



IITM BS Degree Program,
Indian Institute of Technology, Madras,
Chennai Tamil Nadu, India, 600036

Analyzing Growth Strategies for Agricultural Supply Store

(BDM Capstone Project)



SUBMITTED BY:

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Business Introduction

- Jain Seed Store was established in 1998 by Mr. Surinder Jain and owned by Mr. Pankaj Jain since 2019.
- It is a B2C agrochemical retail shop in Dera Bassi.
- It offers seeds, fertilizers, insecticides, fungicides, and growth promoters to small-scale farmers.
- Between August 5 and October 31, 2024 (87 days), the store generated ₹16,16,210 in revenue.
- The business focuses on quality, affordability and customer trust.



Sales Data

- Data is collected from August 5, 2024 to October 31, 2024 (87 days)
- Jain Seed Store generated ₹16,16,210 in revenue.
- It contains data of 158 items with attributes of name, quantity, MRP, Selling Price, Total sales, total revenue generated and daily product summary.

A	B	C	D	E	F	G	H	I	J	K
Serial Number	Name	Quantity	MRP	Selling Price	Total Items Sold from 5/8/24 to 31/10/24	Total Sales from 5/8/24 to 31/10/24	2024-08-05		2024-08-06	
							Units Sold	Total Sales	Units Sold	Total Sa
1	AGRIVENTURE ATRAZ HERBICIDE (Ateazine 50% WP)	500g	600	450	34	15300	0	0	0	
2	ANTENNA - ACETAMIPRID 20% SP	100g	210	170	11	1870	2	340	0	
3	ANTENNA - ACETAMIPRID 20% SP	250g	500	390	21	8190	2	780	0	
4	ANTENNA - ACETAMIPRID 20% SP	500g	890	670	9	6030	0	0	0	
5	ATRATAF - ATRAZINE 50% WP	1kg	550	330	23	7590	0	0	0	
6	ATRATAF - ATRAZINE 50% WP	500g	400	300	19	5700	0	0	0	
7	AZOLE(Liquid Azoxystrobin 11% + Tebuconazole 18.3%)	100ml	170	150	20	3000	0	0	0	
8	AZOLE(Liquid Azoxystrobin 11% + Tebuconazole 18.3%)	1l	1450	1160	16	18560	0	0	0	
9	AZOLE(Liquid Azoxystrobin 11% + Tebuconazole 18.3%)	200ml	320	270	34	9180	0	0	2	
10	AZOLE(Liquid Azoxystrobin 11% + Tebuconazole 18.3%)	500ml	799	640	20	12800	0	0	0	
11	Aarnova (Azoxxy 18.2% + difenconazole 11.4%)	1l	1800	1530	13	19890	0	0	0	
12	Adama Takaf Diafenthuron 47% + Bifenthrin 9.4% SC	100ml	530	400	14	5600	0	0	0	
13	Adama Takaf Diafenthuron 47% + Bifenthrin 9.4% SC	250ml	1200	840	13	10920	0	0	0	
14	Adama Takaf Diafenthuron 47% + Bifenthrin 9.4% SC	500ml	2200	1430	18	25740	0	0	0	
15	Agriventure Pymetro Pymetrozine 50% WG	250g	950	760	8	6080	0	0	0	
16	Agriventure Pymetro Pymetrozine 50% WG	500g	1600	1280	14	17920	0	0	0	
17	Agriventure Thilamcy (Thiamethoxam 12.6% + Lambda-Cyhalothrin 9.5% Z	1l	2200	1100	14	15400	0	0	0	
18	Agriventure Thilamcy (Thiamethoxam 12.6% + Lambda-Cyhalothrin 9.5% Z	500ml	1250	750	14	10500	0	0	2	
19	Anand Size Fast	250ml	1300	1110	18	19980	0	0	0	
20	Anand Size Fast	500ml	2200	1870	6	11220	0	0	0	

Business Problems and Challenges

1. Cash Flow Constraints Due to Credit System
2. Manual Inventory Management Leading to Stock Mismatches
3. Limited Manpower Causing Inefficiencies
4. Cluttered Store Layout Affecting Customer Experience
5. Low Adoption of Digital Payments
6. Limited Marketing Reach & Customer Engagement



Cluttered Store Layout



Limited Manpower



Limited Marketing Reach

Data Analysis Methodology

- Data Collection:** Daily sales data was collected for 87 days (Aug-Oct 2024) from BusyWin management software.
- Data Structuring:** The data was cleaned and structured in a standardized Excel format, with products categorized.
- Statistical Analysis:** Descriptive statistics (mean, median, mode, variance, etc.) were applied to identify patterns.
- Visualization:** Visualizations were created to identify patterns and insights, focusing on key metrics.

	A	B	C	D	E	F	G	H
1	Serial Number	Date	Name	Quantity	MRP	Selling Price	Quantity Sold	Total Sale
2	1	2024-09-01	Indofill M-45(Mancozeb 75%)	300gm	255	200	2	400
3	2	2024-09-01	AZOLE(Liquid Azoxystrobin 11% + Tebuconazole 18.3%)	500ml	799	640	2	1280
4	3	2024-09-01	Nativo(Tebuconazole 50%+ Trifloxystrobin 25%)	50gm	650	390	2	780
5	4	2024-09-01	Layby(Cymoxanil 8% + Mancozeb 64%)	600g	700	560	1	560
6	5	2024-09-01	Topgun(Copper Oxychloride 50%)	800g	1100	990	2	1980
7	6	2024-09-01	Indofill M-45(Mancozeb 75%)	500gm	325	240	2	480
8	7	2024-09-01	Layby(Cymoxanil 8% + Mancozeb 64%)	100g	200	160	2	320
9	8	2024-09-01	WILLO-MITE - PROPARGITE 57% EC	500ml	811	630	1	630
10	9	2024-09-01	SUZUKA IIL (Flubendiamide 20% WG)	25g	270	190	1	190
11	10	2024-09-01	GENESIS - PROFENOFOS 40% + CYPER 4% EC	1l	940	560	1	560
12	11	2024-09-01	Pager- DIAFENTHIURON 50% WP	250g	870	650	1	650
13	12	2024-09-01	Katyayani MSM Metsulfuron-Methyl 20% WP	8gm	220	130	1	130
14	13	2024-09-01	WILQUAT - PARAQUAT DICHLORIDE 24% SL	1l	550	360	1	360
15	14	2024-09-01	PATRIOT - IMAZETHAPYR 10% SL	1l	1750	1140	1	1140
16	15	2024-09-01	WILFORCE-32 - PENDIMETHALIN 30% + IMAZETHAPYR 2% EC	1l	1190	880	1	880
17	16	2024-09-01	Glycel (Glyphosate 41% SL)	5l	3975	2190	1	2190
18	17	2024-09-01	KATYAYANI TATHAASTU (Quizalofop Ethyl 5% EC)	250ml	530	400	1	400
19	18	2024-09-01	WILLOSATE-41 - GLYPHOSATE 41% SL	500ml	485	320	1	320
20	19	2024-09-01	ZEAL CYNORINE	10ml	600	320	1	320

(Before)

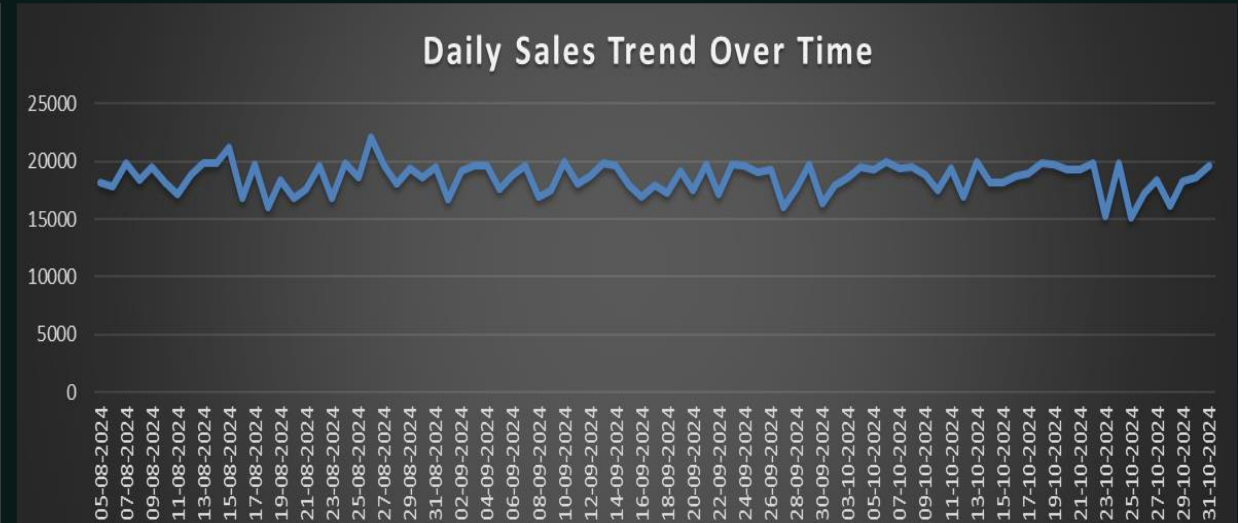
	A	B	C	D	E	F	G
1	Serial	Name	Quantity	MRP	Selling Price	Total Items Sold from	Total Sales from
2	Number					5/8/24 to 31/10/24	5/8/24 to 31/10/24
3	1	AGRIVENTURE ATRAZ HERBICIDE (Ateazine 50% WP	500g	600	450	34	15300
4	2	ANTENNA - ACETAMIPRID 20% SP	100g	210	170	11	1870
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21	19	Anand Size Fast	250ml	1300	1110	18	19980
22	20	Anand Size Fast	500ml	2200	1870	6	11220

(After)

Data Analysis- Graphs(1 / 2)

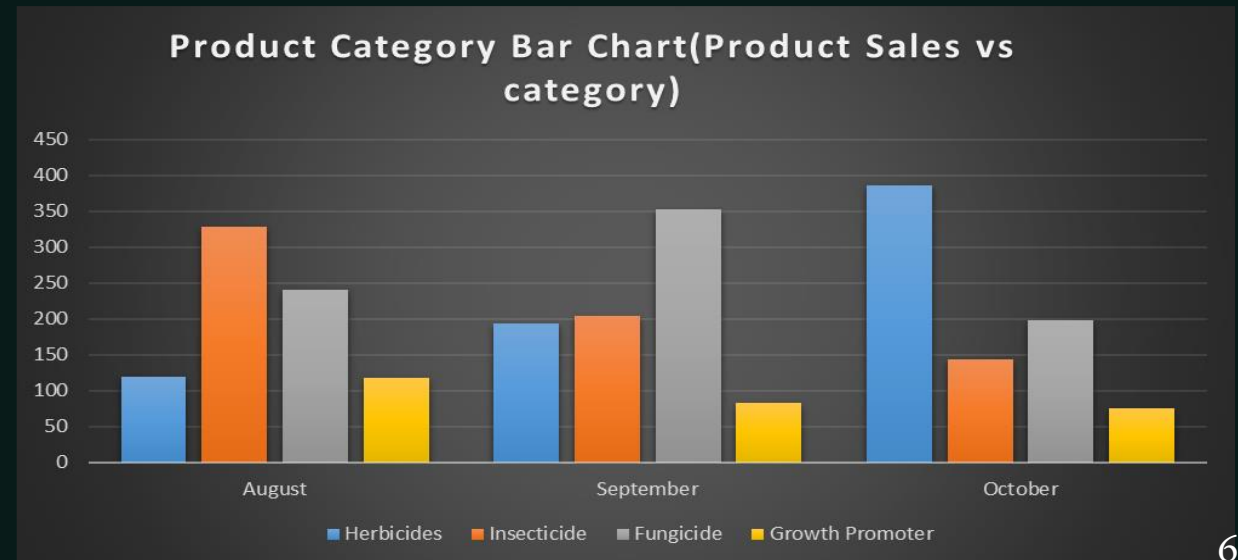
1. Daily Sales Trend (Line Chart):

1. Average Daily Sales is ₹18,000 – ₹19,000 with peaks on August 26 (₹22,070) and dips on October 25 (₹15,080).
2. Weekly patterns: Lower sales on Sundays (₹16,500), higher mid-week (₹19,200).
3. Targeted promotions on slower days could increase revenue by 10-15%.



2. Monthly Sales Distribution (Grouped Bar Chart)

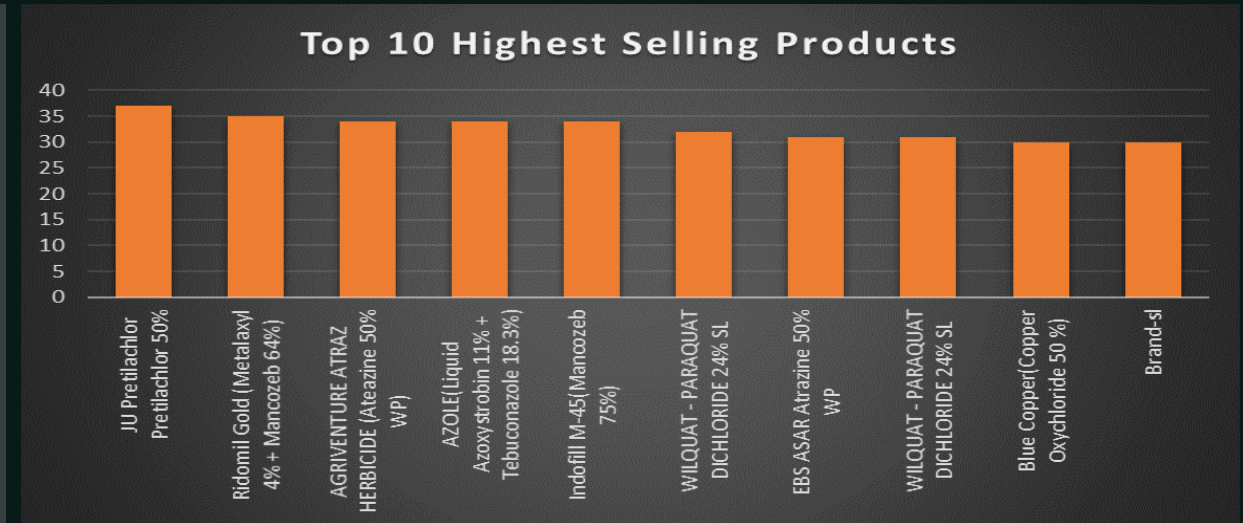
1. August: Insecticides (328 units, 41%) dominated.
2. September: Fungicides peaked (353 units, 42%), while herbicides rose.
3. October: Herbicides surged (386 units, 48%), highlighting seasonal shifts.



Data Analysis- Graphs(2/2)

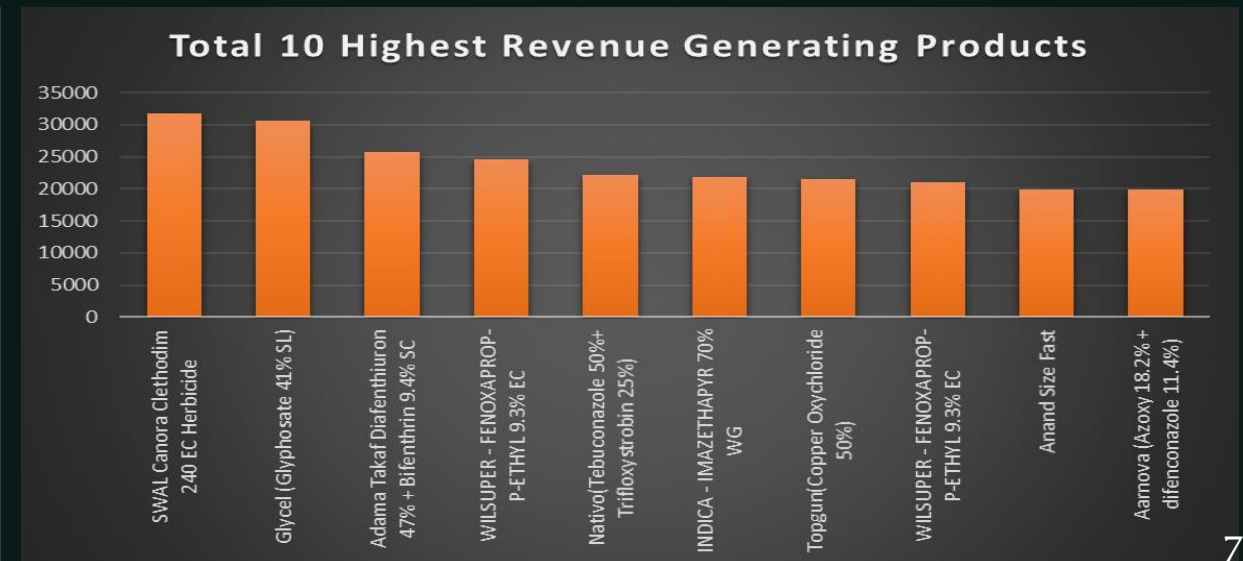
3. Top 10 Highest Selling Products (Bar Chart)

1. JU Prehtachlor (38 units) and Ridomil Gold (36 units) were the most sold products.
2. High sales volume does not always align with revenue contribution.
3. These products should be consistently stocked to meet customer demand.



4. Top 10 Highest Revenue-Generating Products (Bar Chart)

1. SWAL Cadora Getroclim (₹32,000) & Glyder (₹31,000) led in revenue.
2. Herbicides contributed 40% to top revenue, showing higher profitability.
3. ₹2,28,000 (14% of total revenue) came from these 10 products, indicating inventory priority.



Interpretation of Results

Revenue Distribution & Product Performance:

1. Top 5 products → Contribute only 8% of total revenue (₹1,29,297 of ₹16,16,210)
2. Herbicides dominate high-revenue products → Aligns with seasonal demand trend.

Seasonal Patterns & Category Shifts:

1. August: Insecticides peak (41% of sales, 325 units).
2. September: Fungicides lead (42% of sales, 350 units), with rising herbicide demand.
3. October: Herbicides surge (48% of sales, 385 units), while insecticides decline by 57%.

Daily Sales Patterns:

1. Sales average ₹18,000 – ₹19,000, peaking on August 26 (₹22,070) and dipping on October 25 (₹15,080).
2. Mid-week sales (₹19,200) outperform Sundays (₹16,500)

Pricing Strategy:

1. Premium products get ~35% discounts, boosting sales but affecting profit margins.
2. Nativo & Matko see 39-40% markdowns, indicating pricing optimization opportunities.

Inventory Challenges:

1. Overstocking of slow-moving items, shortages of seasonal essentials.
2. Aligning inventory to seasonal demand can improve cash flow & availability.

Recommendations

Inventory Management: Prioritize top 5 revenue-generating products to maintain availability.

Pricing Strategy: Lower discounts for inelastic demand, higher for slow movers, smaller discounts in peak demand, higher in off-season.

Operational Improvements: Reorganize store layout by season (August: Insecticides, September: Fungicides, October: Herbicides).

Digital Payments: Enhance cash flow by setting credit limits & introducing early payment incentives (1-2% discount).

Digital Payments: Introduce UPI & mobile payments to reduce cash dependency.

Marketing: Launch WhatsApp marketing & product updates for regular customers.

Conclusion

Revenue is highly fragmented; herbicides dominate high-revenue sales.

Seasonal demand shifts impact product performance.

Pricing strategy affects profit margins; premium products have high discounts.

Inventory misalignment leads to overstocking & shortages.

Action Plan

- ✓ Optimize inventory to match seasonal demand.
- ✓ Refine pricing to improve margins without hurting sales.
- ✓ Implement demand forecasting for better stock management.
- ✓ Leverage peak sales periods with targeted promotions.