

SWOT Analysis of Farming Situation of Major Crops and Growth Drivers

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Abstract: Strengths, weaknesses, opportunities and threats (SWOT) analysis indicates a framework for helping the researchers or planners to identify and prioritize the goals and to further identify the strategies of achieving them. SWOT analysis is a technique used to analyze the strengths, weaknesses, opportunities and threats of farming system. Farming practices play a vital role in food security. As such, SWOT analysis is used to identify strategies for agricultural development, especially in farming systems and they help the researchers or planners to manage and prioritize them for achieving food security. On the basis of primary and secondary information collected by the team members of KVK (Krishi Vigyan Kendra) from practising farmers, SWOT analysis was carried out with respect to existing farming system. The research area was located in adopted villages in rural areas of KVK at Amreli district under the Junagadh Agricultural University, Junagadh, Gujarat state. Study conducted in four taluka for each farming system where KVK have adopted total fifteen no. of villages from which six villages selected for the study with different cropping pattern. Based on the information, the considered identified strategies play a vital role in farming system development and in increasing food security in this area. The important strategies that must be considered are: Development of local market opportunities and in storage infrastructure, Planting of crops with high economic values, Development of governmental supports, Preparing strategic plans for development of organic farming, Considering the quality of crops, Considering farm sustainability indexes, Using sustainable water resources management, Development of extension programs based on farmers' needs.

Key words: Strengths, Weaknesses, Opportunities, Threats, and KVK

1. INTRODUCTION

A SWOT analysis (where SWOT stands for strengths, Weakness, Opportunities and Threats) is a classical business improvement tool used by organisations and big businesses to better understand their strengths and weaknesses and think about the environment in which they operate. It reveals opportunities that can be taken advantage of and actions that can reduce the impact of threats. A SWOT is a useful thing for farm and a dairy farm business, to do in order to develop and operate a comprehensive district agriculture plan of Amreli in a smarter manner. On the basis of primary and secondary information collected by the team members of Krishi Vigyan

Kendra from practising farmers, SWOT analysis was carried out with respect to existing farming system as under.

2. RESEARCH METHODOLOGY

Researcher is working in the KVK (Krishi Vigyan Kendra) at Amreli district under the Junagadh Agricultural University, Junagadh, Gujarat. KVK have adopted total 15 no. of villages. Study conducted in four talukas for each farming system, from which six villages selected for the study with different cropping pattern.

Table 1: Selected villages with farming system and cropping pattern

Sr. No	Village	Taluka (Block)	Farming system	Cropping Pattern
1	Sanosara	Amreli	Agriculture	Groundnut
2	Lapaliya	Amreli	Agriculture	Groundnut + wheat
3	Matirala	Amreli	Agriculture	Bt. Cotton
4	Karjala	Savarkundla	Agriculture + Animal Husbandry	
5	Mayapadar	Kukavav	Agriculture + Horticulture + Animal husbandry	
6	Shilana	Bagasara	Fisheries	

3. RESULTS AND DISCUSSION

3.1 Farming System: Agriculture

3.1.1 Cropping Pattern: Groundnut

Strength 1.Traditional knowledge for cultivation of crop in semi-arid region, where rain is the limited factor. 2.Good yield potentiality of groundnut under the soil & climate. Fodder quality also very nutritive for milch animals.	Weakness 1.Poor quality of water in coastal area. 2.Mono cropping of creates soil health problems. 3.Shortage of quality seed.
Opportunities 1.Short duration salt resistant Cash crop. 2. Better suitability under the soil, water and climate of district. 3.Healthy available market, as it is the very important crop of this area. 4.High quality of groundnut suitable for HPS.	Threats 1.Drought and erratic rain fall restricts the yield. 2.Lowering ground water table. 3.Pest and disease problems. 4.Fluctuating in market price may affect the sustainability. 5.Labour intensive harvesting, labour problem during peak seasons.

3.1.2 Cropping Pattern: Groundnut +wheat

Strength 1.Groundnut-Wheat is the best cropping sequence in all AES. 2.Congenial atmosphere of soil and climate for this sequence. 3.Traditional knowledge of cultivation of these crops. 4.Wheat yield potentiality/ day is very high.	Weakness 1.Irrigation is for 40% area only, restricts yield potentiality. 2.Traditional practices are followed. 3.Fluctuating in market price may affect the sustainability. 4.Labour intensive harvesting, labour problem during peak seasons.
Opportunities 1.Groundnut-Wheat is the best Legume-cereal sequence provides better soil health condition and provides maximum opportunities to explore the yield potentiality in the region. 3.Very good quality of Groundnut kernels and Wheat grains under this situation	Threats 1.Erratic and uncertainty of rain restricts the yield. 2.Fluctuating in market price may affect the sustainability. 3.Pest and diseases especially groundnut that affects the soil health and ultimately the entire sequence.

3.1.3 Cropping Pattern: Bt. Cotton

Strength 1.Cotton is highly remunerative cash crop as it restricts plant protection measures. 2.Intercropping in cotton provides higher income and restricts the risk. 3.Knowledge for the cultivation of the crop. 4.Organic farming. 5.Bio-control of pest.	Weakness 1.Lack of high yielding & diseases, pest resistant varieties from JAU and Govt. institutes. 2.Erratic and uncertainty of rain restricts the yield. 3.Irrigation is for 40% area only, restricts yield potentiality. 4.Less risk bearing ability. Higher skills & knowledge is required for this crop.
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Opportunities 1.Congenial atmosphere for this crop. 2.One of the best cash crops for the higher income. 3.Composting of cotton stalks can be done after chaffing. 4.Intercropping is one of the important tools for minimizing the risk. 5.Providing fuel for cooking.	Threats 1.Comparatively longer duration crop, it requires soil moisture for the longer time. 2.Irregular rain restricts the crop growth and yield. 3.Problems of sucking pests. 4.Fluctuating in market price. 5.High rainfall causes failure of the crop.
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3.2 Farming System: Agriculture + Animal Husbandry

Strength 1.Experience in management of animal husbandry and dairy 2.Knowledge of agriculture farming and feed and fodder management. 3.Higher remunerative farming system as compared to only agriculture/animal husbandry. 4.Co-operative activities certainly encouraged this system.	Weakness 1.Negligence towards maintenance of cattle. 2.Risk bearing ability is low. 3.Less availability of feed and fodder.
Opportunities 1.Availability of pure breed of cows (Gir cow) and buffaloes (Jafarabadi) are very famous for higher milk yield. 2.Risk is minimizing under this farming system. 3.Finance can be easily available through bank. 4.All member of family may be involved. 5.Increased availability of FYM and biogas.	Threats 1.Diseases infective. Veterinary facilities are limited 2.Unavailability of soft drinking water during the summer. 3.Rapid decrease in the pasture/ grazing lands.

3.3 Farming System: Agriculture + Horticulture + Animal husbandry

Strength 1.Soil and climate suit to this farming system. Knowledge and skills are available. 2.Minimum risk is involved. All family members are involved for the entire year. 3.Income available throughout the year. 4.Good variety of mango (Kesar) is very famous over the country. 5.Available technical personals.	Weakness 1.Risk bearing ability is low. 2.Pest and disease problems in fruit crops. Negligence towards maintenance of cattle. 3.Less availability of feed and fodder.
Opportunity 1.Improved seed / pure breed of milch animals and pure varieties of mango and coconut 2.Transport facility is good. 3.Healthy market available.	Threats 1.Irregular rainfall. Negligence towards maintenance of cattle. 2.Diseases infective. Veterinary facilities are limited. 3.Unavailability of soft

	drinking water during the summer. 4.Rapid decrease in the pasture/ grazing lands.
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growth is the major reason for increased food demands and it puts additional pressure on the natural resource. Based on the information, the considered identified strategies play a vital role in farming system development and in increasing food security in this area. The important strategies that must be considered are:

3.4 Farming System: Fisheries

<p>Strength</p> <p>1.Longest coast line provides good production of sea food. 2.Good scope for cage culture of fin fish/ shell fish. 3.Sea coast provides very well facilities for fishing. 4.Good qualities of fishes are available at the west coast. 5.Very good environment for aquaculture.</p>	<p>Weakness</p> <p>1.No risk bearing ability in fishery business. 2.Socio-economic status is poor. Technical know-how is very low. 3.Not well established market for small fishermen.</p>
<p>Opportunities</p> <p>1.Sea water is very near to this area. 2.Demand of fish is very high. 3.Technical support is available from Fisheries college and the fisheries department</p>	<p>Threats</p> <p>1.Low market price. 2.People are mostly vegetarian. 3.Poor financial capacity.</p>

- i. Development of local market opportunities and in storage infrastructure.
- ii. Planting of crops with high economic values.
- iii. Development of governmental supports.
- iv. Preparing strategic plans for development of organic farming.
- v. Considering the quality of crops.
- vi Considering farm sustainability indexes.
- vii Using sustainable water resources management.
- viii. Development of extension programs based on farmers' needs.

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4. CONCLUSION AND RECOMMENDATIONS”

SWOT analysis indicates a framework for helping the planners to identify the strategies of achieving goals. It is a technique used to analyse the strengths, weaknesses, opportunities and threats of agriculture sector. In India especially in Gujarat farming practices play a vital role in food security. Population