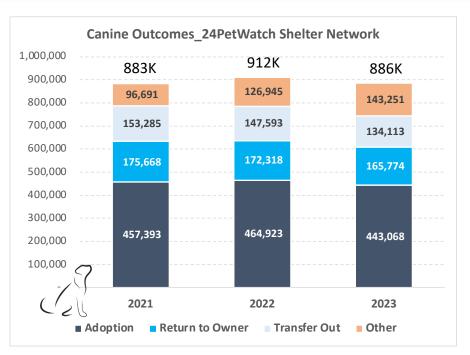
24PetWatch, which provides PIMS software for US shelters handling ~50% of annual shelter placements / adoptions, reports canine and feline intake rates fell in 2023 vs 2022.

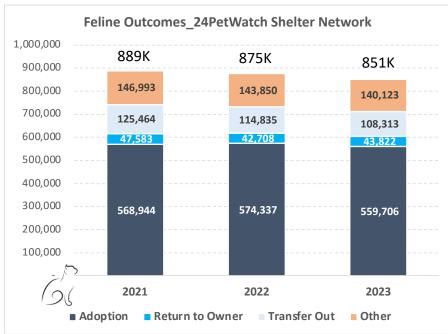
While canine intake of stray dogs increased, net surrenders and adoption returns actually declined as did facility transfers. For cats, the shelters experienced <u>a decline across all</u> <u>intake categories</u> in 2023 vs 2022.





Pet Placements / Outcomes Have Fallen Within 1-2% of Total Intakes for the Period 2021 - 2023





The data also indicates net adoptions and owner returns declined in 2023 for both species.

A comparison of Intake vs Outcome results for the three-year period is as follows:

Canine +1.3% ('21)

+ 2.1% ('22)

+1.8% ('23)

Feline

+0.6% ('21)

+ 1.4% ('22)

+1.5% ('23)



Information courtesy of 24PetWatch®





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