

ORGANISATIONAL AON COMPONENT

“Feasibility study on the engagement of SHG women in production and trading of vegetables/fruits and assess potential, explore possible avenues for making it a viable and sustainable livelihood activity rural and urban SHG federation”

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EXECUTIVE SUMMARY

Title: “Feasibility study on the engagement of SHG women in production and trading of vegetables/fruits and assess potential, explore possible avenues for making it a viable and sustainable livelihood activity involving rural & urban SHG federation”

Organisation: Andhra Pradesh Mahila Abhivruddhi Society, APMAS, Hyderabad

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Objective: To take stock of the current situation in terms of – *scale of production, type of vegetables (product) grown, investment, returns, prices & price spread, demand, collectivization, processing, segregation, fair, direct trade & market participation, the role of intermediaries in the value chain* and devise steps for strengthening this activity as a business activity and strategize for the role of SHG Federations in it.

Methodology and Coverage Area: Interviews with SHG households, SHG federations (at Chevella and Parigi), SLFs at Hyderabad (LB Nagar) and intermediaries in the value chain.

Findings

1. There are at least 30-80 SHG households per village who are involved in vegetable production throughout the year. There are few traders (less than 5) in village and direct trading within the village is prevalent in few villages. Sources of investment are IKP-SHG Loans, Private Micro finance avenues and Commission Agents.
2. The major marketing channel in Parigi is “Producer-CA at Local Market-Retailer-Consumer” and “Producer-CA at Hyderabad Market-Wholesale Trader-Retailer-Consumer” in Chevella.
3. Large Price Spread of at least 30-40% between Local and Hyderabad markets and higher price benefits can be realized by selling at Hyderabad markets. There exists potential for attaining large economies of scale by pooling. Collective transportation is prevalent in chevella mandal. However each farmer individually markets his produce at the market.
4. SHG women are not fully equipped to deal with the marketing.
5. There is sufficient demand for fresh vegetables in LB Nagar in SLF community and could be met by the production from SHG households in Parigi and Chavella in the process benefitting all the players in the value chain. Potential direct market linkage between the urban and Rural SHG federations offers better returns to the producers as well as retailers.

Conclusion: Vegetable business can generate sufficient livelihoods by going for simple value addition, i.e., pooling at village level to attain large economies of scale and marketing it collectively at the market. SHG federations, i.e., Village Organizations can play a pivotal role in pooling and having a direct linkage with the urban SHG federations. However their present skill levels and market knowledge are a serious handicap. At the same time, the vegetable business being a risky business with established complex value chain, the question of decision making power, risk taking ability and efficient handling of daily operations by the women in general and SHG women in particular is a big question mark. The APMAS has to offer hand-holding support to these SHG women for a sufficiently long duration in order to make this institutional set up a successful and sustainable business run by SHG women.

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1.0 INTRODUCTION: VEGETABLE BUSINESS

APMAS is a resource organization and has been mainly involved in capacity building of members of SHG federations formed under IKP. APMAS has also been promoting livelihood activities for these SHG members in various areas. Vegetable Production and trading is one of those areas. APMAS has plans to establish informal SHG collectives in the villages close to Hyderabad to produce and market vegetables collectively at the local markets as well as markets in Hyderabad to save on transaction cost, realize the higher prices in Hyderabad market and in the process create livelihoods for SHG women farmers. APMAS has also been involved in capacity building SLF federations in urban areas. There are SLFs in NTR Nagar area in Hyderabad and majority of members of these SLFs are involved in trading of vegetables. This study tries to explore the feasibility of engaging the members of SHG federations in vegetable trading collectively and also explores the possibility of direct linkage between rural SHG federations and urban SLF federations so that the members of SLFs can trade the vegetables produced by rural SHGs bypassing middle men and realizing higher returns in the process.

After production and harvesting marketing comes into the picture. Marketing is a series of interconnected activities involved in moving a product from the point of production to the point of consumption. In the case of horticultural marketing these include:

- Post harvesting :
-
- Grading of products and their packing, transport, storage, processing, distribution and sale;
- Sending information from production area to market (e.g. products available, volumes) and from market back to producing areas (e.g. prices and supply levels, consumer preferences and changes in taste).

All of these activities are links in the production-marketing chain. Like any chain, it is only as good as its weakest link. Marketing systems are dynamic. They are competitive and involve continuous change and improvement. Suppliers, who have lower costs, are more efficient and can deliver quality products are those who survive and prosper. Those who have high costs, do

not adapt to changes in market demand and provide poorer quality are often forced out of business.

2.0 OBJECTIVE:

To take stock of the current situation in terms of – *scale of production, type of vegetables (product) grown, investment, returns, prices & price spread, demand, collectivization, processing, segregation, fair, direct trade & market participation, the role of intermediaries in the value chain* and device steps for strengthening this activity as a business activity and strategize for the role of SHG Federations in it.

3.0 DETERMINANTS:

The three determinants of this study are

1. Whether vegetable business is a potential lucrative business activity or not.
2. If yes, can it generate more (new livelihood options) livelihoods, if the existing situation in terms of value addition, scale of business and market infrastructure etc improved?
3. Role of SHG Federation in the value chain of the commercial activity.

4.0 METHODOLOGY:

1. Interviews with SHGs and their federations who are producing vegetables.
2. Interviews with Intermediaries. – understand the dynamics and their stake.
3. Interactions with traders or retailers and their unions.
4. Focused group discussions with SHGs, VOs and Mandal Samkhyas.

5.0 COVERAGE AREAS

The study covered majorly production centre and trading centre. The villages in Parigi and chevella are the production centres and the NTR nagar area in Hyderabad is the trading centre. The SHG federations are located in production centre and SLFs are located in Trading areas.

5.1 Parigi and Chevella

Parigi and Chevella Mandals in Ranga Reddy District are the coverage areas. Parigi is situated 90 kms from Hyderabad city and Chevella is 60 Kms away from Hyderabad. This region is home to many SHG federations and Village Organizations.

Parigi cluster consist of two mandals i.e.

- 1) Parigi and
- 2) Gandeed and Chevella cluster – Chevella Mandal, which are adjacent to urban Hyderabad.

Here a predominant number of SHG women are into producing and selling vegetables and fruits as primary livelihood activity.

The largest vegetable growing villages in Parigi mandal are Rangampally, Naskal, Khudavanpur, Ibrahimpur, Sultanpur, Rupkhanpet, Mittakodur and Chiguralpally. The vegetables grown are tomato, brinjal, green chillies, beans, bitter gourd, bendi, onions and leafy vegetables and fruits – mangoes, sweet lemon etc. Sizable investments are made in supporting this activity from the small loans taken from SHGs and Banks through Micro Credit Plans. The access to finance is available to farmers in general and SHG households in particular from not just the Government run VELUGU (IKP) SHG groups but also from other private players like L&T.

The table 1 gives the statistics regarding SHG households and approximate number of SHG households involved in vegetable production and trading.

Table 1 : Profile of Production Centres

Item	Parigi	Chevella
Total Number of VOs	41	45
Total Number of SHG Groups	796	891
Approximate number of SHG HHs into vegetable production per village.	30 to 60	40-80
Total Number of SHG Vegetable traders per village	Less than 10	Less than 10
Investment per day by a vegetable trader at the local market	300-500	300-500
Sources of that Investment	Credit from Agents, SHG Loans	Credit from Agents, SHG Loans

The SHG members in the Parigi mandal are mostly small and marginal farmers and some of the SHG members are land less. Most of these small and marginal SHG households own lands in the range of 1 to 3 acres and typically grow vegetables throughout the year.

Most farmers see themselves as “price takers”, thinking that they have no control over prices and have to accept what is offered. They do not always know how to find new buyers nor how market demand is changing and which products are most profitable to grow. Some of the farmers interacted lacked the understanding to improve the prices they receive and the profitability of their production. When asked about their problems they identify marketing issues as their key constraint in general and lack of control over the prices in particular.

Farmers are skilled in agricultural techniques but marketing requires learning new skills, new techniques and new sources of information.

Interaction had with farmers especially SHG HHs threw up following insights.

1. Cheap family labor is available and smaller farms are suitable for labor intensive products.
2. They can grow products that require attention to detail.
3. They can effectively supply low-volume specialized niche markets and value-added products.
4. They produce only limited quantities
5. Transportation issues because of low scale of production.
6. Education standards are often low and hence they are reluctant to introduce new technology.
7. They face difficulties in obtaining information, support and in some cases capital. However availability of many avenues for finance has reduced their stress on capital.
8. They tend to be averse to risk and need income stability

Bottom line is small farmers need the most support and their success depends on getting the best prices possible.

The prices a farmer in general gets are determined by

- 1. How much competition there is between buyers?** When there is only one buyer, he or she will possibly offer a low “take it or leave it” price. Prices are likely to be higher and more profitable when there are many buyers competing with each other.
- 2. How much competition there is between sellers?** The number of farmers in the market and quantities they have for sale also affects the prices.
- 3. The amount of information the farmer has.** A farmer who is poorly informed of market prices and demand will be less able to negotiate with traders.
- 4. The quality of the produce.** Buyers will sometimes, but not always, offer higher prices to producers with better quality products. If most farmers produce low quality produce it is difficult for a trader to market high-quality produce separately.
- 5. The transport costs.** Lower prices are generally offered to producers whose product is costly to transport (e.g. from farms with small volumes; that are long distances from the market; or along poor roads).

5.1.1 Markets

The markets available to the farmers in parigi mandal are

1. Parigi – Operates on Friday and Saturday
2. Manneguda- Tuesday
3. Kodangal- Wednesday
4. Choudergudi-weekly once
5. Vikarabad- Everyday. This is the big market in the region where farmers believe will get reasonably higher prices compared to other prices in the region.

The farmers in Parigi mandal (Sultanpur and Ibrahimpur Villages) mainly market their produce in these markets depending on the day of operation of markets. The small farmers restrict their marketing to Parigi and Manneguda because of low scale of production and transportation costs involved. They transport their produce in local autos to the markets and their transportation charge comes around INR 1 per kg per km.

All these markets are unregulated markets driven by commission agents and middlemen. The prices are determined by auction and markets lack scientific weighing practices. The number of buyers and quantity of arrivals determine the prices most of the times. The prices vary day to day, within a day and vary seasonally also.

The commission agents charge 10% commission on every transaction and he sells it to buyers(retailers) on credit for few days to a week depending on the scale and mutual trust. Especially in Parigi market, most of the produce gets sold locally itself with retailers selling to petty shops and end users. Vikarabad being a big market in the region supplies to other terminal markets in Hyderabad.

Though different grades of vegetables fetch different prices, the Grading and packing is not done scientifically. Only few vegetables fetch prices as per grades, viz , tomato. There are losses associated with transport as well. The tomatoes are sold in wooden baskets of two varieties of 8Kgs/basket and 13kgs/basket respectively. However accurate weighing does not happen here. As these baskets are dumped in the vehicle, there is a loss of at least one to two kgs per basket which further reduces the price fetched during the auction. Different vegetables are sold in

different units like carrot, beetroot, donda kaayi sold in Gunny sacks each carrying 20-25 kgs of vegetables.

Chevella Mandal : Chevella being close to Hyderabad has its farmers selling majority of their produce in Gudi Malkapur and Bovinapalli markets in Hyderabad. Gudi Malkapur is 35Kms away from Chevella and Bovinapally is 65-70 Kms away and are well connected to villages in Chevella mandal.

The majority of farmers in this mandal sell their produce at Hyderabad and a marginal quantity is sold in local market as well. The prices being fetched at Hyderabad are higher compared to local market.

The villagers or farmers here transport their produce collectively. There are one or more transport vehicles in each village dedicated for transporting this produce. In local parlance these vehicles are called “DCM vehicle”. These are just used for transport and collectively pooling of vegetables is not happening here. The farmers individually pay charges based on the stock keeping unit be it gunny sack, wooden basket, plastic basket etc. The farmers also travel in the vehicle and pay for the same. On reaching the market, each farmer individually pursues his sale with a commission agent of his choice.

The charge paid per unit of gunny sack weighing 100 kgs of carrots is INR 35 per bag. Similarly a plastic basket or box weighing 25kgs of tomatos will attract a transport charge of INR 10 per box. In addition each farmer pays INR 15-20 per person as transport charge. These vehicles are owned by villagers and some of them are informal agents of market brokers.

Here grading happens at the village and is done by the farmers themselves. And the commission agent has provided these villagers with wooden or plastic baskets of different dimensions to transport their produce. The commission agents at these markets also provide financial services to the farmers who in turn guarantee their produce to these agents. As such no formal contract exists and all the contracts are verbal and are based on mutual trust and relationship.

The terminal markets in Bovinapally and Gudi Malkapur are also unregulated and prices are determined by previous day's prices, arrivals in the market and demand. Here also produce is

sold in lots of gunny sacks or box or baskets of different dimensions in auction. Proper weighing does not happen and also there are transport losses in terms of spoilage, occasional theft etc.

5.2 LB Nagar:

NTR Nagar comprises of 4 SLF (Slum Level Federations) and 73 SHGs. 40 SHGs got bank linkage sum of Rs 20 lakhs. There is flourishing vegetable vending business occurring in LB Nagar area, carried out by mostly SHG households mostly by women.

The vegetables market in NTR Nagar houses nearly 400 retail stalls. From the interviews we carried out, it is estimated that around 50 to 60% are from NTR Nagar and nearly 150 to 160 SLF members have their stalls there. It is not entirely run by women alone. Even the family members of SHG members chip in. Mostly male head takes care of transactions with the agents and women engage in operations in the day time. These members have got licenses for the shops long back and they have been in this business for many years now.

The shop owner invests up to INR2500 to INR3000 vegetables per day and makes a profit on an average of INR 300 to 500 per day taking into consideration the losses due to damage and waste disposal. On an average a retail trader earns anywhere between INR 9000 to INR 15000 per month. However because of complexity and enormous fluctuations involved in vegetable business, fixed income per day or per month is not guaranteed which acts as one of deterrents for the people who want to enter into this business.

The retail trader buys vegetables from the commission agents or the wholesale traders in the auction. The agents provide credit for one or two days up to a week depending on the scale of transaction and the mutual trust involved. He charges no interest normally. However there is a fixed commission of 4 to 5% from the retailer and 10% from the farmer which goes into the pocket of commission agent.

As a part of finding out the possibility of linkage between the urban SHG federations (Production areas) and rural SHG federations (Marketing Areas), following things are carried out.

1. Estimation of Demand for Vegetables in LB nagar area
2. Costs and Benefits involved in the linkage in terms of business.

Demand Estimation

Focused Group Discussions are carried out with the members of slum level federation in NTR Nagar area to find out the demand for vegetables in that area.

The table 2 shows the demand for vegetables in the NTR nagar area. The secondary data regarding the total population, total number of Households, total SLF member households is collected from the APMAS staff in the field. Average family size is taken to be around 4-5 and FGDs with the members corroborated the same.

Table 2 : Demand Estimation for Vegetables in NTR Nagar

Total PP	2300	HH		
Total SHG Members	1324			
Average Family Size	5			
Total No of HH	2300			
Total SHG Households	1000			
Avg Veg consumption in Kgs for a family of 4-5	Per Week	Per Year	In NTR Nagar	SLF
Tomato	2	112	257600	112000
Potato	1	56	128800	56000
Okra	1	56	128800	56000
Brinjal	0.5	28	64400	28000
cucumber	0.5	28	64400	28000
Bottlegourd	0.5	28	64400	28000
BitterGuard	0.5	28	64400	28000
Green Chillies	0.5	28	64400	28000
Total vegetable requirement per year in KGs			837200	364000
Total Spending on Vegetables per week per family	250			
Total Spending on Vegetables per year per family of 5	14000			
Total Spending by SHG Federations in NTR Nagar per week	250000			
Total Spending by SHG Federations in NTR Nagar per Year	14000000			

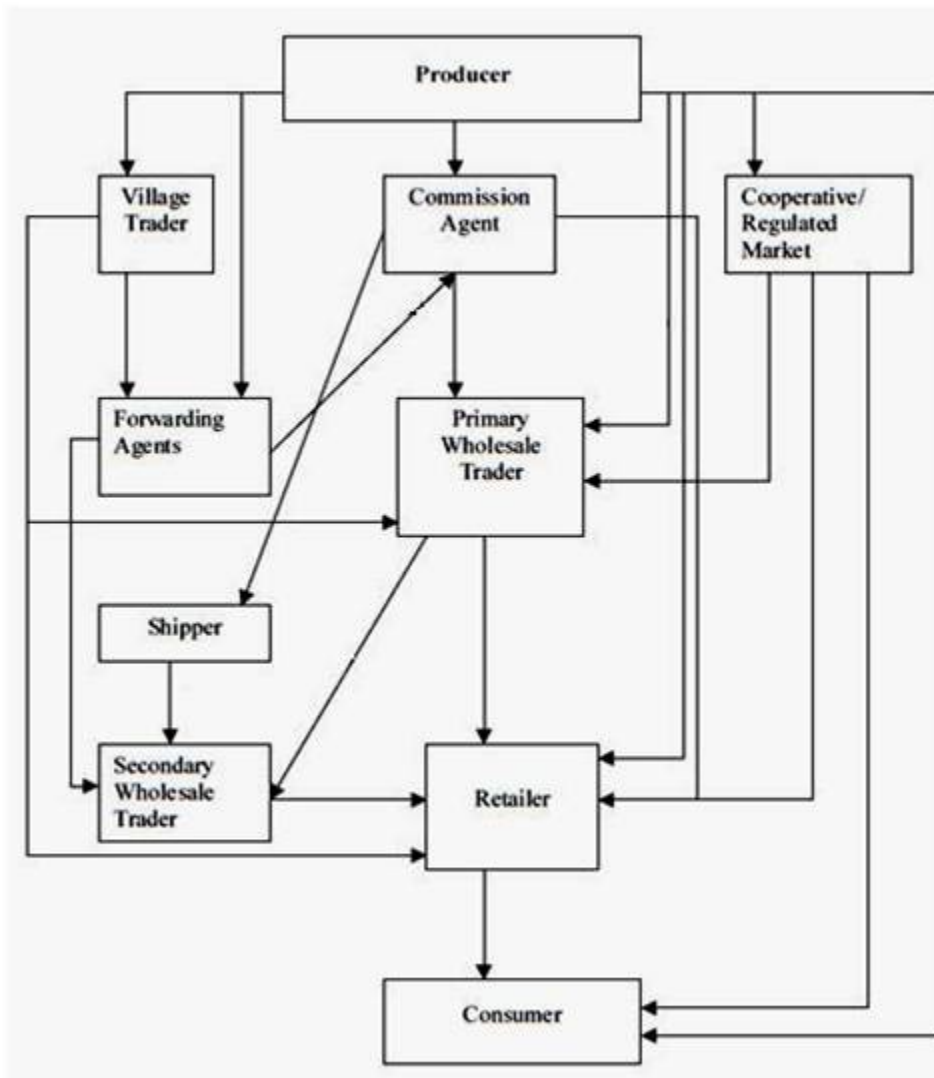
From the calculations, we can see that

1. There is an annual demand of approximately 840 tons of vegetables from entire NTR nagar and 364 tons from the SLF member households which requires a guaranteed supply of at least 6-7 tons of vegetables per week just to meet the demand of SLF member households.
2. In terms of value, there is a market potential of INR 1.4 crores.

6.0 MARKETING CHANNELS

The marketing channels available in India for vegetables are as shown below. The figure 1 covers all the channels involved between producer and consumer. The various players involved in the channel are producer, commission agent, village trader, cooperative, regulated market, unregulated markets, primary and secondary wholesale trader, retailer, hawker and the end consumer.

Figure 1: Marketing Channels For Vegetables in India



In Parigi and chevella mandal, the channels available for farmers to market their vegetables are

1. “Farmer-Village Trader –Consumer”
2. “Farmer-Commission Agent at local Market-Retailer-Consumer”
3. “Farmer-CA at Local Market-Agent at Terminal Market-Retailer-Consumer”
4. “Farmer-Consumer(Village)”
5. “Farmer-Consumer (Local Market)”
6. “Farmer-CA at Terminal Market in Hyderabad-Retailer-Consumer”

6.1 Parigi:

In Parigi, the dominant channel is channel 2 where in farmer himself takes the produce to the commission agent at local market in Parigi or Vikarabad and commission agents auction the produce among the retailers and then consumer buys it from retailer. Here the transport charge till the market is borne by farmer itself. There are total of 8 commission agents in Parigi local market and regular group of retailers mostly women buy vegetables from the auction and then sell in the same market. These retailers buy these vegetables on credit from commission agents and pay back in one or two days. As per the farmers interviewed in the villagers, the relative availability of various channels are judged.

Channel 1 where in the village trader buys it from farmer is present in minute scale as most farmers take their produce to the local markets and even the village traders do not buy the same in the village itself as they believe the prices will be competitive at the local market owing to the presence of large number of buyers and sellers. Also transport responsibility will be spared for the traders if they buy it in local market.

Channel 3 also exists in a minor scale as most of the produce gets sold locally itself and only few commission agents have the storage facilities.

Channel 4 exists only in few cases where loose vegetables are sold to village consumer but hardly at any cost. Channel 5 too does not seem to exist as most farmers would rather prefer to engage themselves in farming rather than concentrate on trading part. As the farmer households have only one or two members who are active in farming, they find it inconvenient to engage in

trading also and they believe opportunity cost involved in focusing on trading also will prove costly on the production side.

Channel 6 is mainly employed by the big farmers present in the area who produce vegetables on a large scale to be able to bear the high transaction costs involved in selling the produce directly at the terminal markets in Hyderabad.

6.2 Chevella-Marketing Channels

Here dominant channel in practice is channel 6 wherein farmers take their produce to the terminal markets in Bovinapalli and Gudi Malkapur.

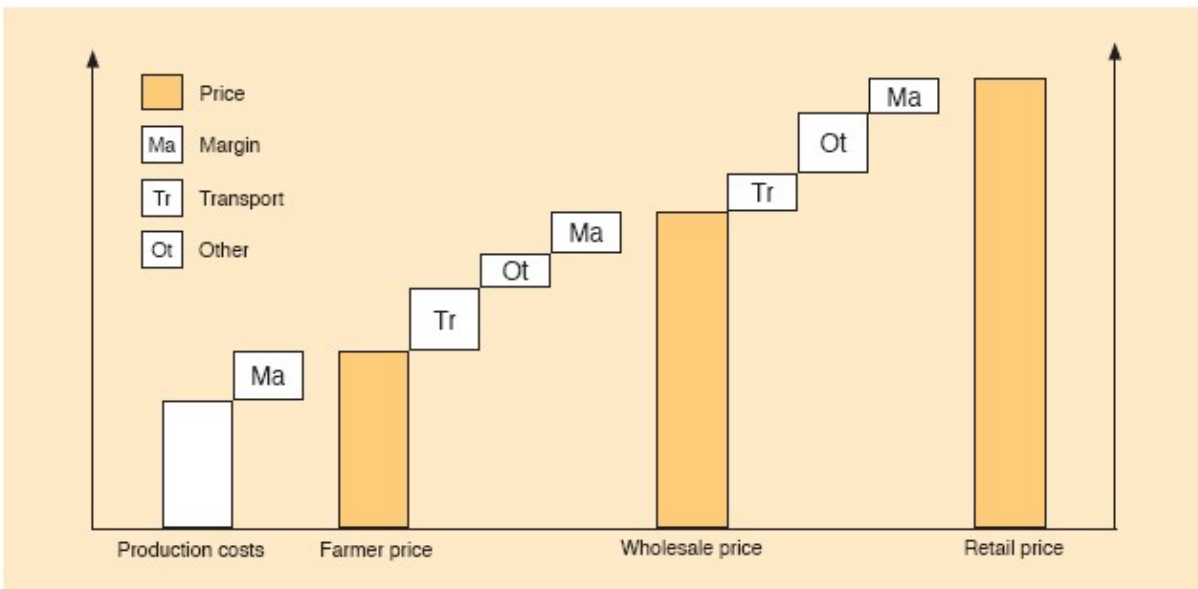
Farmers in chevella mandal collectively transport their produce to the terminal markets at bovinapally and gudi malkapur. Each village in this mandal has one or more transport vehicles owned by a villager and transports the produce at least once in two days depending on the availability of produce. Each farmer individually pays transport charges to the vehicle, Thirty five rupees per unit of gunny sack and fifteen rupees in case of twenty five kg tomato plastic box. In addition farmer has to pay fifteen rupees per person for his transportation charges.

Channel 2 is also being employed by the farmers only when their scale of production is low and when they find that transaction costs involved in transporting the produce to the terminal markets outweigh the prices they get. That's when they sell their produce locally at Chevella market.

Direct marketing channels 4 and 5 are not predominant as farmers believe the additional headache involving with this exercise of selling directly to consumer is not worth the effort keeping in view of the opportunity cost involved in foregoing their normal routine. They can easily invest the same time in managing their farm. Very few people sell it to the village trader.

6.3 Value Chain

Figure 2: Price margins across the value chain



From the figure 2 we see that as produce moves along the value (i.e Production-marketing) chain, prices increase. Unit prices are lowest when farmers sell a standing crop. An example of this is when fruit growers sell their fruit on the tree to fruit contractors, who then harvest and pack it.

Harvested produce sold at the farm gate to village consumer obtains a lower price than produce sold at a local assembly market which, in turn, is sold at a lower price than produce sold at a wholesale market. Retail sales achieve the highest price.

The price the farmer gets depends on the point in the marketing chain at which he or she decides to sell. Although prices are higher, selling further along the marketing chain involves additional costs for transport, market fees, meals and accommodation. There are also opportunity costs in terms of farmer's time. Farmers who take produce to market and sell directly to consumers will usually get the highest price but they do need to decide whether this is the best use of their time, as it may be more usefully spent managing the farm.

6.4 Factors Affecting Profitability

The three factors which influence the profitability of the horticulture produce are price realized, quantity sold and productivity. The former two factors i.e price realized and quantity sold have far more impact on profitability than the increase in productivity.

The interviews carried out with farmers presented several situations where these three factors i.e price realized, quantity sold and actual production influenced the profitability. These can be explained in seven cases as below.

Table 3 : Hypothetical Cases Affecting Profitability

	Normal Situation	Increase In Production	50% Marketed	Price decrease by 10%	Price Increase by 10%	100% Sold	Marketing Costs(minus 10%)
SINO	1	2	3	4	5	6	7
Production in KGs	10000	11000	10000	10000	10000	10000	10000
% Sold	80%	80%	50%	80%	80%	100%	80%
Qty Sold	8000	8800	5000	8000	8000	10000	8000
Selling Price	10	10	10	9	11	10	10
Income	80000	88000	50000	72000	88000	100000	80000
Production costs	20000	22000	20000	20000	20000	20000	20000
Marketing Costs	24000	26400	15000	24000	24000	30000	21600
Total cost	44000	48400	35000	44000	44000	50000	41600
Margin	36000	39600	15000	28000	44000	50000	38400
% of Normal Situation		10%	-58.33%	-22.22%	22.22%	38.89%	6.67%

Note: Marketing costs (Packaging, Transport and commission are INR3 Per Kg)

(1) Normal Situation: It lists the costs and returns of a farmer who produces 10 tons (10000 kgs) of vegetables say tomato. Although 10 tons are produced, only 80% is sold. Price realized or selling price is INR10 per kg. Production costs include cultivation, seed, fertilizer, any sprays and labor costs and are INR 20000. Marketing costs (e.g. packaging, transport and commission) are INR 2 per kg sold. The farmers total sales are INR 80 000, the costs are INR 44000, leaving a margin of INR 36000 to cover any fixed costs (rent, bank charges, salaries etc) and profit.

(2) Additional production inputs result in the yield or production being improved by 10%. Production costs are increased by 10% and marketing costs by 10% as additional production is marketed. Margin increases by INR3600 or 10%.

(3) Only half the production is sold (e.g. because of oversupply, a lack of buyers, poor demand). Margin falls dramatically to INR15000, or about a third of the typical profit in the Base Situation (down by 58%).

(4) Shows impact on profits when prices are 10% down. This will happen when there is low demand or oversupply. Profit margin falls by about a 22% to INR28 000.

(5) Sets out the situation where prices are increased by 10%. This could happen when demand is high and/or supply is low. Profit increases by 22%.

(6) All production is sold. This might be because the market linkages have been improved, because the farmer works harder at marketing or because of strong market demand. Profits improve by INR 14000, or about 40%.

(7) Reflects the situation where 10% savings are made on marketing costs. Margin increases by about 7%.

The three key insights from above cases are

1. If farmers cannot sell all their production, potential profit goes down a lot. This highlights the danger of increasing production without being confident that the additional supply can be sold.
2. An increase in price has a significant effect on improving profit because production costs are generally fixed in spite of varying marketing costs (As a marketing commission is calculated as a percentage of the selling price). This shows the importance of helping farmers to sell at high prices. Ways of doing this include growing crops that are in demand, producing better quality and negotiating more effectively with traders.

3. Marketing costs (e.g. marketing commissions, transport, and packaging) can be greater than production costs, particularly in the case of vegetables. Marketing costs can often be reduced, leading to higher profitability.

7.0 MARKET DYNAMICS

7.1 Prices V/S Arrivals

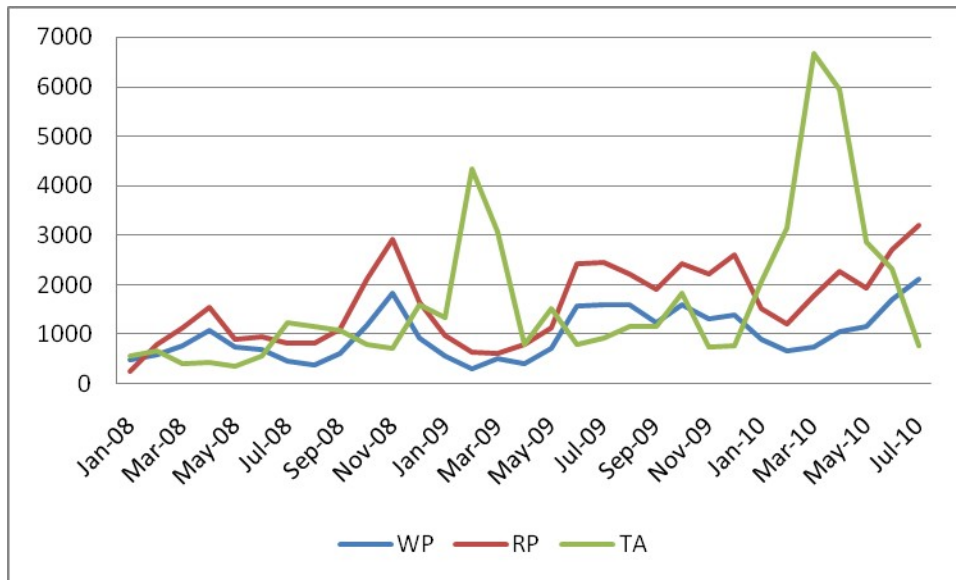
The prices of the commodities in general and vegetables in particular are mainly determined by supply and demand. Basically, a balance is achieved between what people are prepared to supply at a price and what people are willing to pay for the product. As the price rises the quantity that will be supplied also rises and the quantity demanded falls, and vice versa. Supply is what producers are prepared to sell at a certain price and Demand is how much consumers are prepared to buy at the market price.

Though production influences supply, it may not be equal to supply in the market (e.g. farmers may sometimes grow perishable crops and not harvest them because the price is too low). For less perishable crops, farmers or traders may decide to store them in the hope that prices will rise, rather than sell them immediately. When prices do rise they may take the products out of store to sell. At this time supply is equal to production harvested for immediate sale plus products taken out of store.

The Figure 3 depicts the relationship between total arrivals (TA) in Hyderabad Market (i.e Supply) and the Prices (Both Wholesale (WP) and Retail (RP) of tomatoes).

- As can be seen from the graph, there is inverse relation between Total Arrivals (TA) and Prices (WP and RP).
- From the graph it's also clear that Tomato arrivals attain peak during March-April of every year and are in short supply during October-November period.
- Similar relation exists for other vegetables also.
- WP and RP in rupees and TA in Quintals.

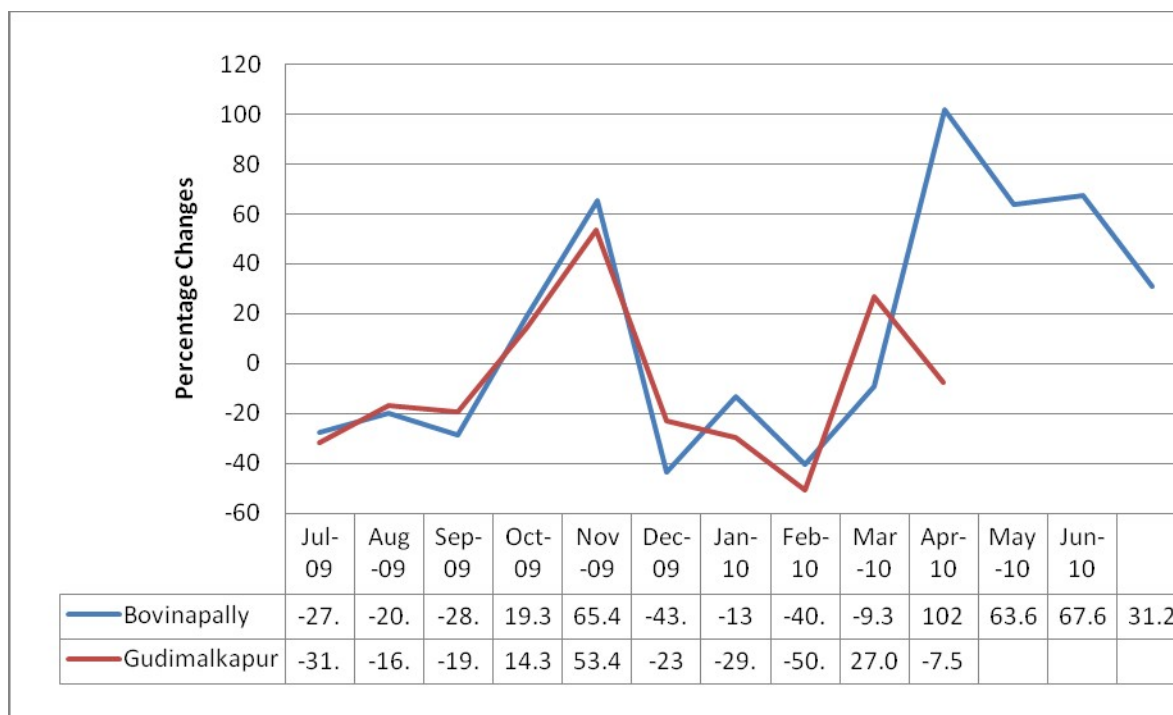
Figure 3: Tomato Prices V/S Arrivals in Hyderabad Markets



7.2 Price Variations between the Markets:

Bovinapally and Gudimalakpur are the two big markets in Hyderabad. They are the main markets for farmers in Chevella mandal. The Figure 4 throws insight on how the two markets in Hyderabad follow each other. The percentage changes in prices of tomato over previous month for both the markets are plotted against each other. We can see that both the graphs go hand in hand and crests and troughs follow each other.

Figure 4: Tomato Price Variations in Two Main Markets in Hyderabad



7.3 Price Fluctuations:

Vegetables prices fluctuate enormously unlike other staple foods. They can vary from day to day and during the day depending on supply and demand. The fluctuations can be over short term, seasonal and over long term.

Short term changes: The main causes of short-term price changes of fresh produce are:

1. The amount of produce on sale in the market on a particular day and the quantities sold in the previous few days. We could observe these trends in Parigi markets
2. Short-term demand changes (e.g. holidays and festivals).
3. The effect on demand of prices of competing products.

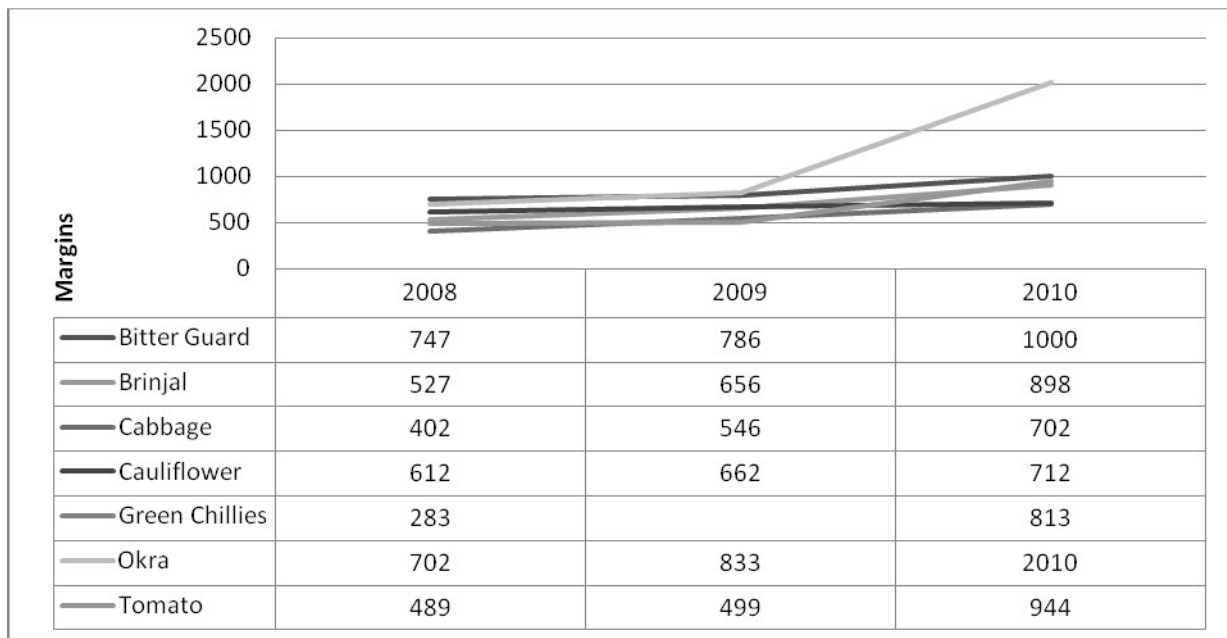
Seasonal price changes: Supplies are generally low at the start of the harvest season, so prices are high. Prices are at their lowest when the crop reaches maturity in the main production areas. At the end of the season, prices normally increase again as supply diminishes. Prices are generally highest during the off-season, when only a small percentage of farmers are able to grow the crop.

Long Term Price Changes: Production and Prices can fluctuate from year to year. A season of high prices and low volumes is often followed by a season of low prices and high volumes. This could be because many farmers make the same decision to expand production in response to high prices in one year.

7.4 Trade Margin:

Trade Margin defined as the difference between Whole sale price and Retail Price has been showing increasing trend in the last two years. The below graph shows the absolute margin for different vegetables and the trend it has taken in the last two years. The prices are weighted average figures. The increasing trend is just a reminder that farmer or producer is losing out on the profit and traders (wholesale as well as retail traders) are garnering the maximum share in the consumer price.

Figure 5 : Margins of All Vegetables

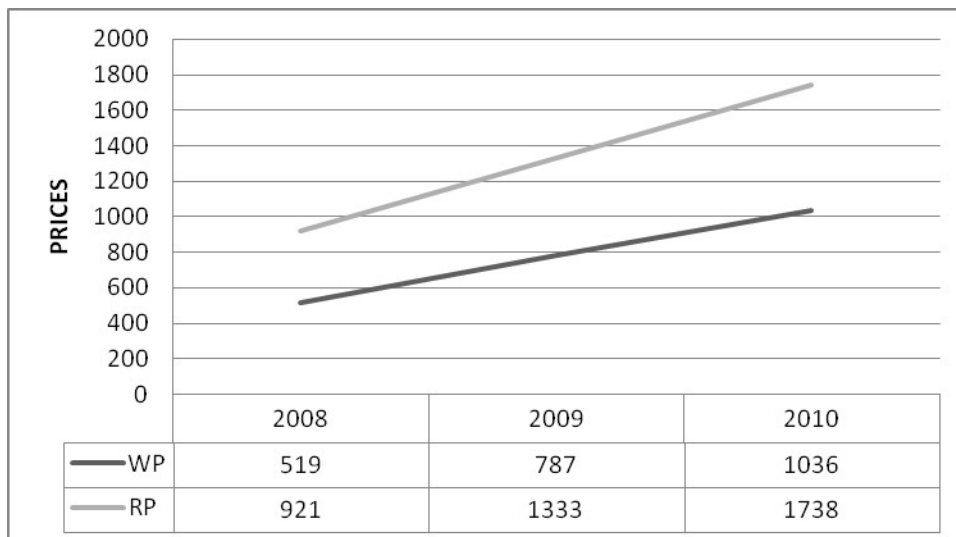


The table 4 and subsequent figure 6 show the absolute figures and trend of wholesale prices and retail prices for cabbage..

Table 4 : Total Arrivals , Whole Sale and Retail Prices of Cabbage

	2008			2009			2010		
Month	WP	RP	TA	WP	RP	TA	WP	RP	TA
January	336	229	546	660	1091	3433	850	1420	5845
February	444	502	674	448	813	4386	689	1241	6680
March	288	436	458	395	731	3586	1010	1913	7567
April	320	459	446	475	833	1484	1746	2708	6213
May	449	487	342	772	1125	1907	892	1509	6776
June	457	731	583	799	1459	4125	1116	1807	7929
July	479	867	4393	877	1431	3994	852	1292	2622
August	431	829	3443	1053	1671	4488			
September	428	801	2845	680	1280	3369			
October	472	818	3072	1150	1912	3844			
November	912	1579	2886	1084	1782	2499			
December	549	1042	5476	918	1571	ces			

Figure 6 : Wholesale and Retail Prices for Cabbage

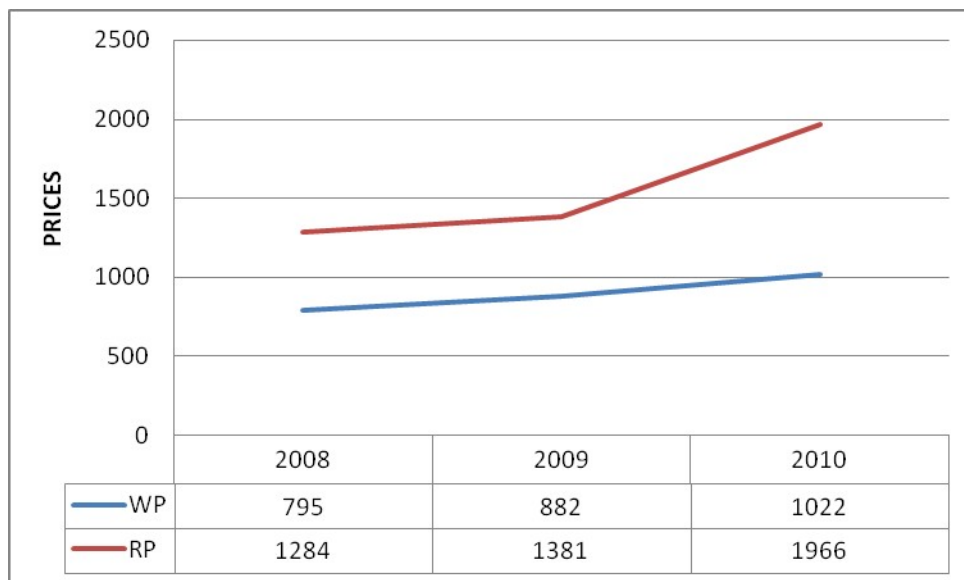


The table 5 and subsequent figure 7 show the absolute figures and trend of wholesale prices and retail prices for Tomato.

Table 5: Total Arrivals, Whole Sale and Retail Prices For Tomato.

Month	2008			2009			2009		
	WP	RP	TA	WP	RP	TA	WP	RP	TA
January	502	260	568	577	975	1340	909	1528	2061
February	597	802	652	318	646	4340	686	1209	3138
March	782	1139	396	529	614	3073	750	1796	6659
April	1084	1541	424	411	814	783	1069	2267	5941
May	766	919	354	732	1129	1522	1159	1935	2855
June	693	948	548	1579	2441	791	1702	2717	2311
July	460	828	1238	1610	2453	919	2125	3208	780
August	404	820	1167	1609	2225	1154			
September	623	1107	1076	1242	1920	1146			
October	1202	2128	803	1620	2433	1822			
November	1847	2935	713	1321	2225	748			
December	933	1658	1594	1391	2608	775			

Figure 7: Wholesale and Retail Prices for Tomato



From all the above figures reflecting the whole sale and retail prices, we can see that the gap or the difference between the wholesale prices at the wholesale market and the final retail price paid

by the end customer is increasing over the years. This indicates that traders involved namely wholesaler, primary retailer, secondary retailer are adding to the increase in the prices. If we draw the cost of production in the same graph, it will lie somewhere below the WP curve (Wholesale Prices) and the difference or the gap between the production cost and retail price will be even wider indicating large difference in the prices farmer realizing to the prices end customer paying.

7.5 Current Scenario: Farmers realization

The Table 6 indicates current scenario for a farmer who is selling his produce at wholesale markets in Hyderabad markets i.e Bovinapally and Gudimalkapur. These indicate the prices which farmers are getting as a percentage of final consumer prices. This is what a typical big farmer in the village is realizing and not the small farmers as they are not producing at large scale to be able to afford marketing costs involved in selling at bigger and farther markets. A typical small farmer in the villages in the parigi mandal is not selling at Hyderabad markets. He is marketing his produce at local markets where the prices realized are substantially less than the prices prevailing at markets in Hyderabad. The prices do not include the marketing costs incurred by the farmer like commission to brokers, transportation charges and loading and unloading charges. The profit figures including these marketing costs and cost of production will be substantially less.

Table 6 : Price Spread for Different Vegetables

	Tomato	Cabbage	Brinjal	Okra	Cauliflower
Price paid by end consumer (INR / KG)	19.66	17.38	20	24	19.64
Price received by farmer (At Hyderabad Market)	6.37	8	11.02	15	12.52
Price realization by farmer as % of end consumer price	32.34%	40.61%	55.94%	76.14%	63.55%
Mark Up(price paid by end consumer to the price received by the farmer)	3.1	2.2	1.8	1.6	1.6

8.0 OPPORTUNITIES AND ROLE OF SHG FEDERATIONS:

8.1 Pooling: The small farmers in the Chevella and Parigi mandal are suffering because they are individually marketing their small produce and hence are not reaping the price advantages associated with bigger scale which can be attained by coming together and pooling their produce. They are realizing very low prices for their produce at the local markets and also lower scale of production means lower bargaining power and lack of confidence in the farmers.

The reasons why collective of farmers is required are as below.

- Reduce the costs of inputs because of increase in bargaining power when dealing with the input suppliers
- The collective reduces the chain of intermediaries.
- Information asymmetries and technological gaps presently faced by small farmers can be overcome by having pooling arrangement.

- Large economies of scale obtained by pooling
 - Reduces the transaction cost per member
 - Reduces marketing costs per member
 - Helps in realizing price advantages by selling at Hyderabad markets
 - Keeps Options open for collective marketing and new linkages
- Pooling of produce helps in increasing bargaining power for the small farmers when negotiating with the commission agents.
- Collective helps small farmers adapt to new patterns and greater level of competition.

Let us see an example on how pooling would be beneficial to small farmer. Here we have considered a collective pooling of produce of ten farmers.

The Table 7 shows the cost of production of tomato for one acre and income realized by the farmer. The assumption here is farmer would sell a third of his produce at minimum prevailing rates, a ninth of his produce at maximum prevailing rates and rest of the produce at modal rates.

Table 7 : Costs and Benefits for Farmer in Tomato before joining collective

Costs Incurred In Production	Quantity	Rate per unit	Cost
Seed Hybrid(Alankar)	200Grams*2 Packet	280	560
Nursery plants			1000
Irrigation	4-5hours*7-8 days per half acre		400
Fertiliser	3 bags*50kgs(20:20)	400	1200
Pesticide	100gms	1000	1700
Ploughing by tractor	2 times	500/Acre	1000
Labour			
Sowing	4 Members	70 Per Day 2 Days	560
Weeding+Plucking	6 Members	70 Per Day 5 Days	2100
total labour			2660
Total Production Cost			11180
Marketing Costs			
Transport	420 Boxes of 24Kgs	10Rs Per Box+100 Pe	4700
Packing + Miscellaneous	420 Boxes		1470
Commission to the agent	10% To commission agent		6372
Total Marketing Expenses			12542
Total Cost			23722
Total No of Box(10000/24)	417		
Total Production In Kgs	9000	(Including 10% Losses)	
Prices Realised At Local Markets			
On average 1/3rd produce goes at minimum rates of 200Rs Per Quintol			
1/9 produce goes at maximum rates of 1200 Rs Per Quintol			
Rest goes at modal rates of 500Rs/Quintol			
Revenue per acre		Prices Considered	
7722	at minimum rates	Maximum Per Kg	16
15998.4	at maximum	Minimum Per Kg	2.6
39996	at modal price	Modal Price Per KG	8
63716.4	Total Revenue		
Profit		39995	

Now, the Table 8 shows the benefits associated with the pooling of the produce and selling the same at the Hyderabad markets namely Bovinapally and Gudimalkapur where relatively higher prices are realized compared to the prevailing prices in local markets.

As we can see, the farmer will be able to share the transaction costs or marketing costs with the fellow farmers who have joined the pooling arrangement and at the same time realize the higher prices by selling the pooling produce at the Hyderabad markets. As reflected, the farmer would be able to more than double the profit realized by going for pooling arrangement.

Table 8 : Costs and Benefits for farmer after joining collective pooling of atleast 10 farmers.

Production Costs	11180		
Marketing Costs			
Transport Costs	470		
Packing and Miscellaneous Costs	147		
Commission To agent	637.164		
Marketing Costs Per Member	1254.164		
Total Cost	12434.164		
New Sales Realised at Hyderabad Markets			
Prices Realised		Produce sold	Revenue
Maximum Price Per Kg	20	990	19800
Minimum Price Per Kg	7.5	2970	22275
Modal Price Per Kg	12	4950	59400
	Total	8910	101475
1/3rd produce goes at minimum rates of 750Rs Per Quintal			
1/9 produce goes at maximum rates of 2000 Rs Per Quintal			
Rest goes at modal rates of 1200Rs/Quintal			
Revenue	101475		
Net Profit	89040.836		
Increase In Profit Per Farmer	49046		

The unit (Per Kg) analysis for the same case is shown in Table 9 for both parigi and chevella mandals.

Table 9 : Unit Analysis For Tomato At Parigi and Chevella.

Tomato	Parigi	Chevella
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Unit Analysis	Existing @Local Markets	Pool and Sell Local markets	Pool and sell at hyderabad	Existing to hyd markets	Pool and sell at hyderabad
Production Cost Per Kg	1.118	1.118	1.118	1.118	1.118
Farmers Costs					
Transportation	0.5	0.047	0.47	0.47	0.047
Commission	0.637164	0.0637164	0.1022	1.022	0.1022
Packing and Misc	0.147	0.01	0.05	0.147	0.01
Total Costs to Farmers	2.402164	1.24	1.74	2.757	1.28
Whole sale Price	6.37164	6.37164	10.22	10.22	10.22
Commision Agent (10+3)%	0.8283132	0.8283132	1.3286	1.3286	1.3286
Profit Per Farmer Per KG	3.969476	5.13	8.48	7.463	8.94
Retail Price	12	12	19.66	19.66	19.66
Income for Retailers	3.716868	3.716868	6.374	6.374	6.374

By joining pooling arrangement

1. A farmer in Parigi would be able to realize much better profit per kg by going for pooling and selling the pooled produce in local Parigi market. He can even enhance the profit to INR 8.5 per kg by selling the same at the Hyderabad markets.
2. In Chevella, farmers are already practicing the collective transportation arrangement. However pooling of produce is not happening. Though they are minimizing the transportation charges and have a dedicated vehicle for transportation produce, each farmer is still individually paying the transportation charges and individually negotiating with the commission agent at the market to sell his produce. However the last column shows the benefits associated with pooling and collective negotiation with the commission agent. In the new arrangement, each Chevella farmer will make a profit of nearly INR 9 per kg of tomato nearly 20% increase in profit realized.

Table 10 : Unit Analysis for Tomato (As a Percentage of Final Retail Price)

Tomato						
Parigi	Existing	PL	PH	Chevella	Existing	PH
PC	9.32%	9.32%	5.69%	PC	5.69%	5.69%
MC	10.70%	1.05%	3.16%	MC	8.34%	0.83%
FM	33.08%	42.74%	43.13%	FM	37.96%	45.46%
TM	46.90%	46.90%	48.02%	TM	48.02%	48.02%

PC: Production cost, **MC:** Marketing Cost, **FM:** Farmer Margin, **TM:** Trader Margin (Wholesaler and Retailer), **PL:** Pool and Sell Locally, **PH:** Pool and Sell at Hyderabad Markets.

We can see from Table 10 that an individual farmer incurs substantial marketing costs. PL arrangement is where in produce of ten farmers is pooled together and sold at local markets and in PH arrangement the produce is sold at Hyderabad market to take advantage of higher prices prevailing in Hyderabad markets viz Bovinapally and Gudimalkapur. Here calculations are done considering ten farmers for pooling. If we can pool the produce of more farmers, the costs can be brought down further.

We can see that PL brings down the marketing costs for farmer and increases his margin. PH might add to the marketing costs (Incase of Parigi) because of transportation charges to Hyderabad. However, the higher prices realized in Hyderabad will off-set the costs incurred and increase the farmers' margin.

Cabbage: This is one example where in PH might not be advantageous compared to that of PL. This is considering pooling of produce of ten farmers. If collective of more than ten say fifteen can be formed then PH might prove to be advantageous to the farmer. Still PL or PH is still better than the existing arrangement under which farmers are living as of now.

Table 11: Unit analysis for Cabbage at Parigi and Chevella.

CABBAGE					
	Parigi			Chevella	
Unit Analysis	Existing @Local Markets	Pool and Sell Local markets	Pool and sell at hyderabad	Existing to hyd markets	Pool and sell at hyderabad
Production Cost Per Kg	1.2	1.2	1.2	1.2	1.2
Farmers Costs					
Transportation	0.470	0.047	0.47	0.188	0.0188
Commission	0.8	0.08	0.1036	1.036	0.1036
Packing and Misc	0.1	0.01	0.05	0.1	0.01
Total Costs to Farmers	2.57	1.34	1.82	2.524	1.33
Whole sale Price	8	8	10.36	10.36	10.36
Commission Agent (10+3)%	1.04	1.04	1.3468	1.3468	1.3468
Profit Per Farmer Per KG	5.43	6.66	8.54	7.836	9.03
Retail Price	12	12	17.38	17.38	17.38
Income for Retailers	1.6	1.6	3.912	3.912	3.912

Table 12: Unit analysis for Cabbage (As a Percentage of Final Retail Price)

Cabbage						
Parigi	Existing	PL	PH	Chevella	Existing	PH
PC	10.00%	10.00%	6.10%	PC	6.10%	6.10%
MC	11.42%	1.14%	3.17%	MC	7.62%	0.76%
FM	45.25%	55.53%	49.42%	FM	45.02%	51.94%
TM	33.33%	33.33%	40.39%	TM	40.39%	40.39%

PC: Production cost, **MC:** Marketing Cost, **FM:** Farmer Margin, **TM:** Trader Margin (Wholesaler and Retailer included)

As we can see PH is not better than PL in case of Parigi where as it is still better option to the existing arrangement. PH in case of Chevella gives better returns than the existing arrangement where in collective transportation is happening but not pooling.

8.2 Direct Market Linkage:

Apart from PL and PH arrangements, one more arrangement worth exploring is the direct market linkage between rural SHG federations (Producer) and Urban SLF federations (Traders) at LB nagar in Hyderabad. This option is explored to tap in the potential of utilizing the strengths of SHG federations to create an institution. Just like SHG federations in rural areas, there are slum level federations in the LB Nagar area and many of SLF members are vegetable traders in the local market in the area. These people have been in this vegetable retailing for decades and bring in their expertise. This arrangement hence aims to tap in the expertise of rural SHG federation in production aspects and the trading expertise of urban SLF members and create a profitable linkage between them benefiting both the stakeholders of the linkage. The trader-collective at the urban level can offer lesser prices to customer than the prevailing rates. Hence the customers also stand to gain from this arrangement.

The economic feasibility of this arrangement is tentatively studied and the calculations are done considering that

1. The vegetable produce is collected or pooled at the village level by the village organization at the collection centre.
2. The collection of vegetables from the collection centers at the village and transporting the same to the urban distribution centre is under the responsibility of urban SLF federation members.
3. Pooling is happening at the village level and team headed by VO member is responsible for the operations like collection, grading, sorting, book keeping and loading. Calculations are done considering a collective of ten farmers.
4. And the costs and benefits are also shared at the urban level by a group of members of SLF who individually will trade the produce to the retailer or the SLF consumer or to the end customer himself. We have considered a team of ten traders to bear the responsibility and the calculations are also done considering the same.
5. The calculations are considering a retail price of one rupee less than that of existing retail price thus benefiting the end customer also.

Table 13: Unit Analysis in case of a Direct Market Linkage between SHG Federations and SLFs.

Tomato	Parigi	Chevella	Hyderabad
Unit Analysis	Pool & sell at Hyderabad	Pool & sell at Hyderabad	Direct Market Linkage btw SHG Feds
Production Cost Per Kg	1.118	1.118	1.118
Farmers Costs			
Transportation	0.47	0.047	0
Commission	0.1022	0.1022	0
Packing and Misc	0.05	0.0147	0.0147
Total Costs to Farmers	1.7402	1.2819	1.1327
Whole sale Price	10.22	10.22	10.22
Commission Agent (10+3)%	1.3286	1.3286	0
Profit Per Farmer Per KG	8.4798	8.9381	9.0873
Retail Price	19.66	19.66	18
Income for Retailers	6.374	6.374	7.705
Operating Costs for retailers in new linkage			
Transport			0.05
Other			0.025

The Table 13 shows the comparison between the pooling and direct market linkage arrangements. As we can see from the Table, a farmer in Parigi will make a profit of INR 8.5 if engages in pooling his produce with that of other ten farmers. Similarly a farmer in Chevella mandal will make a profit of INR 8.93. Note this figure includes the responsibility of transporting to the Hyderabad market and farmer has to invest his time into the same.

However the direct market linkage between the urban and rural federations will absolve the farmer of the headache involved in transportation and he can save his time involved and invest the same elsewhere. The biggest thing he is saving is the commission paid to intermediaries as he is no longer dealing with them in this arrangement. He is saving a substantial amount of marketing costs involved and time associated with the same.

At the same time farmer makes a profit of INR 9.10 with this arrangement (nearly INR 0.5 per kg in case of a Parigi famer and INR 0.15 per kg more in case of Chevella farmer along with saving time).As per the table, a farmer still bears the same production cost, saves on his marketing costs by saving on marketing costs and makes an increase in his profit per kg.

Also the retailer is increasing his income from 6.3 rupees per kg to 7.7 rupees per kg. These figures for the retailer are not the profit he is making but the income excluding the commission

he is paying to the agents and the costs of vegetables. Other fixed costs are not included. As we have assumed earlier, the linkage involved collective sharing of losses and benefits even on retailer side. The calculations are done taking into consideration pooling of 10 retailers on the urban side as well. They save the transaction costs involved i.e transportation, loading, unloading etc and the same is reflected in the above table.

Table 14 : Unit Analysis (Distribution of Consumer Price) in case of Direct Market Linkage vis a vis Pooling

Tomato					
Parigi	PL	PH	Chevella	PH	DML
PC	9.32%	5.69%	PC	5.69%	6.21%
MC	1.05%	3.16%	MC	0.83%	0.08%
FM	42.74%	43.13%	FM	45.46%	50.49%
TM	46.90%	48.02%	TM	48.02%	42.81%
Pooling			Pooling		
Increase in Farmers Margin					5.02%
Increase in retailers margin					20.88%

PC: Production cost, **MC:** Marketing Cost, **FM:** Farmer Margin, **TM:** Trader Margin (Wholesaler and Retailer included), **PL:** Pool and Sell Locally, **PH:** Pool and Sell at Hyderabad Markets, **DML:** Direct Market Linkage between Rural SHG federation and Urban SLFs.

The above table shows the percentage of Production cost, Marketing Costs, Farmers Margin and Traders share in the consumer price. As we can see from the table

1. Pooling (Produce of 10 Farmers) and selling at Hyderabad market is not highly advantageous to parigi farmers compared to selling the same in local market. They gain only marginally by selling at Hyderabad market. However if the same farmers get into market linkage with urban SLF federation , they stand to reap substantial benefits with their margin increasing by 7 percentage points to 50%. At the same time their marketing costs become negligible and they save on time as well.
2. A Farmer in chevella also stands to gain at least 5% over that of pooling arrangement by saving on his marketing costs.

3. Also the urban retailer , who bear the risk and responsibility of transporting the produce and bearing the transaction costs, also stand to gain at least 20% on his income from this arrangement.

9.0 SHG FEDERATIONS AND SHG WOMEN: FINDINGS

The focused group discussions carried out with the SHG federations i.e. Village Organization and interviews with individual SHG women revealed many things about the strength and weaknesses of the SHG organizations and SHG members.

The SHG federations as of now in these villages mainly are involved in banking services and they regularly conduct meetings to discuss about the proceedings. While they are competent enough to govern the institution i.e. VO, there is a lot to be desired when it comes to their business skills and competence. And the fact that only few members, i.e., office bearers are literate as well as skilful in terms of governing is another concern in building a business institution involving these SHG women.

There are some parameters on which SHG women were judged to assess their competence so as to be able to involve them in building a business institution which has to be run by them. They are

- Willingness in Business: Though some SHG women in particular were enthusiastic in appreciating the higher returns involved in collective pooling and direct market linkage with the urban SHG federations, most of them were unwilling to dedicate themselves throughout the day in vegetable business. The reasons being family commitments on one side and bad experiences in the past with similar experiments.
- Capability: In terms of capability to run a business enterprise, there is a serious handicap with women in general and SHG women in particular. Though many women are involved in production of vegetables, they are not completely aware of costs incurred and prices realized. Women are not fully aware of market dynamics and their management skills are also a big concern.
- Decision Making Power with respect to Production and Trading of vegetables rests on male head of the family and women hardly plays any role in this aspect and hence are ignorant about the intricacies of the trading.

- Perceptions about Pooling: Most of these women are wary of pooling their produce with the others as they are doing their farming and trading independently and sort of do not trust others. Hence they are not really ready for pooling though they appreciate the benefits it could offer.

9.1 Issues with the collective:

Apart from the concerns with the SHG federations and SHG women, there are issues associated with pooling as well as direct market linkage between the rural and urban SHG federations are shown below. These issues arise with the formation of SHG-farmer collectives as well as retailer-collectives in LB Nagar.

- Sharing of costs and benefits

As pooling requires different farmers coming together and bulking their produces, the issue of sharing costs and benefits arises and plays a major role in ensuring member participation in this arrangement. The costs and benefits have to be shared in proportion to the volume of produce of each individual farmer. This necessitates the importance of proper infrastructure like weighing scale and also up to date book keeping.

- Sharing of Risks is also a concern. Direct market linkage between rural SHG federations and urban SHG-retailer-collectives requires regular guaranteed supply from the producers. However there is a chance that farmers might sell their produce at the local markets incase the prices are high and then the direct market linkage arrangement might break down.
- Initial Absorption costs in setting up the collective for infrastructure. The question of who will bear these costs is also a concern.
- Group cohesiveness and free rider problems: Group cohesiveness is very important and prerequisite for these arrangements to work and it's also the most difficult parameter to bring about. There is always a possibility of mistrust and conflicts arising among the group members. There has to be a suitable compliance mechanism to deal with these issues.
- Need of capacity building of SHG Federation members who will take care of operations in pooling at village level. This has to be dealt so as to ensure smooth and efficient operations in collective pooling.

10.0 CONCLUSION:

Vegetable business can generate sufficient livelihoods by going for simple value addition, i.e., pooling at village level to attain large economies of scale and marketing it collectively at the market. SHG federations, i.e., Village Organizations can play a pivotal role in pooling and having a direct linkage with the urban SHG federations. However their present skill levels and market knowledge are a serious handicap. At the same time, the vegetable business being a risky business with established complex value chain, the question of decision making power, risk taking ability and efficient handling of daily operations by the women in general and SHG women in particular is a big question mark. The APMAS has to offer hand-holding support to these SHG women for a sufficiently long duration to build business competence and expertise in SHG women in order to make this institutional set up a successful and sustainable business run by SHG women.

12.0 REFERENCES

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2. Directorate Portals of department of Agriculture[dacnet.nic.in]
3. National Horticulture Board [nhb.gov.in]

ANNEXURE 1:

BROAD TOPICS UNDER INTERVIEWS WITH PRODUCERS AND SHG FEDERATIONS

1. To *assess scale* of vegetable/fruits production
 - a. Type and quality of Vegetables/fruits grown
 - b. Seasonal Calendar
 - c. Volume of production
 - d. Land size
 - e. Productivity
 - f. Production risks

2. To understand *input services*.
 - a. Sources of finance and utilization of it.
 - b. Access to seeds, fertilizers, pesticides
 - c. Irrigation & Technology
 - d. Labor

3. Cost of production
 - a. Investment
 - b. Labor wages
 - c. Irrigation & Power
 - d. Transportation

3. To output marketing/services
 - a. Existing market (shandy, retail & wholesale, rythu bazaar) and types of practices
 - b. Market players involved and Margins
 - c. Prices, price spread, price variations (between the producer and consumer)
 - d. Steps involved in the process
 - e. Sale practices (weightment, auction)
 - f. Risks, and risk mitigation
 - g. Market infrastructure requirement (storage, godown, etc)

- h. Direct market Vs. Indirect market options
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- 4. To comprehend current income and potential opportunities for business development by linking rural and urban SHGs (*producers with consumers via SHG feds*).
 - a. Current livelihood sources of urban SHGs and SLFs
 - b. Possibility of engaging SHG federations in vegetable trading in urban areas
 - 5. To suggest appropriate linkages, strategy for leveraging scales of production and to see how competent the SHG women Households and SHG federations.
 - a. Possibility of Pooling at SHG level or at VO level or at MS level