

## Family Farming is Linked to National and Global Food security

**Vijaja Kkhader\***

*Professor, Former Dean, Acharya N. G. Ranga Agricultural University, Hyderabad, India*

**\*Corresponding Author:** Vijaja Kkhader, Professor, Former Dean, Acharya N. G. Ranga Agricultural University, Hyderabad, India.

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After 70 years of Independence, India, has the highest incidence of under nutrition, in the world. Most recent surveys show that 40-50% pre – school children and over 30% adults show anthropometric evidence of under nutrition. Deficiencies of micronutrients (Vitamins and minerals) the so called Hidden Hunger is rampant

### Eradicate extreme poverty and hunger

In September 2000 a world leader signed a commitment to achieve eight Millennium Development Goals (MDG) by 2015 to eradicate extreme poverty and hunger Forty countries have already achieved the first target to halve the proportion of people who suffer from hunger by 2015. We could not achieve the goal in spite of economic development.

### Right to food is a basic human right

As per FAO report 842 million people, 12% of global population with chronic hunger live. The cost of hunger and malnutrition fall heavily on the most vulnerable.

1. 60% of the hungry in the world are women.
2. Almost 5 million children under the age of 5 die of malnutrition related causes every year.
3. 4 to 10 children in poor countries are mal nourished.
4. 26% of the world children are stunted due to mal nutrition.
5. Two billion people suffer from one or more micro nutrient deficiency.
6. 70% of food insecure people living in rural Africa, Asia, Latin America and Near East. Many of them are family farmers and small holders. The right to adequate food is realized when every man, women and child has the physical and economic axis to all times to adequate food.

Why are family farmers who provide food – hungry?

The reasons are many

- Lack of axis to good seeds
- Lack of adequate storage for their crops.
- Lack of proper transportation.
- Lack of timely financing and policy support.
- Nearly 98% of the farmers in the world are family farmers.

Family farmers have more knowledge of their

- Land and its history
- Need and productive crops
- Local ecological conditions
- Safe guarding Agro-Biodiversity through the sustainable use of natural recourses.
- In Brazil family farmers provide on an average 40% of the products from 25% of the farm land.
- In Fiji small holders provide 84% yam, rice, maize and bean from 47.4% of the farm land.
- In U.S.A. the marginal farmers provide 84% of farm produce from 78% of farm land.

So it makes sense that family farmers can have a big role to play in ending hunger feeding all and taking care of our earth. In fact 500 million out of 570 million farms in the world are family farms. Family farmers are fruit and vegetable farms, grain farms, orchard, live stock and even fisheries and those that harvest non wood forest product. Thus all family based agricultural activities that are managed and operated a family and rely predominantly family labour. Family farming is linked to national and global food security in developing and developed countries.

### Nutrition security

The term nutrition security goes beyond food security and implies, “Physical, Economic and social axis to an age and physiological status – appropriate diet balance safe drinking water, environmental hygiene and primary health care for all”. Thus for nutrition security there has to be Awareness and Axis at Affordable cost, not only food security but also safe drinking water, disease free environment and health care outreach, to ensure Absorption.

Family farming included all families depend on Agricultural Activities and is linked to several areas of rural development mainly Agriculture, Forestry, Fisheries and Aquaculture. Family farming preserves traditional, while contributing to a balanced diet and safe guarding the worlds Agro-Biodiversity and the sustainable use of natural resources.

### International year of Family farming

More than 35 billion people depend on rice for at least 20% of their dietary calories. More than one billion people depend on rice production for their livelihood. Family farms are the main source of rice production especially in Asia. The United Nations declared 2014 as the International year of family farming. FAO in collaboration with its partners, facilitating the implementation of the year with following objectives.

- Support the development of Agricultural, Environmental and Social Policies, Conducive to sustainable family farming.
- Increase Knowledge communication and public awareness.
- Attain better understanding of family farming needs, potential and constraints and ensure technical support.
- Create synergies for sustainability.

### Food production in India

Though Agriculture played a key role in India's Economy by sustaining the livelihood of millions of households with substantial share in the country's GDP, in recent years the share of Agriculture and its allied sectors in the growth pie has been declining gradually and they have been causing some concerns.

Green Revolution saved the country from ship to mouth existence and led to self sufficiency (and even export capability) of cereals from mid-70s. However Green revolution by and large bypassed legumes (pulses) and millets. Since mid 90s cereal production has also declined raising concerns about food securities.

### Environmental impact of Green revolution

Green revolution had adverse environmental impact being resource intensive. Soil fatigue due to intensive mono cropping and excessive use of chemical and water are the major problems. Research focus should be to develop green methods precision farming and reducing pre harvest and post harvest losses.

### Integrated farming system

India is a large and diverse country with majority of farmers being small and marginal. Integrated farming of crops for food and fodder and raising of livestock (milk, fish, eggs, poultry etc) can contribute to village and household food security by ensuring access to micro nutrient protein rich food.

### Bio technology

Bio Technology includes a broad range of bio technologies applied to crops, live stock, forestry, fisheries and aquaculture and Agro – Industry. They are used for many different purposes such as:

- Genetic improvement of plant and animals to increase their yield or efficiency.
- Characterization/conservation of genetic resources for food and agriculture.
- Plant and animal disease diagnosis.
- Vaccine development
- Production of fermented foods.

### Battle against hunger, mal nutrition and rural poverty

The vision of Governments for Agriculture development seems to exclude majority of the farmers. The farming is moving to highly mechanize, external input agriculture because Government policies made us believe that small holders agriculture is not viable. As a result thinking has emerged that 50% of the farmers should be moved out of agriculture in 15 years. But policy makers failed to recognize that even 20% of them move out; there are no viable alternative livelihoods available either in rural areas or in cities which are already unable to cope with their current expansion.

The Agriculture support system, research, extension, credit, subsidies, minimum support prices, market procurement, insurance are all designed based on external input based on green revolution model creating problems to agriculture sector.

### Food loss and wastage

- One third of the food produced for human consumption is lost or wasted globally which amount to about 1.3 billion per year.
- In developing nations 40% losses taking place during post harvesting and processing and 25% during pre harvest process.
- In Industrial countries more than 40% losses occur at the retail and consumer level.
- The annual wastage of agriculture produce in India is almost 30% and equivalent to Rs.580 crores due to inadequate storage and processing facilities. The wasted food can feed almost 232 million people.
- Food losses represents a waste of resource used in production such as land, water, energy and inputs, increasing green gas emission.

### Reduce rural poverty

Climate change, other environmental threats and population growth, migration and disproportional revenue on livelihoods in rural area where poverty is already existing are main reasons to aggregate poverty in rural areas.

Food Technology can directly contribute to food security through enhancement of nutrient density establishment of tiny cot-

tage scale for processing industry in rural areas would help to empower a rural woman which contributes livelihood security. Value addition/processing is need of the hour. Post harvest management will save the food.

Rural employment opportunities should be increased by promoting post harvest opportunities and value addition, entrepreneurship at the village level and this will increase the net income of the farmers. The promotion of agriculture, small scale rural industry, the rural economy gets a big boost and also corrects the rural-urban imbalance and prevents migration.

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