



P-ISSN: 2349-8528

E-ISSN: 2321-4902

IJCS 2019; 7(6): 4008-4012

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Received: 16-09-2019

Accepted: 19-10-2019

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Business performance of start-Ups in agriculture - A case study

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Abstract

The present study analysed the business performance of Green Grow Nutrients Pvt. Ltd., an agriculture start-up company based in Bengaluru city. The business performance and growth rates were analysed by using financial ratios and compound annual growth rate. The marketing strategies was also analysed by using percentage analysis and Garrett's ranking technique. The study revealed that all the liquidity ratios except quick ratio were the highest for the year 2017-18 which indicates that the company can meet its current debt obligations. The study also reveals that the company registered an impressive performance with respect to procurement and sales. (CAGR of 17 and 16 percent respectively).

Keywords: Financial ratios, Growth rate

Introduction

Agricultural start-ups play a significant role in serving the small farmers agricultural sector in India. So, considering the significance and importance of agricultural start-ups in serving the small farmers there should be a more seed funding available to the agricultural start-ups also incubation and mentoring to make a larger impact. Start-ups and innovation are the backbones of a vibrant India and could be one of the key drivers for several of the potentially transformative program of Government of India such as 'Make in India' for employment generation. Today, there is a strong willingness among aspiring entrepreneurs (especially amidst the youth of India) to take risks and a vision to establish business models that would generate revenues and employment. Start-ups and innovation are two strong pillars that directly contribute to the nation's economic wealth as well as social development. The innovation ecosystem should be fully committed to providing all the support needed by the new generation of entrepreneurs. FICCI (Federation of Indian Chambers of Commerce and Industry) Start-ups Committee aims to build a booming start-up ecosystem thriving on the tightly-knit, most vibrant entrepreneurial system in the country. The time is right to create a platform for intentional and showcase indigenous technologies or innovations to the global audience and also invite global players to explore collaboration opportunities. Innovation by agriculture start-ups can change the future outlook of agriculture. There is a lot of increasing population and demand for superior quality food, hence, there is a pressure for better performance in the farm activities. Agriculture start-up is such a meaningful resolution it has been determined by decent growth in the country in five focus areas: supply chain, infrastructure development, finance and related solutions, farm data analytic and information platforms. Since, the launch of start-up India initiative in January 2016, a total of 15,632 start-ups have been recognised by Department for Promotion of Industry and Internal Trade as on January 27, 2019. A total of 366 agriculture-based start-ups have come up from 2013 to 2017 with more than 50 percent of the startups in the last five years starting in 2015 and 2016, more than 90 percent of all funding is focused on seed-stage and early-stage start-ups.

Agriculture start-ups have received decent support from the Government through supportive policies such as start-up India, Atal Innovation Mission, NewGen Innovation and Entrepreneurship Development Centre, the Venture Capital Finance Assistance (VCA) Scheme promoted by the Small Farmers' Agribusiness Consortium and ASPIRE scheme for Promotion of Innovation, Rural Industries and Entrepreneurship. Such schemes along with well-recognized accelerators, incubators and mentors identified for the agriculture start-up ecosystem have been working in tandem to provide the best support. Initially, the whole focuses of incubators and investors were on start-ups related to IT and other allied sources.

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Both start-ups and investors were chasing fancy valuation and glamour associated with start-up success stories. Start-up focused on copy-paste models using IT than getting on the ground and trying to solve real problems in India. So, agriculture start-ups are neglected. The failure rate among start-ups focusing on IT, e-commerce and other sought after segments were huge and the investors started getting an idea of the real picture of over the past two to three years, several start-ups in agriculture space have slowly but steadily grown and succeeded. Several central and state governments boosting the growth of the start-ups. Agriculture start-ups have come a long way and have a lot more support today. Initially, we got seed funding from a-IDEA, an Agri

incubation Centre, initiated by the National Academy of Agricultural and Research Management (NAARM), Hyderabad.

Green Grow Nutrients Pvt. Ltd. was the start-up company selected for the study. It was established in the year 2013 with the brand name of "SRUSTI". This company involved in the supply chain type of start-up and supplying granular formulation of micro-nutrients to the farming community through dealers as the distribution channel as the company is in nascent stage the curiosity towards its growth stimulates the researcher to take up the study with the following objectives.

Table 1: State wise number of start-ups in India

Sl. No.	State	Number of Start Ups
1.	Maharastra	2973
2.	Karnataka	2261
3.	Delhi	2094
4.	Uttar Pradesh	1294
5.	Telangana State	889
6.	Haryana	820
7.	Tamil Nadu	813
8.	Gujarat	811
9.	Kerala	603
10.	West Bengal	479
11.	Madya Pradesh	428
12.	Rajasthan	416
13.	Odisha	291
14.	Andhra Pradesh	228
15.	Bihar	199
16.	Chattisgarh	197
17.	Jharkhand	131
18.	Uttarakhand	124
19.	Assam	118
20.	Punjab	114
21.	Jammu and Kashmir	71
22.	Goa	69
23.	Chandigarh	61
24.	Himachal Pradesh	28
25.	Puducherry	19
26.	Manipur	12
27.	Nagaland	7
28.	Arunachal Pradesh	4
29.	Tripura	4
30.	Andaman and Nicobar	4
31.	Dadra and Nagar Haveli	3
32.	Daman and Diu	2
33.	Meghalaya	2
34.	Mizoram	2
35.	Sikkim	1

Source: Lok Sabha reply

1. To assess the financial performance of Green Grow Nutrients Company
2. To document the procurement and sales growth rate of the company

Methodology

The present study was carried out during 2017-18 to analyse the financial performance of the Green Grow Nutrients and its growth rate using secondary data.

Selection of study area

Bengaluru is the start-up hub of the country and the Green Grow Nutrients Pvt. Ltd. Company is located in Bengaluru. The present study was carried out in the company itself 20,

2nd Floor, SJP Arcade 2nd cross Balaji layout Dasarahalli Main Road Dasarahalli, Rachenahalli, Lake, Bengaluru, Karnataka 560024. Bengaluru is one of Asia's fastest-growing cities and India's fifth-largest city. Situated at an altitude of 920 meters above sea level, Bengaluru is the principal administrative, cultural, commercial and industrial center of the South Indian State of Karnataka. It has seen a major technology boom and is now home to more than 250 high-tech companies, including homegrown giants like Wipro, IBM and Infosys. The erstwhile garden city has now been pegged the 'Silicon Valley' of India.

Data collection: The present study depends on secondary data relating to the financial performance and growth rate

were assembled from the financial statements maintained in the company records from 2013-18 (five years).

Analytical framework

To analyse the business performance, financial ratios are the effective tools used, to know about the growth of the company growth rate analysis *i.e.* Compound Annual Growth Rate (CAGR) was used. Financial ratios include liquidity ratios, activity ratios and profitability ratios.

Liquidity ratio was analysed using current ratio, quick ratio and liquidity ratio.

Activity ratio was analysed using total debt ratio, inventory turnover ratio, days of inventory holding, total asset turnover ratio and working capital turnover ratio.

i. Total debt ratio: It is obtained by dividing current liabilities by current asset.

ii. Inventory turnover ratio: It is obtained by dividing the cost of goods sold by the average inventory.

iii. Days of inventory holding (DIH): It is calculated by dividing the cost of goods sold by average inventory and whole is multiplied with the number of days in a year.

iv. Total asset turnover ratio: It is the ratio gives us the ability of the firm in generating sales from all the financial sources committed to total assets and calculated by dividing the sales by total assets. Thus, higher ratio is always more favourable.

v. Working capital turnover ratio: The firm can compute it by simply dividing sales by working capital.

Profitability ratios was analysed using net working capital, net profit to working capital ratio, net profit to total sales ratio

and net profit to fixed assets ratio.

Growth rate analysis: Growth rate of products procured and sales of the products were computed using Compound Annual Growth Rate (CAGR) formulae where

$$CAGR = [(End\ value/Initial\ value)^{(1/Number\ of\ years)}] - 1$$

Results and Discussion

Business performance of the Green Grow Nutrients Pvt. Ltd. Company

The business performance is assessed by the financial ratio analysis using the financial statement of the Green Grow Nutrients Pvt. Ltd. Company which have been presented below.

Liquidity ratios

The current ratio of the company (Table 2) ranged from 1.13 (2013-14) to a maximum of 2.21 (2017-18) over the study period. The company must have a current ratio of at least 1.0 which means it can exactly meet its current debt obligations. So, this company is solvent. These findings have the support of Bhunia *et al.* (2011)^[4], Nalwaya and Vyas (2012)^[9] and Kajanathan (2014)^[6].

The liquidity ratio of the company (Table 2) ranged from 0.93 (2013-14) to a maximum of 1.95 (2017-18) over the study period. But, during the initial stages, the company is not performing well (2013-14). These results are in contradiction with the findings of Shetty (2016)^[17] and Shah (2017)^[16] and seeks the finding of Neha and Girish (2013)^[10].

The quick ratio of the company (Table 2) ranged from 0.11 (2013-14) to a maximum of 0.41 (2015-16) over the study period. To stay solvent and pay its short-term debt without selling inventory, the quick ratio must be at least 1.0 which is not found. Hence, the short-term liquidity of the company is not encouraging. This result seeks the support of Shah (2017)^[16] and Shetty (2016)^[17].

Table 2: Liquidity ratios of Green Grow Nutrients Pvt. Ltd.

Sl. No.	Year	Current ratio	Liquid Ratio	Quick Ratio
1.	2013-14	1.13	0.93	0.11
2.	2014-15	1.44	1.28	0.28
3.	2015-16	1.69	1.42	0.41
4.	2016-17	1.45	1.16	0.17
5.	2017-18	2.21	1.95	0.22

Activity ratios

The total debt ratio was highest during 2013-14. It ranged from 0.89 (2013-14) to 0.45 (2017-18) as the lowest value over the study period.

The total debt ratio is minimum during the year 2017-18, 0.45 (Table 3) it means 45 percent in terms of percentage it measures the financial leverage. The company's debt is more than 50 percent in all four years except 2017-18 during the study period means the company is leveraged and it leverages on outside sources of financing.

The inventory turnover ratio ranged from 35.75 (2013-14) to a maximum of 58.47 (2017-18) and the minimum value noted as 28.60 (2015-16) over the study period.

The inventory turnover ratio is an efficiency ratio that shows how effectively inventory is managed. It measures how many times the average inventory is sold during a period. The present study reveals that the average inventory turnover is 39.47 (Table 3) which implies that the company effectively sells its products an average of 39.47 times in a year. Higher

the inventory turnover ratio is desirable for the growth of any company. The findings are in line with Kajanathan (2014)^[6]. The days of inventory holding ranged from 10.21 (2013-14) to 6.24 (2017-18) as the minimum value and the maximum of 12.76 (2015-16). In other words, it holds a maximum inventory of 13 days during the study period.

The total asset turnover ratio ranged from 3.30 (2013-14) to 3.29 (2017-18). The maximum value noted is 3.48 (2015-16) and the minimum value noted is 3.19 (2016-17) which means the company is generating maximum of 3.48 rupees of sales for every rupee invested in assets. These results are in contradiction to the findings of Singh (2018)^[18] and Dahir (2016)^[5].

The working capital turnover ratio ranged from a minimum of 4.49 (2013-14) to a maximum of 5.85 (2017-18) means a high turnover ratio indicates that management is being extremely efficient in using a company's short-term assets and liabilities to support sales. The present study reveals that the working capital turnover ratio is increasing year by year. Hence, the working capital is well utilized to support sales.

Table 3: Activity ratios of Green Grow Nutrients Pvt. Ltd.

Sl. No.	Year	Total debt ratio	Inventory turnover ratio	Days of inventory holding	Total asset turnover ratio	Working capital turnover ratio
1.	2013-14	0.89	35.75	10.21	3.30	4.59
2.	2014-15	0.70	38.84	9.40	3.47	5.44
3.	2015-16	0.59	28.60	12.76	3.48	5.20
4.	2016-17	0.69	35.70	10.22	3.19	5.34
5.	2017-18	0.45	58.47	6.24	3.29	5.85

Profitability ratios

The profitability of the company was assessed using four ratios namely net working capital, net profit to working capital, net profit to total sales and net profit to fixed asset ratios.

The net working capital ranged from a minimum of 8,56,915 (2013-14) to a maximum of 57,21,375 (2017-18). The company has positive networking capital which means the company has enough current assets and money left over after paying its current liabilities having more net working capital helps a company run its business. In this company, it has enough to cover its short-term bills available to spend on growing its business.

The net profit to working capital ratio ranged from 0.03 (2013-14) to 0.02 (2017-18). The maximum value found is 0.36 (2016-17) and the minimum value found is 0.01 (2014-15). This result reveals the contribution of working capital to net profit, in these cases, the contribution is very poor. So, there is a need to improve the ratios by increasing the total

sales volume. These results are supported by Saigeetha and Surulivel (2017)^[15].

The net profit to total sales ratio highest in 2016-17 (0.07), lowest during 2013-14 and 2015-16 (0.01 each) and negligible during the financial year 2014-15 and 2017-18 were noted during the study period. This is used to measure how much the net profit has been achieved per total sales, in other words, the unit net profit earned per unit sales in the present study the earnings are very poor. These results are supported by Saigeetha and Surulivel (2017)^[15], and Shah (2017)^[16].

The net profit to fixed asset ratio is used to measure the net profit earned per fixed asset which reveals good response with highest during 2016-17 (0.97) and lowest during 2014-15 (0.04) means maximum 0.97 rupees earned per one rupee of a fixed asset. These results are in contradictory to the findings of Saigeetha and Surulivel (2017)^[15] and Srinivasan (2018)^[20]. The above findings are represented in Table 4.

Table 4: Profitability ratios of Green Grow Nutrients Pvt. Ltd.

Sl. No.	Year	Net working capital (Rs.)	Net profit to working capital	Net profit to total sales	Net profit to fixed asset ratio
1.	2013-14	8,56,915	0.03	0.01	0.08
2.	2014-15	21,42,200	0.01	0.00	0.04
3.	2015-16	35,96,452	0.07	0.01	0.14
4.	2016-17	32,35,556	0.36	0.07	0.97
5.	2017-18	57,21,375	0.02	0.00	0.05

Procurement and sales growth rate of the Green Grow Nutrients Pvt. Ltd. Company

The procurement and sales growth of the company is noted as follows.

Table 5: Procurement and sales growth rate of Green Grow Nutrients Pvt. Ltd.

Sl. No.	Year	Products purchased amount (in Rs.)	Total sales amount (in Rs.)
1.	2013-14	2,41,72,140.21	3,71,51,372
2.	2014-15	2,84,15,163.00	4,21,74,713
3.	2015-16	3,02,91,542.00	5,02,96,508
4.	2016-17	3,96,42,615.00	6,01,50,425
5.	2017-18	4,50,65,846.00	6,72,83,754
CAGR (%)		17	16

The compound annual growth rate of products procured and sales of products was estimated. The results reveal that Table 4 signifies that the growth rate in the procurement and sale of products are positively and statistically significant.

The growth in procurement and sales is highly significant in financial terms. Thus, it may be concluded that the ever-increasing the demand for the granular formulation of micronutrients supplied by the Green Grow Nutrients Pvt. Ltd. Company has expanded procurement growth rate of 17 percent and 16 percent sales growth rate during the study

period. These results are in line with Paramasivan and Pasupathi (2016)^[12] and Raj and Selvaraj (2007)^[13].

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