

RURAL WOMEN ENTERPRISE: SHG INSTITUTIONS HAVE VITAL ROLE IN FOOD PRODUCTION TO IMPROVE HEALTH & NUTRITION

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Abstract: Women need opportunity not sympathy-they want freedom to change the face of health & nutrition condition in developing countries. Women based Self-Help-Groups (SHGs) in south Asia; India, Bangladesh, Pakistan, Nepal etc. are actively participating in development arena especially in health & nutrition related interventions. SHGs based women institution primary or secondary level institutions have played vital role to make health and nutritional awareness helping local government providing support in access of health facilities & day-to-day nutritional requirement to all. SHGs and women organizations for the poor, where they promote collective action do so not by enforcing a commonality of tastes, but by reducing uncertainty surrounding cooperation. Community institutions reduce the cost of health facilities and improve effectiveness. These institutions are better in social monitoring as well as implementation in most vulnerable. Community participation is a social process in which specific groups with shared needs living defined geographical area actively pursue identification of their needs and take decision and establish mechanism to meet the require need of common man. SHG institutions has potential to produce fortified food production in rural to fulfill the nutritional requirement in developing countries. In developing countries like India second highest population in the world where to provide health & nutrition facilities down to the line is challenging to make reach to the actual beneficiaries. Women institutions can make realistic judgments about how changes can be achieved to acquire equity, effectiveness and efficiency in especially most backward and remote villages where hardly any government services can penetrate easily. SHG institution to play vital role in production of fortified food from locally available raw materials (Rice, Maize, Wheat, Pulses) improve the industrial development as well as reduce the post harvest losses in rural areas.

Introduction: Malnutrition, poverty and unemployment in developing countries and low-income countries seek self-employment as a viable option towards building social and human capital to work towards poverty alleviation. It moves on to a discussion of a qualitative analysis of health and nutrition, the impact of SHGs on individual members, family, and community life, changes in skills, knowledge, and attitudes, successful outcomes, and the development of human and social capital. Self Help Group is about people coming together with others who are affected by a particular issue (experience, disadvantage, discrimination, etc) to support each other and to work together to change the disadvantage affecting them. Activities that groups do include community education, information, mutual support etc.

Self Help group (SHG) is a self-governed, peer-controlled small and informal association of the poor, usually from socio-economically homogeneous families who are organized around savings and credit activities. Funds for credit activities are coming through regular savings deposited by all of its members on a weekly or fortnightly basis. In the meetings they discuss common village problems and plan solution, share information; make efforts to improve their basic health and nutritional status.

Self Help Groups are not charity or simply community based groups. They are made of and controlled by the people affected. Group members are not volunteers. Although the work is usually

unpaid, members work to change their own situation and the support is mutual. The knowledge base of self-help-groups are mutual support groups is experiential, indigenous, and rooted in the wisdom that comes from struggling with problems in concrete, shared ways. Self-help groups build on the strengths of their members' health and literacy skills. SHGs have another very important role to play particularly in the transfer of technology to user group population. It has been found by the members of SHGs that they offer them organizational base, large resources, and access to modern technology leading to employment and income generation. Thus, SHG movement among the rural poor in different parts of the country is emerging as a very reliable and efficient mode for technology transfer. However, it is strongly felt that the "pace of transfer" and popularization of technologies must be accelerated so that even the small farmer can benefit from new technologies.

The emergence of self-help groups can be seen as a response to industrialization, the breakdown of the kinship system, and the decline of the community (Katz & E, 1976) Despite the variety of explanations for the self-help phenomenon, the consensus is that there is a need for a new model to supplement and complement professional services, and that self-help groups are growing at an unprecedented speed worldwide.

Self-help groups are generally defined as "voluntary, small group structures for mutual aid and the

accomplishment of a special purpose". In a broader perspective, self-help groups may be viewed as a "special form of voluntary association formed by particular populations to accomplish specific common purposes" (Yoak & Chesler, 1983). As such, these groups share many characteristics of the general class of small voluntary associations; they are often locally based, somewhat formalized in nature, and have an identifiable membership and purpose. They must confront issues of leadership, internal regulation and policy, and articulation with other organizations and institutions in their locale. Thus, self-help groups provide a natural laboratory in which to examine dynamics of the broader class of local voluntary organization. More recent efforts have included a focus on such organizational aspects as leadership, membership, formal structure, & institutional affiliation, (Smith & Pillemer, 1983) (Pillisuk & Parks, 1980).

In last two decades, self-help-groups are as part of social movement, or an organized expression of changing value and orientation, and as part of challenge to technological and bureaucratic control over human services (Smith & Pillemer, 1983)

Post Harvest Losses and Role of Women

Institution in Rural Areas: Current world population is expected to reach 10.5 billion by 2050, further adding to global food security as well as nutritional security concerns. This increase translates into 33% more human mouths to feed, with the greatest demand growth in the poor communities of the world. Food supplies would need to increase by 60% (estimated at 2005 food production levels) in order to meet the food demand in 2050 (Alexandratos & Bruinsma, 2012). Food availability and accessibility can be increased by increasing production, improving distribution, and reducing the losses. Reduction of post-harvest food losses is a critical component of ensuring future global food security that translates into nutritional security to developing world. Food and Agriculture Organization of U.N. predicts that about 1.3 billion tons of food are globally wasted or lost per year. Reduction in these losses would increase the amount of food available for human consumption and enhance global food security, a growing concern with rising food prices due to growing consumer demand, increasing demand for bio fuel and other industrial uses, and increased weather variability. Countries those have not sufficient food and suffering from Malnutrition can trim a developing country's gross domestic product by up to 3 percent, according to the World Bank. Quantitative food losses are reduction in weight of edible grain or food available for human consumption. The quantitative loss is caused by the reduction in weight due to factors such as spillage; consumption by pest and also due to physical

changes in temperature, moisture content and chemical changes (FAO, Assessment and Collection of Data on Post-harvest Food Grain Losses, 1980). This definition is unsatisfactory since food grains undergo reduction in weight due to drying, a necessary postharvest process for all grains. Although this process involves considerable reduction in weight, there is no loss of food value, and therefore, should not be counted as loss. Quantitative losses consider due to spillage and other unintended losses along the supply chain rather than intentional weight loss through drying or other processing.

The *qualitative loss* can occur due to incidence of insect pest, mites, rodents and birds, or from handling, physical changes or chemical changes in fat, carbohydrates and protein, and by contamination of mycotoxins, pesticide residues, insect fragments, or excreta of rodents and birds and their dead bodies. When this qualitative deterioration makes food unfit for human consumption and is rejected, this contributes to food loss (Aulakh & Regmi, 2013). Women producer groups are best platform where these post harvest issues can be addressed correctly. To reduce the qualitative collective action can contribute more than individual.

A typical post-harvest chain comprises of a number of stages for the movement of harvested output from the field to the final retail market. The losses incurred at each step vary depending upon the organization and technologies used in the food supply chain. In less developed countries where the supply chain is less mechanized, larger losses are incurred during drying, storage, processing and in transportation. The magnitude and pattern of post-harvest losses vary across countries based on their stage of economic development. In high- and middle-income countries, significant losses occur in the early stages of the food supply chains and at the consumer level (FAO, Global Food Losses and Food Waste- Extent, Causes and Prevention. , 2011). Food losses are relatively high across many commodities for the developed and developing countries. Capacity building to women institutions post harvest technologies can be used in effective way

Post Harvest losses in India

India, with its diverse agro-climatic conditions and consumer preferences, produces about 700 million tonnes of biological material per year including food grains, oil seeds, fruits, vegetables, sugarcane, milk, eggs, fish, meat, spices etc. India incurs post-harvest fruits and vegetable losses worth over Rs 2 lakh crore each year largely owing to the absence of food processing units, modern cold storage facilities and a callous attitude towards tackling the grave issue of post-harvest losses. In India 5-50% of food items get lost in the post-production system (Economictimes, 2013). The extent of loss depends on

the type of food commodity whether it is durable, semi-perishable or perishable. At least 50% of this loss could be prevented using appropriate post-harvest technology and locally food processing facilities. This enhances and augments per capita food availability from unit arable land.

There are four ways of increasing per capita food and fiber availability. One is to increase the area under agriculture, second is to increase the productivity, third is to control the population and the fourth one is to prevent post-harvest losses. Minimizing post-harvest losses is one of the most effective and

economical ways of increasing per capita food availability.

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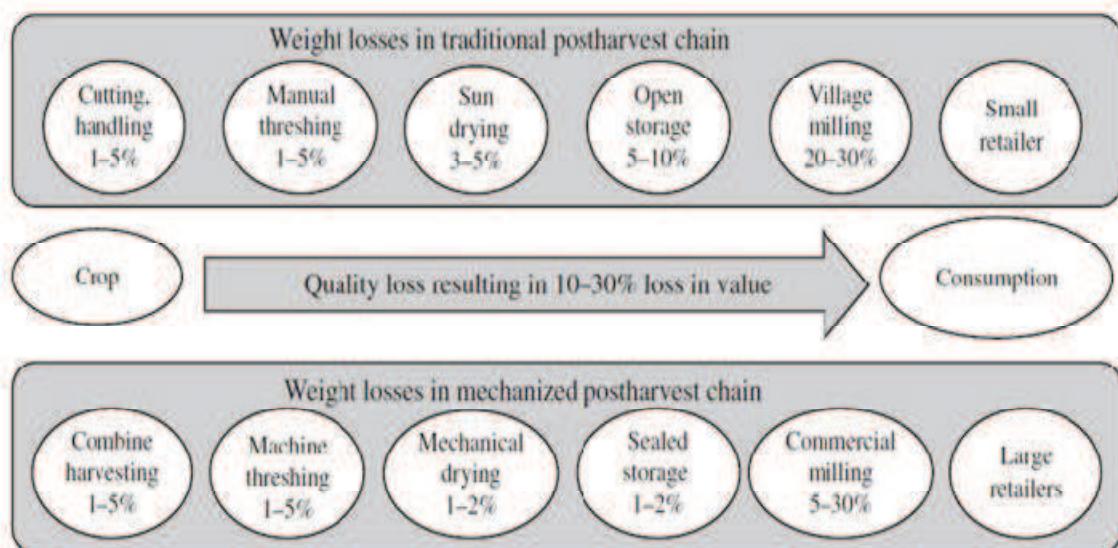


Fig:1. Traditional versus mechanized postharvest chain (Hodges, Buzby, & Bennett, 2011).

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Food and nutrition security

Food and nutrition security should address to the availability and accessibility of food of adequate quality, quantity & safety to meet human nutrient and non-nutrient requirements during the life cycle. Income and food security trends, poverty and malnutrition remain serious problems within South Asia. About 58 percent of the children are currently malnourished. Even with the projected increase in food availability, 46 percent of children are still projected to be malnourished in the year 2020. Since the region's population is so large, global trends and levels of malnutrition in the year 2020 will be largely colored by what happens in South Asia. More than 50 percent of the malnourished children in all developing countries are found in South Asia today. By 2020, South Asia's share of the world's malnourished children will still stand at 48 percent (Kacharu, 2010).

Community based participation in Health and Nutrition

World Health Organization (WHO) in 1978, adopted the policy of Primary Health Care (PHC). In doing so, they recognized that health improvements were not merely the result of health service delivery and medicines, (WHO, 1978). Reflecting recognition of social determinants of health which included social, economic and political concerns, PHC was based on principles of equity and community participation and supported by recognition of activities for appropriate technology, multi-sectoral collaboration and sustainability.

The idea that community lay people had a crucial role to play in health improvements was rather surprising to health professionals (Rifkin, Hewlett, & Draper, "Community Participation in Nutrition Programs for child survival and Anemia", 2007). However, this principle of community based institutions have several reasons to adopt for better performance in health and nutrition.

- Community resources including money, materials and time can contribute to improved health; community institutions influence the system to enhance the capacity of local people to access health services.
- Peoples' health is not merely an outcome of health services but equally important for women, women are the key indicator for the improvement in health
- Health improvements and sustainability of community health programs depend on people defining their needs and taking action to meet these needs (Rifkin, Community participation in maternal and child health/family planning programmes., 1990).SHG's institutions are bridging the gap of government and beneficiaries in coverage of target people
- "Social learning" where professionals and community people learn from each other enables both groups to define joint purposes and build partnerships SHG institution provide the platform to learn (Bank, 1996).

Community participation was traditionally seen by the medical establishment as mobilizing people to adopt an intervention. A typical example is mass immunization day campaigns (Gonzalez, 1965)

Fig:2,Diagram for assessing community participation in a health programme (Bichmann, 1989)

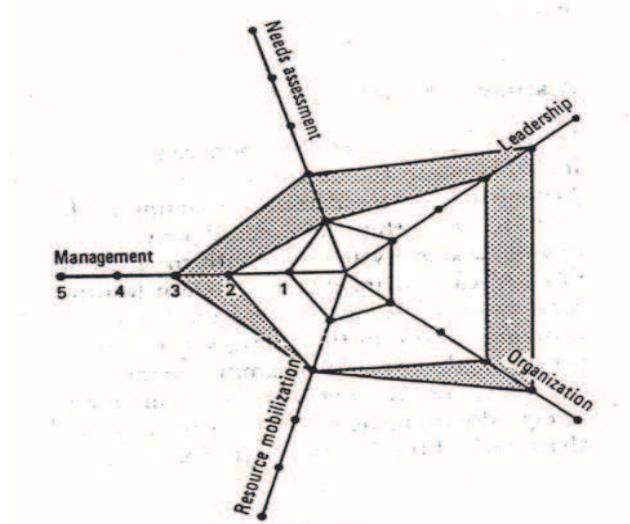
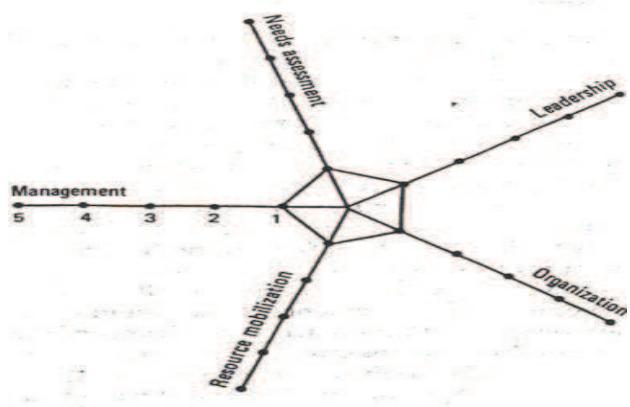


Fig:3. Baseline assessment of community participation in a health programme (Bichmann, 1989)

Rifkin and others (Bichmann, Rifkin, & Shrestha, 1989).have also developed a tool for assessing participation that has been used in both developed and developing countries. This includes a visualization called a spidergram that links five continua together with narrow participation at one end and broad participation at the other. It was designed to assess changes in five factors (needs assessment, leadership, organization, management, and resource mobilization) by first recording the breadth of participation at the beginning of the program as a baseline then at designated times during program development (see Figure 4). Two points must be noted: 1) the pentagon at the center of the diagram reminds the assessors all communities

have some degree of participation. This means no mark can be at the center of the continuum; 2) changes do not necessarily reflect growing participation; they also can show diminishing participation (Rifkin, Hewlett, & Draper, "Community Participation in Nutrition Programs for child survival and Anemia", 2007).

Framework of women institutions can make efficient role in production of Fortified food to improve health and nutrition in community and reduction of post harvest losses.

Engaging women SHGs is improving community health as an important component of equity in health and nutrition in rural areas especially. Women participation approaches endeavor to empower women with confidence and skills to adopt new and senior roles. This not only promotes equity, but it also benefit child health outcomes as women are more likely to use any improved knowledge or income for their children. In developing countries post harvest losses are very significant; there are limited resources in rural areas through which rural people can get nutrition as recommended for the day. Production of fortified food products form locally available resources contribute in overall income of farmers as well as availability of "**Fortified Products**" reduces the health risk particular in South Asia region; Pakistan, Bangladesh, India, Nepal, Myanmar etc, in terms of iron & Vitamin A deficiency in women and children.

This "**Pentagram**" framework analyze the potential of women institution based on five factors; leadership, organization, resource mobilization, planning and management, and monitoring & evaluation. These factors measure the qualitative quality of institutions. This tool can enable planners to see whether participation has changed in any one factor and to discuss why this had happened with women institution. The indicators are purely descriptive; they do not tell planners whether participation is good or bad, they only allow the planner to see change and to explore the processes that allow such change to occur.

Leadership – women leaders serve as role models for other community members. These leaders act for all community members, not just those with whom they have a special relationship. This ensures that the program is effective and benefits everyone, especially the most in need. If leadership and governance/democracy skills are weak within the community, efforts should be made to strengthen these skills to engender strong, sustainable and open leadership. Engaging women as improving community based women enterprise is an important component of equity health and advocacy for nutrition in rural areas from locally available raw materials as well as reduce post harvest losses. With

regard to external leadership for specific program promotion, leaders must build partnerships with local people, respecting views and contributions, and share responsibility for the new program.

Organization: To address the social challenges, SHG's institutions have performed in a cost effective and sustainable manner. It is argued that women institutions help SHGs become institutionally and financially sustainable because they provide the economies of scale that reduce transaction costs and make the provision of these services viable. Other benefits of SHG institutions are their ability to take up common marketing, reach to large scale, interact with different sphere, and strengthen in rural activities farming and collection of agri-products, promote leadership qualities in women, mobilize a large number of women to obtain a "Social justice" in the society and promote new SHGs in remote & in inaccessible communities of those area.

Resource Mobilization: Mobilization of resource is a process in which women institutions will identify the resources essential for the development, implementation and continuation of works for achieving the reduction in post harvest losses and collective action to perform this. In real terms, resource mobilization means expansion of relations with the resource providers like rural people, rural markets, personal skills, knowledge and capacity for proper use of resources. Resource mobilization does not only mean use of money but it extensiveness it also means seeking new sources of resource mobilization and right and maximum use of the available resources. Every SHGs institutions can develop a code of conduct on resource mobilization, which should specify what are the resource providers that one would like to expand relations with, and what types of resources should be mobilized (Koirala, 2009).

Planning and management – Equitable and sustainable women enterprise programs and reduction in post harvest losses require communities with planning and management skills. This means community institutions can plan around their needs in a locally appropriate way, which may also foster local program ownership since it stems from local people's ideas and time investments. Strong planning and management skills means that the community will be more likely to adapt the program to changing circumstances, thus maintaining program effectiveness. Activities to promote such skills include active participation in needs assessments and monitoring and evaluation. Community participation approaches endeavor to empower women with confidence and skills to adopt new and senior roles. This not only promotes equity, but may also benefit child health outcomes as women are more likely to

use any improved knowledge or income for their children.

Monitoring and evaluation – women participation transfers measurement and analytical skills to the community as they learn how to define indicators, and monitor and evaluate in a way that is meaningful to them. The women institutions therefore becomes better able to analyze its actions and their effects and to respond appropriately. This will help maintain program effectiveness and sustainably.

Such a framework reflects the rationale that women institution may help achieve effective and sustainable changes in health and promote equity within the community. A community development approach to participation aims to give a community the skills, experience, and confidence to sustain a program without external support and adapt it to changing

circumstances, to diversify their activities to pursue their own development, and to protect the weak among them.

In India, Female life expectancy is low compared to many countries. In a large number of families, particularly in rural areas, the girls and women including mothers face nutritional discrimination within the family and are anemic and malnourished. Maternal mortality in India is second highest in the world. The health professionals supervise only 42 per cent of births in the country (Patel, 2014). Supply of nutrition and food security in rural India inclusive in nature. Agriculture is the main occupation of more than 60% population of India and rest of developing world. Low cost model for the food storage, post harvest technology and food fortification is needed

Framework for analyzing “Women Institution in Fortified Food Production”

| Component of Participation | Women SHG Institution Participation Typology | | |
|--|---|--|--|
| | Mobilization | Community acceptance | Development of fortified Product |
| Leadership Of the Institution to direct the community professional as well as entrepreneur where the intended beneficiaries are living for collection of raw materials to fortified finished product | Leader of women institution decide and provide the guidelines for community professional & entrepreneur within the Self-Help-Groups (SHGs). Leadership within the institution is concerned with widening the decision-making taking in concern from all members of institution. Leaders mobilize the members of SHG's for fortified food & utilization of agriculture produce (maize, wheat, rice, other cereals & vegetables) to finished product. | Decision-making is collaborative between SHG members and leaders as well as community professionals. Leaders seek ways to present the interests of various groups, particularly the poor. Taste and quality of fortified food product should be accepted in community. | Production of fortified food product to reduce the post harvest losses in rural areas. This is led by SHG members selected through a representative process who act in everyone's interests. They are accountable to the community and responsive to change. If women leadership is weak initially, collection of raw materials and production of fortified food would be managed by community professionals and support members. Local leadership is a role model and ensures that the interests of various groups are represented in decision-making and /or provides opportunities for different groups to participate in decision-making, especially women and |

| | | | vulnerable groups. |
|--|--|--|--|
| Planning and Management <i>How partnerships between local farmers and the SHG members are forged</i> | Community professionals conduct the needs assessment and decide the program's focus, goals and activities and provide necessary resources. Program timeframe is at community professional's discretion. Decisions are not necessarily transparent and number of mechanisms are established to hold community professionals accountable to the community and institution also. Community professionals should tell the community how they may participate in production of fortified food. Minimal transfer of skills & technical training necessary. | Community professionals collaborate with the community and SHG members, assess needs by asking local people for information regarding fortified food production. Community Professional have a predetermined remit, but invite the community to participate and respond to their priorities within that remit and in ways that are negotiated with and involve community members and existing community organizations. Production goals are negotiated. Processes and decision-making work toward transparency. Production timeframe has some flexibility. Both professionals and community members provide resources. Community members provide materials, money and human resources e.g. volunteers, local NGO participation. Some transfer of skills: capacity-building and training. | Partnerships between communities and other professionals are created or re-negotiated with representatives of the community and are institutionalized. Community Professionals act as facilitators to enable the community to plan and manage the program. Community conducts needs assessment, possibly with professional help. Fortified food production priorities are defined by community members and advocated by them. Local people's knowledge and understanding of an issue is the starting point for exploring solutions. Production are integrated into existing institutions. Institutions are supported and members learn any program management and evaluation skills they lack and then assume these tasks. Mechanisms are established for the community to hold Community Professional and local program management accountable, and fortified food production |
| Organization Women institution are abide by legal and institutional characteristic | Women institution are governed by byelaws of co-operative society act. SHGs are the integrated part of Institution they make secondary as well as tertiary institutions. Committee formation within the institution for handling of different activities, mobilize | Women actively participate in fortified food production aspects and their opinions are elicited. Institution contribute to the program, particularly when it affects them directly, however they have decision-making roles. Board of directors (BoD) | Women participate actively at all stages. They hold positions of decision-making and responsibility is a program objective. Production of fortified food and development of product from local |

| | | | |
|---|---|---|--|
| | and includes member for new activities and production of fortified. | of institutions are execution and decision making body. | available agriculture produce. |
| Monitoring and evaluation <i>How intended beneficiaries are involved in these activities</i> | Community Professional and BoD members design M&E collection protocols, choose the outcomes and analyze the data to suit their or their information needs. Main objective has to be fortified food and fortification as per need of community or govt. health data available. Priority to those SHGs where severity is high and plan implementation accordingly . | Community Professional design M&E protocols and perform analyses, but community members are involved in data collection. Mixed methods (including qualitative methods) are used to capture wider outcomes and the context. Broad definition of 'success' used. Responses to monitoring Community Professional are met and community feedback is both sought and given in appropriate format | Communities are actively involved in monitoring the program and in deciding how to respond to findings from monitoring data. Participatory M&E is an essential component of overall evaluation which uses both quantitative and qualitative methods. Communities conduct an evaluation which reflect the fortified product acceptance and use of product in right manner. |
| Resource Mobilization <i>For sustainability of the Organization and production of fortified food.</i> | Resource Mobilization helps to formulate an independent budget. To break the tradition of running the specific programs of any donor agencies only. To spend in the pro of the Organization's liking | Community resource mobilization optimum use of domestic capital and skills, expand deep relations with the stakeholder and community, to fulfill responsibilities towards the community. To develop new thinking and challenge institution has to make their traditions. | For Fortified food production availability of raw materials and collection, institution play vital role to mobilize awareness. Fortified food products should be distributed in most needful areas. Resource must be in proper balance no waste of product at door-to- door and complete information about use of products. Different products for the different age group people should come in budget of community affordable price. |

This framework explains the women institutions participation in local community to make awareness, to disseminate information related to post harvest losses as well as to food fortification at with local available resources. These are the key indicators of role of women institutions to reduce post harvest losses and convert it into fortified food:

These institutions have capability to identify resources provider both for raw material (Agri-produce) and technology for processing

- a. They have mechanism to receive resources
- b. Institutions have lower financial risk
- c. They have scope of diversify and expand the local resources
- d. Resource mobilization helps to formulate and independent budget to break tradition of running methods in post harvest
- e. Institution leadership and local resource uses decrease dependency on others
- f. Institution expand deep relations with the stakeholders (PRI, SHG' member etc) and community.
- g. To develop new thinking and challenges the old traditions
- h. To enhance the dignity of institutions in society.

Conclusion : This paper has highlighted the importance of reducing postharvest food losses as well as ensuring nutritional product availability at local areas necessary step in ensuring future global food security and nutrition security in a sustainable manner through women SHG institution. The challenges faced by climate change and limited land and water resources, food security cannot be achieved merely through increases in agricultural productivity. Attention also needs to be given to measures to reduce losses along to enhance the food processing the farm-to-consumer chain. Reduced losses not only reflect an increase in food available for human consumption, but they also reflect a more judicious use of our limited natural resources. There is a need to understand that "growing" alone is futile without "processing". It is important to appreciate that "growing" and "processing" are complementary and need to be promoted in tandem. A full backup support in value-addition, processing and marketing of agri-based products for ensuring nutritious food availability in local area.

Food fortification is an attractive and important for rural world especially women & child groups through existing food delivery systems, without requiring major changes in existing consumption patterns. Compared with other interventions, food fortification may be cost-effective and, if fortified foods are regularly consumed, has the advantage of maintaining steady body stores, balance of micronutrient (Zn, Iodine, Vitamin A, Iron, folic acid & calcium) which are essentially required for the body.

This paper also emphasis on women institution potential and capability to take up maximum participation in health and nutrition issues especially in south Asian countries. These institution are key performer in society to mobilize, aware and implement the good practices in agriculture and adopting new technology to enhance the capacity of farm production and fortified food production also. Women institution have vital role in south Asia region because there are many programmes which are based on women participation especially health and nutrition initiatives. This is a self respectful step to develop the institution, to provide continuous service to the community and become self-reliant, brings down the financial risk, gives diversity to the production and enhances the managerial capacity. In India, National Rural Livelihood Mission (NRLM) under Ministry of Rural development has flagship programme to improve rural livelihoods through Self-Help-Group strategy. Women SHGs are promoted under NRLM programme to collaborate them secondary and tertiary institutions for the better support as organization. The overall perspective of this paper to reflect the role of women institution in food production, improve health and nutrition status of women, empowerment to make managerial decisions, financial management and maximize the local resources for the benefits of communities those are at highly risk of malnutrition and outbreak of disease in absence of proper food. This paper also suggest that Government should support to these institutions and treat as potential organization collaborate as "Community- Public- Partnership" CPP model for food processing and optimum utilization of local resources in developing countries

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