

KVK TIMES

A WINDOW TO KVKS OF
ICAR- ATARI, ZONE XI, BENGALURU

ICAR CELEBRATING KVKS
GOLDEN JUBILEE
YEAR 2024

VOL-02 ISSUE 21,
01-15TH MAY, 2024

EAT THE RAINBOW

NUTRIGARDEN : SUSTAINABLE & NUTRITIONAL SECURITY

NUTRI GARDEN

FRUITS & VEGETABLE

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KVK TIMES
A WINDOW TO KVKS OF ICAR-ATARI ZONE XI, BENGALURU
VOL-2, ISSUE -21, 1-15 MAY 2024



Foreword

The ICAR-Krishi Vigyan Kendras (KVKs) are instrumental in bringing advanced agricultural research directly to farmers through their "Lab to Land" programs. As key extension agencies at the district level, ICAR-KVKs significantly influence the agricultural economy by providing farmers with vital, region-specific resources such as high-quality seeds, seedlings, and bio-agents. These efforts are crucial in ensuring the economic sustainability of farmers and enhancing agricultural practices. "KVK Times," published by ICAR-ATARI Zone-XI, Bengaluru, has become an essential platform for exchanging ideas and innovations among KVKs within the zone. This publication has enabled farmers to access advanced agricultural technologies beyond their districts and even their state, fostering a culture of shared learning and innovation.

I am delighted to acknowledge the outstanding efforts of the National Seed Hub Project, which operates at a national level, producing and distributing high-quality seeds of pigeonpea varieties GRG-152 and GRG-811 across the state. The ICAR-KVK in Kalaburgi-II is effectively disseminating UAS, Raichur technologies through various means such as On-Farm Trials (OFT), Frontline Demonstrations (FLD), method demonstrations, and mass media platforms like WhatsApp groups, Kisan Sarathi (Message Portal), and YouTube. These initiatives are instrumental in educating stakeholders, enhancing livelihoods, and increasing the incomes of farmers and entrepreneurs. Moreover, I am proud to highlight the achievement of Sri. Somnathreddy Purma from Kodla, Sedam, Kalaburgi, who has been honored with the "Kannada Rajyotsava 2023 Award" for his contributions to agriculture. His success exemplifies the impact of KVK initiatives on individual farmers' lives.

I extend my heartfelt gratitude to Dr. V. Venkatasubramanian, Director of Zone-XI, ICAR-ATARI, Bengaluru, and his dedicated team for their relentless efforts in making "KVK Times" a beacon of knowledge and progress. I also commend all the KVKs of Zone-XI for their continued commitment to sharing their achievements and innovations through this publication.

I am particularly pleased to see ICAR-KVK, Kalaburgi-II compiling the 21st edition of "KVK Times" for the period of May 1-15, 2024. This issue will undoubtedly continue to inspire and educate the farming community, taking our agricultural profession to new heights.

Raichur
15th May 2024

Dr. M. Hanumanthappa
VC, UAS, Raichur

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Foreword

KrishiVigyanKendras are playing pivotal role in handholding of farmers through technological backstopping for enhancing the productivity of crops and enterprise keeping in mind profitability and sustainability. 'Believing through seeing' and 'Learning by doing' is most appropriate to the KVKs, as the Scientists and farmers are jointly involved in implementing KVK mandated activities to reach the mission of enhancing the farmers income. KVKs are expanding the horizon from elite extension to innovation, market linkage, FPOs, processing and value addition.48 KVK's in Zone XI of ATARI placed in states of Kerala, Karnataka and Lakshadweep Union Territory has immensely contributed in enhancing agriculture productivity and farmer income thus ensuring sustainable social and livelihood security of farm families.

A first of its kind virtual platform, KVK TIMES which documents fortnightly activities of each of the 48 KVKs of Zone-XI is gaining a real momentum. The news items covered in issues made an impact that is long lasting. Most of the news items published in the TIMES has got the potential of cross learning among KVKs and worth reading. This should boost the morale of all of us and many such noteworthy efforts of our fraternity in the zone.

I am happy that KVK, Kalaburgi-II is bringing up the 21st issue of second volume of KVK TIMES covering the first fortnight of May, 2024. Nutri-Garden- Need of the hour-for sustainable and nutritional security of farm family. I congratulate the KVK fraternity of Zone XI specially Dr. P.Vasudev Naik, Senior Scientist and Head and his team of KVK,Kalaburgi-II for bringing out this unique edition of KVK Times.

BENGALURU
15th May 2024

V. Venkatasubramanian



Foreword

The Krishi Vigyan Kendras (KVKs) have consistently demonstrated their essential role in bridging the gap between advanced agricultural research and practical application within farming communities. Their remarkable contributions to agriculture have been instrumental in ensuring that the latest technological advancements reach the doorsteps of farmers, fostering significant improvements in rural livelihoods and self-employment opportunities. At the district level, ICAR-KVKs serve as dynamic knowledge hubs, dedicated to promoting farmers' progress through the scientific transformation of agricultural practices.

Guided by the principle of "Lab to Land," KVKs employ various extension methodologies to disseminate critical knowledge. Despite these efforts, there has been a need for more robust exchange of ideas between different KVKs. To address this, in celebration of the Golden Jubilee of KVKs, we have documented the Nutri-Garden initiatives across all KVKs. This initiative aims to enhance the exchange of ideas and knowledge among KVKs within ATARI-Zone-XI.

I extend my heartfelt gratitude to Dr. V. Venkatasubramanian, Director of Zone-XI, ICAR-ATARI, Bengaluru, for his invaluable support, and to all the KVKs of Zone-XI for their relentless commitment to farmer welfare. I also deeply appreciate the ongoing support and encouragement from our Hon'ble Vice Chancellor, Dr. M. Hanumanthappa, UAS, Raichur. His unwavering motivation drives us to effectively carry out our KVK mandate and serve the farming community to the best of our abilities.

I commend the entire team of ICAR-KVK, Kalaburgi-II for their dedication in bringing out the 21st edition of KVK Times from 1-15 May 2024. This edition successfully showcases the Nutri-Garden activities of all KVKs, promoting a spirit of collaboration and shared learning.

UAS, RAICHUR
15th May 2024

Dr. S.B. Goudappa
DE, UAS, Raichur



Acknowledgement

I am very glad to express my gratitude to Dr. V. Venkatasubramanian, Director, Zone IX, ICAR-ATARI, Bengaluru, whose visions of creating the KVK times has significantly united all the KVKs under Zone XI and enhanced our awareness of the vital activities carried out by each KVK. I extend my heartfelt thanks to the Director and all the Nodal officers, Technical and Administrative staff of ICAR-ATARI, Zone-XI, Bengaluru for providing us an opportunity to bring out second volume of KVK Times of Zone-XI for the 1st fortnight from 1 to 15th May 2024 with their constant guidance and support in executing the KVK activities.

Special thanks to Dr. Mallikarjun Hanji, our Nodal officer, for his unwavering motivation and guidance. I also thank Dr. D.V. Kolekar for this invaluable assistance in producing this issue.

My deepest appreciation goes to Dr. M. Hanumanthappa, Hon'ble Vice Chancellor of UAS, Raichur, for his constantly supportive attitude and commitment to development. I am also grateful to our beloved Director of extension, Dr. S.B. Goudappa and Directorate of Extension staff of UAS, Raichur for their regular motivation and guidance.

I extend my special gratitude to Dr. A.R. Kurubar, Associate Director of Extension, UAS, Raichur for his guidance in ensuring this issue success. Additional, I sincerely acknowledge the entire Zone-XI, KVK family member for sharing their KVKs the valuable information on Nutri-Garden for sustainable and nutritional security.

Finally, I thank all the members of my ICAR-KVK, Kalaburgi-II staff for their stable support, encouragement and efforts were indispensable in bringing out this issue to fruition.

KALABURAGI - II
15th May 2024

Dr. P. Vasudev Naik
Sr. Scientist & Head
ICAR-KVK, Kalaburagi-II

KVK TIMES

A WINDOW TO KVKS OF ICAR-ATARI ZONE XI, BENGALURU

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Introduction

The agricultural policies and interventions in India are mainly aimed at improving total production and productivity of farmers. However, increasing food production alone while ignoring nutritional issues will not suffice to eradicate malnutrition in rural India.

Globalization has led to proliferation of fast-food chains worldwide, which has in turn led to changes in diet of the families. Women and youth in villages must be educated and trained about role of macro and micronutrients, importance of cultivating variety of vegetables and fruits in nutri-garden to have diet diversity.

Division of Agricultural Extension, New Delhi has initiated special programmes like NARI (Nutri Sensitive Agri-resources& Innovations) through KVKs across the country to reduce malnutrition and improve the intake of quality nutrition among the farming community. As a part of this program, KVKs will establish nutri-gardens in the adopted villages and give suggestions about nutrition rich foods to improve the dietary intake and remove the nutritional inadequacies in diet among the community.

The main target group of this programme is women, who will be encouraged to grow vegetables, pulses and fruit plants in their homestead garden or nutri-garden to improve their family diet.Nutri-garden is an advanced form of kitchen garden in which vegetables are grown as a source of food and income.

Currently research is focused on field-based commercial, but questions about agriculture's contribution to nutrition and health are slowly arising. This has led to introduction of nutri-gardens, which show a more clear-cut way from food production to nutritional outcomes.

ICAR-ATARI, Zone-XI, Bengaluru is working with KVKs of three states and Union territories to monitor crops for different agroclimatic zones. Krishi Vigyan Kendras will promote nutri garden in farm families and strengthen the existing nutri garden in KVKs to help train farm women and Aganwadi workers.

The nutri-garden models for the three states working under the ICAR-ATARI; Bengaluru has been prepared with the assistance of State Agricultural Universities.

The states and Union territories fall under different agro climatic regions according to that, the details of different models were explained by respective KVK's in the zone individually in this edition.




कोबी









KVK TIMES
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ALAPPUZHA NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY	
ADOPTED MODEL	KAU-Nutri Garden Model	
AREA (GUNTA)	5 cents per home steads (30 households) / year	
ENTERPRISES	Vegetable cultivation, banana cultivation, backyard poultry, dairy farming , goatary unit, fish rearing	
KVK INTERVENTION	Scientific cultivation and management practice of nutri garden, Nutritional and healthy food habits, banana cultivation, organic manure production	
IMPACT OF FARMING	BEFORE	AFTER
AVERAGE AVAILABILITY OF LEAFY VEGETABLE PER PERSON/DAY	12.4g	130.3g
AVERAGE AVAILABILITY OF OTHER VEGETABLES PER PERSON/DAY	68.4g	176.3g

SOCIO-ECONOMIC IMPACT :

- ✓ Fresh vegetables available for a period of six months
- ✓ Leafy vegetables could be included in the diet regularly
- ✓ Saved an average of Rs.4500-5835 for a period of 3 three months
- ✓ Scarcity for vegetables was managed by nutri garden
- ✓ Few members could earn Rs.3000-4500 per month through the sale of vegetables after their consumption



NUTRI GARDEN





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BAGAKOTE NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	Rectangular
AREA (GUNTA)	10
ENTERPRISES	Nutri-garden
KVK INTERVENTION	KVK Bagalkote has established nutrigarden as one of the demo unit growing different vegetables and medicinal plants which will knowledge on growing on nutrigarden

IMPACT OF FARMING	BEFORE	AFTER
	Before knowing the nutrigarden knowledge concept people highly dependent on market vegetables and other food materials those were grown by application of chemicals that will harmful to their health and family income.	After visiting KVK people gained about nutrigarden concept and people fulfilled their family requirement for vegetable need by growing them in backyard of the home or field. It will help to minimize health issues of family members. By growing medicinal plants in their backyard will help them to reduce dependency on allopathic medicines and more than 40.

SOCIO-ECONOMIC IMPACT :

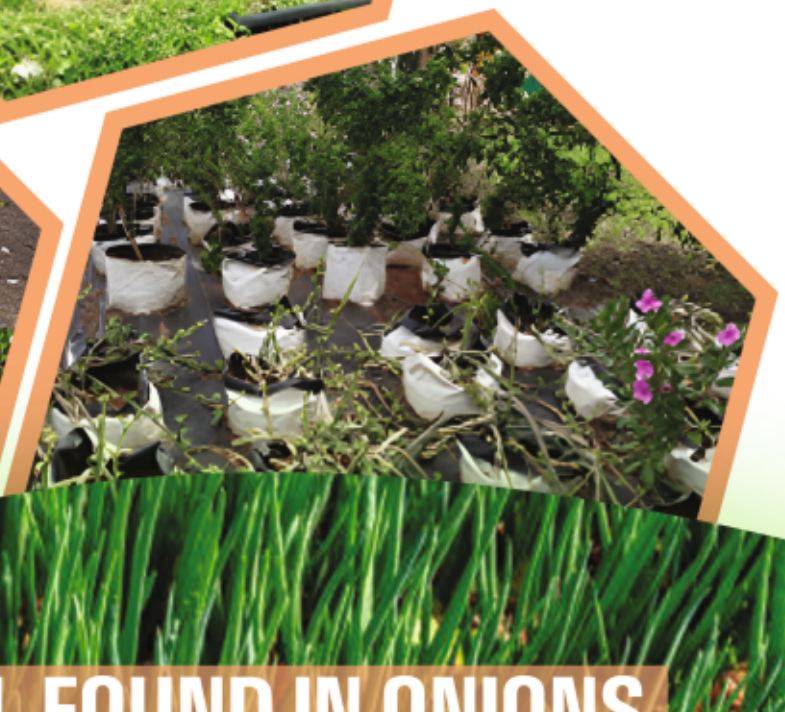
- Adaptation of nutrigardens will help to meet the people needs with good quality food materials and also to increase their family and family welfareness.











QUERCETIN, FOUND IN ONIONS, DECREASES THE GROWTH OF LUNG CANCER CELLS

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BALLARI NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL
AICRP modified model

AREA (GUNTA)
40

ENTERPRISES
Brinjal, Gogu, Mint, Coriander, Ridge gourd, Fenugreek, French beans, Onion, Shepu, Spinach, Chilli, Tomato, Cluster beans, Raddish, Okra, Carrot, Drumstick.

KVK INTERVENTION

- ✓ Distribution of vegetable and green leafy vegetable seeds.
- ✓ Provision of seedlings for crops like chilli, tomato, brinjal, capsicum
- ✓ Distribution of seedlings for curry leaf, drumstick, mango, and guava.
- ✓ Supply of bio-agents such as PSB (Phosphate Solubilizing Bacteria), rhizobium, and neem oil.
- ✓ Training and workshops on organic farming techniques.
- ✓ Guidance on soil preparation, composting, and organic pest management.
- ✓ Educational materials and demonstrations on setting up and maintaining nutrigardens.

IMPACT OF FARMING

BEFORE

✓ **Nutrient Intake :** Showed deficiencies in energy (1926 Kcal), protein (45g), and vitamin C (25mg). Low intake of these nutrients can lead to weakened immunity, lack of energy, and impaired growth and development, particularly in vulnerable populations such as children and pregnant women.

✓ **Excess Intake :** While fat (32g) and sugar (30.4g) intakes slightly exceeded recommendations, the overall dietary pattern still lacked balance. Excessive intake of these nutrients can contribute to health issues such as obesity, cardiovascular diseases, and dental problems, highlighting the need for moderation and balanced dietary habits.

✓ **Overall Inadequacy :** The data underscored widespread inadequacy in meeting recommended dietary standards before the intervention, affecting both food group diversity and nutrient adequacy. This highlighted the critical importance of targeted interventions and nutritional education to promote healthier eating habits and improve overall nutritional status.

✓ Vegetables used to procure from the market



SOCIO-ECONOMIC IMPACT :

✓ **Improved Nutrition :** Nutrigardens provided villagers with access to fresh, locally-grown produce, addressing past deficiencies in energy, protein, and vitamins, thereby improving overall health outcomes within the community.

✓ **Economic Empowerment :** By reducing household expenses on purchased foods and creating opportunities for income through surplus produce sales at local markets, nutrigardens contributed to economic stability and empowerment among village residents.

✓ **Environmental Sustainability :** Nutrigardens promoted sustainable farming practices, such as organic cultivation and water conservation, contributing to environmental sustainability at the village level by reducing carbon footprints and preserving local biodiversity.





AFTER

✓ **Increased Food Group Consumption :** The intervention aimed to increase the consumption of key food groups such as cereals, pulses, and green leafy vegetables (GLVs) to enhance dietary diversity and adequacy. Cereals provide essential carbohydrates, pulses are rich in protein and fiber, and GLVs offer vitamins and minerals crucial for overall health. By increasing consumption to 325.6g for cereals, 80.3g for pulses, and 286.5g for GLVs, the intervention aimed to address previous deficiencies and promote a more balanced diet.

✓ **Improved Nutrient Intake :** Nutrient intake improvements were significant post-intervention. Energy intake increased to 2130 Kcal, ensuring individuals meet their daily energy requirements for optimal function and activity levels. Protein consumption rose to 48g, supporting muscle growth, repair, and immune function. Vitamin C intake increased to 37mg, boosting immunity and overall health. These improvements were essential in enhancing nutritional adequacy and addressing previous deficits in energy, protein, and micronutrient intake.

✓ **Balanced Crop Yield Utilization :** The intervention also focused on optimizing crop yield utilization patterns to ensure both household food security and economic sustainability. Crops like onions and chillies were entirely consumed for household use, addressing immediate nutritional needs. Meanwhile, crops like radishes and tomatoes were predominantly sold, contributing to income generation and economic stability within the community. This balanced approach ensures that households have access to nutritious food while farmers can sustainably manage their agricultural production for economic benefit.

"Figs may be plants, but they aren't quite all vegan"

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BELAGAVI- I NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	1.Gangama mandal Nutri Garden, 2. Rectangular model of nutrigarden, 3. Drumkit method of nutrigarden with drip system
AREA(GUNTA)	1. Gangama mandal nutrigarden-2gunta 2. Rectangular model of nutrigarden-1gunta 3. Drumkit method of nutrigarden with drip system-0.5 gunta
ENTERPRISES	Nutrigarden
KVK INTERVENTION	ICAR KVK, Tukkanatti, Belagavi-1 demonstrated the nutrigarden special programme at Belavi village of Hukkeri taluka during the 2023-24. A nutrigarden seed kit was prepared which includes All three types seeds like laeafy vegetable, roots and tubers and other vegetables and drumstick and papaya seeds distributed to 30 households. KVK conducted different extension activities like method demonstration, training on layout preparation and nutrigarden management, importance of vegetables in daily diet to farm women, adolescent girls, anganawdi workers and school children to create awareness on Nutri Garden.
IMPACT OF FARMING	

SOCIO ECONOMIC IMPACT	BEFORE	AFTER
	1. Only few vegetables are growing by the farm families 2. Less consumption of vegetable in daily diet. 3. More vegetables purchased from the market	1.Farm families are growing more than 16 vegetables in nutrigarden 2. Monthly quantity of vegetables consumed for each household was increased 3. Monthly quantity of vegetables purchased for each household was reduced



"Supplements can never fully Replace real foods"

SOCIO-ECONOMIC IMPACT :

PARAMETER WITH UNIT	BEFORE	AFTER
Vegetables produced(kg/4months)	105	129
Amount spent on vegetables (Rs)	1520	1200
Amount saved on vegetables (Rs)	3950	5510
Availability of vegetables (gm/day/member)	0.175	0.215g
B : C Ratio	3.5	5.5

The consumption of fresh vegetables increased in the daily diet which contributed towards the upliftment of the nutritional and health status of the farm families.









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BELAGAVI- II NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	UAS, Bengaluru
AREA (GUNTA)	1 gunta
ENTERPRISES	Nutritional Security
KVK INTERVENTION	• Seeds of Vegetables and Green Leafy Vegetables • Seedlings of chilli, tomato, brinjal, capsicum and cabbage • Seedlings of curry leaf, drum stick, mango and guava • Bio-agents – PSB, rhizobium and neem oil

IMPACT OF FARMING

BEFORE	AFTER
• The Knowledge, attitude and practice (pre-test) on food consumption pattern before establishment of nutrigarden was found to be 23 %, 22.6% and 36 % respectively • Average purchase of vegetables was 190 kg/3 months before establishment of nutrigarden • The average mean food intake before intervention for food groups viz., cereals, pulses, roots and tubers, green leafy vegetables and other vegetables were found to be 235.21, 39.17, 115.26, 59.17 and 81.32 as against Recommended Dietary Allowance (RDA) • The nutrient intake viz., energy (kcal), Protein (g), fiber (g), Ca (mg), Fe (mg), carotene (µg) and vitamin C (mg) was found to be 1484.07, 40.83, 18.77, 392.51, 12.23, 2745.51 and 20.47 respectively	• Impact of nutrition education on food consumption pattern towards knowledge, attitude and practice (post-test)of farm women after establishment of nutri garden was found to be 75 %, 82 % and 88 % respectively • Average production of vegetables after establishment of nutrigarden is 225 kg/3 months. • Due to establishment of nutri garden vegetable availiability (g/person/day) is 215g and vegetable adequacy is 48%. • The average mean food intake before intervention for food groups viz., cereals, pulses, roots and tubers, green leafy vegetables and other vegetables were found to be 296.46, 50.55, 150.28, 86.63 and 165.88 as against Recommended Dietary Allowance (RDA) • The nutrient intake viz., energy (kcal), Protein (g), fiber (g), Ca (mg), Fe (mg), carotene (µg) and vitamin C (mg) was found to be 1931.46.38, 25.52, 510.39, 18.63, 3356.44 and 30.24 respectively

"Artificial Trans Fats are very unhealthy"



SOCIO-ECONOMIC IMPACT :

- Establishment of nutrigarden increased the consumption of diverse and nutri rich foods.
- Children were involved in the production of vegetables
- Exchanging of vegetables with neighbors which has been grown surplus
- Consuming organically grown fresh vegetables have helped in increasing the nutritional level and health status of the family.
- Due to establishment of nutrigarden 50 per cent savings was observed in purchase of vegetables









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BENGALURU RURAL NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	UAS (B) and IIHR
AREA (GUNTA)	1
INPUTS	Amaranthus, Spinach, Dil, Coriander, Fenugreek, Sponge gourd, Bitter gourd, Snake gourd, Ash gourd, Chilli, Tomato, Brinjal, Carrot, Beetroot, Onion, Bhendi, Beans, Radish, Mango, Amla, Curry leaf, Drumstick, Medicinal plants, Microbial consortia, Vegetable special and Pongamia cake
KVK INTERVENTION	• Training on importance of fruits and vegetables in daily diet • Input distribution and demonstration on establishment of nutrition garden • Post harvest handling of fruits and vegetables • Method demonstration on waste segregation and compost preparation

IMPACT OF FARMING	BEFORE	AFTER
	No practice of nutrition garden	100% establishment of nutrition garden
	No vegetables production	Production of 80 bundles of leafy vegetables and 264 kg of other vegetables, in which 50 bundles of leafy vegetables and 186 kg of other vegetables were consumed and 30 bundles of leafy vegetables and 77 kg of other vegetables were sold & earned an additional income of Rs. 1455/- in a year
	Total expenditure on purchase of fruits and vegetables per year- Rs. 9000/-	Total expenditure on purchase of fruits and vegetables reduced to Rs. 1750/- & saved Rs. 7250/-. Apart from this an income of Rs. 1455/- from sale of vegetables (1gunta) in a year

CONSUMPTION OF FRUITS AND VEGETABLES AGAINST RDA		CONSUMPTION OF FRUITS AND VEGETABLES AGAINST RDA		% INCREASE
Green leafy vegetables	75%	Green leafy vegetables	87%	16%
Other vegetables	68%		82%	20%
Fruits	52%	Other vegetables Fruits	58%	11.5%
Nutrient adequacy against RDA		Nutrient adequacy against RDA		
Fibre (g)	72%	Fibre (g)	82%	10.57%
Iron (mg)	49%	Iron (mg)	57%	7.97%
Vitamin C (mg)	60%	Vitamin C (mg)	65%	5.69%
Beta-Carotene (mg)	55%	Beta-Carotene (mg)	58%	3.70%
Waste segregation and compost production was not practiced		Waste segregation and production of 15 kg compost and its utilization in nutrition garden		

SOCIO ECONOMIC IMPACT

Improved food security through increased availability, accessibility and utilization of fruits and vegetables.

Availability of pesticide free fresh vegetables and fruits throughout the year.

Improved overall health in families mainly reduced occurrence of micronutrient deficiency symptoms like anemia, bleeding gums, joint pains etc. among the members in the family.

Savings on vegetable purchase-48%









"Chickens have been Domesticated for Meat since 2000 B.C."

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BIDAR NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	Reliance Model/Local Design
AREA (GUNTA)	1 Gunta
ENTERPRISES	Vegetables : Spices : Medicinal : Fruits
KVK INTERVENTION	• Vegetable Seed Kit which includes Seeds of Vegetables and • Green Leafy Vegetables. • Saplings of curry leaf, drum stick, mango and guava. • Method demonstration on seed treatment with Bio-agents like PSB, • Rhizobium and Honge oil. • Capaity building programme.

IMPACT OF FARMING	BEFORE	AFTER
	The attitude and knowledge practice (pre-test) on food consumption pattern before establishment was 20.2, 24 and 29.8 per cent respectively.	Impact: The attitude and knowledge practice (pre-test) on food consumption pattern before establishment was 84, 81 and 90 per cent respectively.
	Farmers consumption was 55kg per month before adoption of the model	Establishment of nutrigarden resulted in production of 81kg vegetables per month.



SOCIO ECONOMIC IMPACT

The establishment of nutrigardens has significantly enhanced the consumption of diverse, nutrient-rich foods. Engaging the entire family—from elders to children—in the cultivation process, these gardens have become a hub for growing a surplus of organically produced vegetables. The fresh produce from these nutrigardens has not only boosted the nutritional and health status of the families involved but has also been shared with neighboring households, fostering a sense of community and mutual support. This collective effort in nurturing nutrigardens has led to better dietary habits, improved health outcomes, and strengthened social bonds within communities.







GINGER RHIZOMES ARE OFTEN USED TO FLAVOUR BREAD, SAUCES, CURRY DISHES, CONFECTIONS, AND PICKLES.

CHAMARAJA NAGAR NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	IIHR Bangalore, 2012
AREA (GUNTA)	5.97
ENTERPRISES	• Green leafy vegetables (Palak, Amaranthus, Fenugreek, Dill, Coriander, Multivitamin (Chakramuni) and Drumstick) • Other Vegetables (Beetroot, carrot, Tomato, Okra, Ridge gourd, Beans, Radish and Onion) • Fruits (Guava, Papaya)
KVK INTERVENTION	Nutrition education and establishment of nutrition garden for farm families
IMPACT OF FARMING	**BEFORE** • Consumption of leafy vegetables was only once or twice a week • Procurement of all the needed veg etables and greens from local market, local shops **AFTER** • Consumption of leafy vegetables has increased to 4 - 5 times a week • Reduction in procuring daily need veg etables and greens from external source (market, local shops)

SOCIO ECONOMIC IMPACT

- Reduction in cost incurred towards vegetable purchase from ₹.1251/- to ₹.105/-per month per family
- Reduction in obesity by 66.7 %
- Family members, especially children are involved in nutrigarden maintenance, thereby, a good habit with positive impact





"Get whiter teeth with turmeric!"



Low intake of nutrients rich food in the diet and lack of proper nutrition may cause various short and long term health issues among rural people especially, farm women. To ensure a healthy diet, women and youth in villages must be taught about importance and role of cultivating and different vegetables and fruits in nutrition garden and consuming the same. Vegetable and fruit based nutrition garden is the richest source of nutrients and plays an active role in eradicating malnutrition. Nutrition garden is advanced form of kitchen garden in which fruits and vegetables are grown as a source of food and income. For farm women, nutrition garden contributes critically towards diversified family diet needs and provide nutritional security. With this background, ICAR-KVK Chamarajanagara demonstrated nutrition garden (source: IIHR Bangalore, 2012) for farm women emphasizing nutrition education and establishment of nutrition garden for farm families in the villages Haradanahalli, Somavarepete and Doddarayanapete. This initiative targeted about 6500 sq. ft. area for 30 farm women to establish nutrition garden. Before intervention, farm women used to purchase vegetables in local markets.

After the intervention, from all the implemented 30 nutrigardens, they were able to produce green leafy vegetables (1681 bundles), other vegetables (1271 kg) and fruits (650 kg) in their home backyards. Among these, they sold 531 bundles green leafy vegetables and 313 kg other vegetables. There was a significant increase in the consumption of green leafy vegetables (31.79 %), other vegetables (41.48 %), roots and tubers (34.03 %) and fruits (31.3 %). Feedback from farm women after the establishment of nutrition garden was that the cost incurred towards purchase of vegetables has reduced from Rs.1251/- to Rs. 105/-per month per family and consumption of leafy vegetables has increased from twice a week to 5-6 times a week. Nutrition garden has curtailed overall expenditure towards purchasing the needed vegetables, improved nutritional security of farm family and these nutrigardens are very much essential in the places where villages are isolated and far from the local market. Nutrition gardening is one of the advantageous practice to improve nutrition level in women folks with minimum investment and thereby improving their health.







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CHIKKA BALLAPUR NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY	
ADOPTED MODEL	UAS (B) and IIHR	
AREA (GUNTA)	01	
ENTERPRISES	Coriander, Palak, Ridgegourd, Tomato, Ladies finger, Pumpkin, Bottle gourd, Brinjal, Amaranthus, Dil, Radish, Fenugreek, French beans, Hyacinth beans, Peas, Pole beans, Drumstick, Papaya, Lime, Curry leaf, Guava, Doddapatre and Chakramuni. Microbial consortia, Vegetable special and Need based PP chemicals spray	
KVK INTERVENTION	Training on importance of balanced diet and utilization of fruits and vegetables in daily diet	
	Input distribution and demonstration on layout plan of nutri garden	
	Post harvest handling of fruits and vegetables and its utilization	
	Nutritional status and consumption pattern of food groups on before and after Nutrigarden establishment	
	Method demonstration on waste segregation and compost preparation	
IMPACT OF FARMING	BEFORE	AFTER
	No practice of nutrition garden	100% establishment of nutrition garden
	Vegetables and green leafy vegetables has been purchasing from local market	Production of bundles of 242 leafy vegetables and 219 kg of other vegetables, in which 156 bundles of leafy vegetables and 203 kg of other vegetables were consumed and 86 bundles of leafy vegetables and 133 kg of other vegetables were sold resulting in additional income of Rs. 2455/- in a year
	Percentage consumption of fruits and vegetables (RDA) Green leafy vegetables -47.17% Other vegetables-36.23% Fruits-18.33%	Percentage consumption of fruits and vegetables (RDA) Green leafy vegetables-87.15% Other vegetables-41.62% Fruits-27.67%
	Nutrient intake Iron (mg) -66.10% Vitamin C (mg)-83.46%	Nutrient intake Iron (mg) -90.44% Vitamin C (mg)-92.69%

SOCIO ECONOMIC IMPACT

Improved the nutritional status among farm families and gained knowledge regarding Nutrigarden and its importance.

Enhanced food security by expanding availability, accessibility, and utilization of nutritious foods.

Total expenditure on purchase of fruits and vegetables reduced to Rs. 7,500/ year.

Consumption of green leafy vegetables, other vegetables and fruits were increased by 39.98, 5.39 and 9.34 %.

The intake of nutrients viz., Iron and Vitamin C adequacy was also increased in farm women by 24.34 and 9.23 % .

Availability of pesticide free fresh vegetables and fruits throughout the year

Enhancing family well-being by mitigating micronutrient deficiency symptoms such as anemia.

Waste segregation and production of 13 kg compost and its utilization in nutri garden.





"There's more water in cucumber than watermelon"

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CHIKKA MAGALURU NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	AICRP model, Scientific nutrition garden source: UAS(B)
AREA (GUNTA)	61.25
ENTERPRISES	• Fruits, • Vegetables, • Green leafy vegetables • Roots & Tubers • Vermi composting • Value addition
KVK INTERVENTION	• Nutrition Education • Guest lectures • Demonstration on use of bio-fertilizers and • Field visits/Follow up visit • Organic farming • Awareness campaigns on account of poshan abhiyan • Publicity in social media/mass media

IMPACT OF FARMING

PARTICULARS	BEFORE	AFTER
Consumption of leafy vegetables	2-3 times a week	5-6 times a week
Medical visits	5-7 visits per year	5-7 visits per year
Knowledge on vermi compost	Yes	Yes
Knowledge on bio-fertilizers	No	Yes
Production of vegetables (kg/7 months)	4252	6109
Amount spent on fruits and vegetables (7 months per family approx..)	6800-7000	4500-5900
Vegetable availability (g/person/day)	168	310

"Spice foods help us lose weight"



SOCIO ECONOMIC IMPACT

1.It was observed that, before intervention the amount spent on purchase of vegetables and fruits is Rs. 6800-7000/7 months is more compare to after intervention which was observed to be 4500-5900 /7 month. It is because of the introduction of nutri garden. Thus nutri garden intervention help the families to grow the required fruits and vegetables near to their premises and which has considerably brought down the expenditure on fruits and vegetables and also enhanced the family savings.

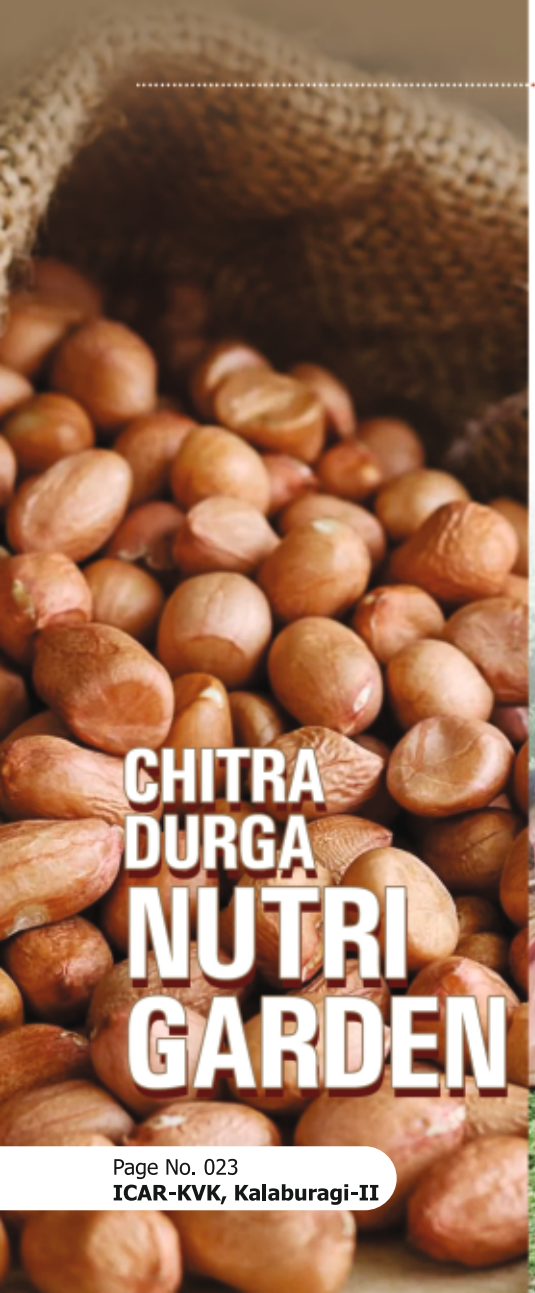
2.Availability of preferred fresh fruits and vegetables improved the family overall health and considerably cut down the medical expenses borne by the family



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CHITRA DURGA NUTRI GARDEN



PARTICULARS

DETAILS OF TECHNOLOGY

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	Own Model
AREA (GUNTA)	250 Sq mt
ENTERPRISES	Green leafy vegetable, Roots &Tubers, Other vegetables(ladies finger, Brinjal, Tomato, Chilli etc), Guards
KVK INTERVENTION	Distribution of Arka Vegetable seed kits, training on Lay out formation, Education on Nutrition, training importance of vegetables for healthy living, etc
IMPACT OF FARMING	**BEFORE**: School & Anganwadi children were not getting the recommended quantity of vegetables **AFTER**: 1. The consumption was improved after this programme implementation. 2. The amount spent on vegetable purchase was saved

SOCIO ECONOMIC IMPACT

This programme brought impact among children and in-turn few children have started nutri garden at their residence yards. Through nutri garden around Rs. 1500-2500 /Season was saved by Anganwadi and School respectively.

"Peanut butter is good for you"





Nutri-garden is related to nutrition and gardening, combining these two areas could lead to growing your own fruits and vegetables for a healthier diet. During the year 2023-24, Schools and Anganwadi centers ten each of Hiriyur taluk were selected for implementing "Nutri-Garden" a special programme. The main objectives of implementing this programme were to Promote Healthy Eating, to Improve Food Security, to impart Education on Nutrition and to start enterprise. The information about the schools and Anganwadi centers (with compound and water facility) was collected from the concerned departments. Then, the seed kits were distributed for the selected beneficiaries at KVK by conducting training about the purpose of this programme. All the selected school and Anganwadi teachers actively participated in layout formation and sowing of vegetable seeds. The school children were very enthusiastically participated in forming the layout. At each school and Anganwadies, the quantity of harvested vegetables was maintained in written documents. The children's received comparatively better quantity of vegetables when compared to without Nutri – Gagen in their premises.







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DAKSHINA KANNADA NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	AICRP Model -Scientific nutrition garden
PROBLEM IDENTIFIED	Lack of awareness about nutritious food, non-utilization of available resources like water, space & organic waste
ENTERPRISES	Bitter gourd, Ridge gourd, Okra, Brinjal, Yard long bean, Bottle gourd, leafy vegetables like Amaranthus, chakramunis, palak, drumstick, curry leaf
PARAMETERS RECORDED	Quantity of Vegetables produced and Change in Knowledge after intervention
KVK INTERVENTION	• Demonstration of Nutri-farms for year-round nutrition security among farm families
IMPACT OF FARMING	• Gained knowledge on importance of nutrients • Out of 25 women, 19 members have expressed that the kitchen gardens with improved varieties have helped the families to improve the consumption of fresh vegetables in their diet and to improve social relationships with their neighbours by sharing the surplus produce from their homestead gardens

SOCIO-ECONOMIC IMPACT :

- Out of 25 families, 15 families (60%) have lowered their maximum monthly expenditure on purchase of vegetables (Rs.300-400/-per month)
- 8 families (24%) have lowered monthly expenditure on purchase of vegetables (Rs.200-250/- per month) and remaining 4 families (16 %) could not get maximum benefits because of not following the programme due to their occupational workloads

THE US DEPARTMENT OF HEALTH RECOMMENDS EATING TWO SERVINGS OF SEAFOOD A WEEK.















DAVANGERA NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	AICRP model –Scientific nutrition garden Source: UAS(B)
AREA (GUNTA)	54.86
ENTERPRISES	• Fruits • Vegetables • Green Leafy Vegetables • Roots and Tubers • Vermi-composting
KVK INTERVENTION	☑ Nutrition Education ☑ Guest Lectures ☑ Method Demonstration on Use of Bio fertilizers and Bio agents ☑ Celebration of World Kitchen Garden Day ☑ Trainings ☑ Field Visits ☑ Prepared Folders

IMPACT OF FARMING

	BEFORE	AFTER
Consumption of Leafy vegetables	3 times/week	6 times/week
Medical Visits	5 times/year	2 times/year
Knowledge on Vermi-compost	Yes	Yes
Knowledge on Bio - fertilizers	No	Yes
Knowledge on Bio - fertilizers	No	Yes
Production of Vegetables (kg/8 months)	5830	7490
Amount spent on food items (Rs./8 months)	43574	35504
Vegetable availability (g/person/day)	188	326

"Good gut bacteria are usually the ones that feed on fiber"



SOCIO-ECONOMIC IMPACT :

- It was noticed that before intervention the amount spent (Rs.43574/year) on purchasing food items is more compared to after intervention of nutri-garden(Rs.35504/year). It is because of introduction of nutri-garden helps them to grow the required fruits and vegetables near their house that has reduced the expenditure of farm families on purchase of fruits and vegetables. It was also noticed that after intervention of nutri-garden on an average of Rs. 8250 was saved from a single family.
- Availability of fresh and pesticide free fruits & vegetables has also saved the medical bills of the farm families







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DHARWAD NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL
ICAR-Nutri garden model

AREA (GUNTA)
10 gunta (0.25 acre)/ demo (Total: 30 Demos.)
Belur, Dharwad Tq., Dharwad Dist.

ENTERPRISES
Nutri-garden

KVK INTERVENTION
- Demonstrations
- Trainings
- Field visits

IMPACT OF FARMING

PARAMETERS	BEFORE	AFTER	CHANGE (%)
Production of vegetables (kg/6 months)	1420	Nil	100
Vegetable availability (g/person /day)	167	93	44.31
Vegetable adequacy (%)	93.76	57.83	38.32
Knowledge level reg. cultivation & consumption (%)	92.75	69.25	25.33

SOCIO-ECONOMIC IMPACT :

- After adoption of nutri-garden farming families, socio-economic status was improved.
- Reduced expenditure on purchase of vegetables

A BASKET OF MANGOS IS CONSIDERED A GESTURE OF FRIENDSHIP IN INDIA





ERNAKULAM NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	Homestead farming for safe food and nutrition
AREA	25 cents
ENTERPRISES	Vegetables
KVK INTERVENTION	Vegetable and local fruit cultivation was encouraged in homesteads, utilizing available land either directly or in growbags. Farmers were provided with seeds or seedlings of various vegetables and fruits, including ladies finger, brinjal, tomato, bitter gourd, snake gourd, ash gourd, amaranthus, green chili, cowpea, pumpkin, cucumber, ridge gourd, cabbage, palak, curry leaf, drumstick, and local varieties of papaya. Along with biofertilizers and biopesticides, training and technology backstopping were also provided to support sustainable farming practices and ensure successful cultivation.

IMPACT OF FARMING	BEFORE	AFTER
	The average monthly consumption of vegetables per household is a modest 4.9 kg.	The total vegetable consumption per household per month increased to 10.56 kg.

SOCIO-ECONOMIC IMPACT :

The Krishi Vigyan Kendra (KVK) implemented the Nutrigarden programme in the villages of Karumalur and Alangad in the Ernakulam district of Kerala. Twenty-five socially and economically backward families were selected, and a benchmark survey on their nutritional status was conducted. The survey identified a lack of sufficient vegetable intake as a key issue. Subsequently, a training programme on homestead vegetable farming was conducted, and inputs, including seedlings, were distributed. With constant technology backstopping provided, this intervention increased vegetable consumption per household per month from 4.9 kg to 10.56 kg over a period of 4-5 months.

" WATER IS THE MOST NEGLECTED NUTRIENT IN YOUR DIET, BUT ONE OF THE MOST VITAL"




RI GARDEN 2021-22
Kochi, Kerala

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GADAG NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	UAS, Dharwad and UAS, Bengaluru
AREA (GUNTA)	1.0 to 2.0 gunta
ENTERPRISES	1) Leafy vegetables 2) Other vegetables 3) Roots and tubers 4) Fruits 5) Perennial fruits and vegetables
KVK INTERVENTION	• Conducted 145 number of demonstrations in adopted villages • Organised 55 capacity building programmes involving 1633 farm women and farmers. • Organised 22 group discussions with 358 farm women, 112 field visits and 34 advisory services to 73 farm women. • Conducted 8 field days on nutri-garden • Organised 14 exposure visits to farm women • Video show on nutri garden • Training and demonstration of Nutri Garden to 122 Krishi Sakhis

IMPACT OF FARMING	BEFORE	AFTER
	• Consumption of Green Leafy Vegetables (GLV) once or twice a week • Percentage adequacy of fruits, root and tubers, GLV and other vegetables is 174.50 • Money spent on purchase of vegetables per family per year is Rs. 19200/-	• Enhanced consumption of green leafy vegetables three to four times in a week • Percentage adequacy of fruits, root and tubers, GLV and other vegetables is 307.20 • Money spent on purchase of vegetables per family per year is Rs.3600/- and money saved is Rs.15600/-

"There is no perfect diet for everyone"



SOCIO-ECONOMIC IMPACT :

- There is exchange of vegetables among neighbours and farm families
- Total quantity of vegetables produced by 145 families is 17086 kg (leafy vegetables, Roots, Tubers, and other vegetables) worth of Rs.6,83,440/- from 2019-20 to 2023-24
- Additional income obtained by selling of excess vegetables produced in the nutri-garden
- Participation and involvement of whole family in nutri-garden activities
- Children are made aware about nutri tional importance of fruits and vegetables
- Seed storage among farm women for sowing in subsequent years
- Cost incurred towards purchase of veg etables has been reduced
- Consumption of some of the special veg etables like beetroot, bottlegourd, spinach and drumstick has been enhanced.









HASSAN NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	AICRP-UAS (B) Model
AREA	200 sq. ft per family
ENTERPRISES	Nutri-farm
KVK INTERVENTION	• Training • Demonstrations • Nutritional Education • Health benefits of fruits and vegetables in daily diet • Introduction of IIHR Vegetables seed Kit

IMPACT OF FARMING	BEFORE	AFTER
Consumption of leafy vegetables	3-4 days in a week	4-6 days in a week
Production of green leafy vegetables (bundles/year/family)	96	192
Production of other vegetables (kg/year/family)	192	384
Production of fruits (kg/year/family)	18	72
Total expenditure on purchase of fruits and vegetables per year per family	24000	14400
ADEQUACY OF FOOD INTAKE		
• Green leafy vegetables	83.50%	95.75%
• Other vegetables	70.62%	85.35%
• Fruits	55.60%	68.35%
NUTRIENT ADEQUACY AGAINST RDA		
• Fibre	68.50%	83.61%
• Iron	71.74%	80.61%
• Vitamin -C	70.62%	82.67%



SOCIO-ECONOMIC IMPACT :

- Nutri-garden increases the availability and consumption of fresh vegetables and saves an average of Rs. 9600 per family.
- Establishment of nutri-garden reduces the cost of expenditure by 60.00 % per family
- Demonstration of nutri-garden increases the consumption of fresh vegetables and fruits intern it improves the health status of the family.
- The demonstration of nutri-garden created awareness on health and nutrition. Further it helps to enhance the social capital among rural families.









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IDUKKI NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	Nutrition garden model KAU, Kerala
AREA (GUNTA)	4 gunta
ENTERPRISES	Vegetables, Fruit plants and mushroom as a source of protein
KVK INTERVENTION	From 2019 onwards ICAR- KVK Idukki is providing awareness campaigns on nutritional security among the farm women and children. Under the leadership of Smt. Rachel Skariakutty, Programme Assistant (Lab Technician) of KVK Idukki Different capacity building programmes, Vocational Trainings and Demonstrations were conducted on Nutri-garden. In addition, supply of critical inputs like seeds, seedlings, fruit saplings, Mushroom spawn and Substrates were also supplied by KVK Idukki to the farmer beneficiaries.

IMPACT OF FARMING

BEFORE

- Lack of awareness on nutritional benefits
- More consumption of Pesticide resided vegetables and fruits
- Heavy purchase rate of fruits and vegetables

AFTER

- Addressed the nutritional disorders
- Ensured balance diet
- The cost incurred towards purchase of vegetables had been saved.
- Provided children first-hand experience with nature and gardening.
- Continuous supply of vegetables for the table throughout the year
- enhanced dietary diversity





SOCIO-ECONOMIC IMPACT :

The demonstration on Nutri-garden created awareness on health and nutrition as well as in providing fresh fruits and vegetables to the families. The vegetables were exchanged with neighbours and the excess vegetables were sold in the market. Adoption of Nutri garden created a good impact on the food consumption pattern of the farmers in nearby villages also



CINNAMON IS A POPULAR INGREDIENT IN INDIAN AND WESTERN CUISINES.





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KALABURAGI-I NUTRI GARDEN

PARTICULARS

ADOPTED MODEL

AREA (GUNTA)

ENTERPRISES

KVK INTERVENTION

IMPACT OF FARMING

DETAILS OF TECHNOLOGY

AICRP Model -Scientific nutrition garden

0.2 ha each

1. Government Higher Primary School, Gunjbabalad, Tq. Aland, Dist. Kalaburagi
2. Government Higher Primary School, Belakota, Tq. Kamalapur, Dist. Kalaburagi

Demonstration of Nutri-Farms for year round nutrition security among farm families

- Advisory service on ICAR model nutri-garden
- Planned and layout based on soil test report
- Demonstrations
- Trainings
- Field visits

BEFORE	AFTER
1. Lack of awareness about nutritious food, non-utilization of resources-Water, Space & organic waste	1.Created awareness and also established the garden and utilise the same for consumption 2.Fellow farmers are also adopted the same

SOCIO-ECONOMIC IMPACT :

- Daily utilization of fruits & vegetables in diet, food adequacy and dietary intake improved
- Expenditure on purchase of vegetables is reduced.













ONE EASY WAY TO BOOST YOUR GUT MICROBIOME IS TO CHOOSE WHOLE GRAIN

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KALABURAGI II NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY	
ADOPTED MODEL	Nutrition garden model KAU, Kerala	
AREA (GUNTA)	4 gunta	
ENTERPRISES	Leafy vegetables	Amaranthus, Spinach, Coriander, Drumstick, Methi, Dill
	Roots and tubers	Onion, Radish, Beet root
	Other vegetables	Ridgegourd, Pumpkin, Okra, Tomato, Spongegourd, Cucumber, Bittergourd, Brinjal, Cluster bean, Chilli
	Pulses	Chickpea, Pigeon pea (tender)
	Fruits	Jamun, Guava, Aonla, Jackfruit

KVK INTERVENTION

- Vermicomposting with kitchen waste
- Enrichment of compost with bio agents and use of organic pesticides for management of pest and diseases.
- Raising of seedlings in portrays
- Awareness about Nutri thali and diet plan
- Extension activities on Nutri-Garden

IMPACT OF FARMING

BEFORE	AFTER
• `Lack of knowledge about Nutri- garden and diet plan for healthy society.	• Impact of nutrition education on food consumption pattern and establishment of Nutri-garden increased by 82% Average production of vegetables after establishment of nutria-garden is 198 kg/3 months.
• Average purchase of vegetables was 128 kg/3 months before establishment of nutria-garden	• The average mean food intake before intervention for food groups viz., cereals, pulses, roots and tubers, green leafy vegetables and other vegetables were found to be 235.8, 68.6, 115.1, 56.6 and 82.8 as against Recommended Dietary Allowance (RDA)
• The average mean food intake before intervention for food groups viz., cereals, pulses, roots and tubers, green leafy vegetables and other vegetables were found to be 215.15, 58.6, 98.5, 42.8 and 68.5 as against Recommended Dietary Allowance (RDA)	







SOCIO-ECONOMIC IMPACT :

• Nutri-Garden are not only act as source of nutrient and also important for medicinal value

• Increased the diversity among the consumption of nutrient rich food to combat deficiencies in farm families

• Vegetables grown in excess were exchanged with neighbor enhance the livelihood and children were involved in their production.

• Vegetable purchases showed a 50% savings as a result of the creation of Nutri-garden.















A DAY WITHOUT CHILLI IS LIKE WITHOUT SUNSHINE

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KANNUR NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	SAU recommended VADI model
AREA	25 cents (1 cent /farmer)
ENTERPRISES	Mushroom Cultivation Value addition Micro green cultivation
KVK INTERVENTION	Distribution of inputs Training programme Follow Up Feed back

IMPACT OF FARMING

BEFORE	AFTER
• Depended on vegetables from market • Lack of knowledge on nutrition • Least consumption of leafy vegetables	• Safe to eat vegetables • Leafy vegetable included in the diet • Increase in consumption of vegetables • Nutrition education improved the knowledge and attitude

SOCIO-ECONOMIC IMPACT :

- Average expenditure of fruits and vegetables reduced.
- Positive attitude towards this new innovative model of nutri-garden
- Empowerment of women
- Improved nutritional status
- Better use of household resources and improved eating habits

"ONE COCONUT A DAY KEEPS THE STRESS AWAY"








KRISHI VIGYAN KENDRA
KANNUR
Nutri Garden
FARM SCIENCE CENTRE



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KASARGOD NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	Nutri Garden for Household Food and Nutritional security
AREA	2.5 acre
ENTERPRISES	Vegetables and Fruits cultivation
KVK INTERVENTION	Demonstration of

- ✓ Scientific layout of Kitchen garden
- ✓ Scientific organic cultivation practices for vegetables and fruits
- ✓ Awareness on Significance of Vegetables and fruits for Upscaling Nutritional status of the household.
- ✓ Awareness on RDA for Indians for balanced intake of food and for addressing micro nutrient deficiencies especially anaemia and other life style related disorders.
- ✓ Recycling of Kitchen waste and composting techniques
- ✓ Use of bio pesticides for safe food production and health security.
- ✓ Achieving economic security through production and consumption of sustainable source of food through Homestead Nutrition Gardening.









MUSSELS PACK A VITAMIN PUNCH



IMPACT OF FARMING

BEFORE	AFTER
• Layout of the Nutri Garden was conventional or in some cases did not exist	• Layout scientifically planned
• A maximum of 2-3 vegetables were grown.	• Introduced different vegetable especially leafy vegetables/ other veg etables and tuber (around 8- 10 varieties) including moringa and papaya
• Intake of leafy vegetables was very minimal.	• Locally used Amaranthus, Moringa, curry leaves, basalla promoted along with underutilized green sources highlighting its nutraceutical aspects.
• Monotonous use of food forms in the form of curry/ thoran limiting its use	• Diversified form of use through right cooking methods, incorporation or blending in various foods, dehydration techniques (moringa powder) and varied form of use as soups, sauce/ketchup, chutneys etc demonstrated through scientific techniques to upscale its use.
• Approximately 80- 120 g of vegetable source was used	• Approximately 200 g to 350 g is now consumed.
• Kitchen waste and other organic waste not recycled and used	• Significance of composting techniques and organic compost production through vermicomposting and other scientific composting technologies were demonstrated to effectively use the same for improving soil health status and production of quality foods
• Discouraged to grow vegetables due to non availability of quality seeds and pest problem	• Encouraged to grow vegetables with vegetable kits provided by KVK and through awareness on preparation of botanical pesticides and organic manure production for safe food production

SOCIO-ECONOMIC IMPACT :

Around 25 farm families adopted scientific organic cultivation of Vegetables and fruits through Nutri Garden activity. Dependence for vegetables through market purchase is reduced by 40 %. Vegetables are incorporated in more frequency in daily diet due to its easy accessibility through farm fresh produce produced. Has empowered women engaging themselves in sustainable farm activities as caretakers of the family benefitting the households economically by reducing the purchases. By undertaking nutrigarden activities helps the families to be active physically and mentally during all the day.





KVK TIMES
A WINDOW TO KVKS OF ICAR-ATARI ZONE XI, BENGALURU
VOL-2, ISSUE -21, 1-15 MAY 2024

KOZHIKODE NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	KAU
AREA	Minimum 3-5cent
ENTERPRISES	Homestead Nutrition garden
KVK INTERVENTION	For the implementation of Nutri garden programme in Kozhikode district, selected 30 housewives in BPL families at Arikkulam panchayath.The inputs like vegetable seeds, fortified varieties of sweet potato, mushroom spawn, bio control agents etc also provided. To create awareness and impart knowledge among the farm community, conducted awareness classes on nutrition to understand the importance of fruits and vegetables included in the daily diet. In addition, conducted training on zero budget farming-vermi-compost making using kitchen waste and also provided earth worms.

IMPACT OF FARMING	BEFORE	AFTER
	1. No vegetable garden 2.Harvested 300gm -500gm vegetables/week. 3. Consumed leafy vegetables rarely.	1. Established nutrition garden on minimum of 5 cents 2. 4-5 kg Pesticides free vegetables are harvested per week. 3. Increased the consumption of leafy vegetables to 4/5 days per week.

SOCIO-ECONOMIC IMPACT :

All households established nutrition garden on minimum of 5 cents and about 4-5 kg pesticides free vegetables are harvested per week. .78% of the cost of purchasing vegetables has been converted as savings. The excess of vegetables are sold through village market.The practice of making vermi-compost from kitchen waste was adopted in all homes.



"COCONUT OIL IS THE HEALTHIEST OIL ON EARTH."













KVK TIMES
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KODAGU NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	Nutri garden for nutritional security and income
AREA (GUNTA)	20
ENTERPRISES	Mixed vegetables (Gourds, Legumes, fruits, leafy vegetables
KVK INTERVENTION	Sensitized the 25 identified farm household to take up nutri garden by group meeting, training and provided vegetable seed kits in the KVK adopted DFI village (Cherendetti village, Bhagamandala cluster of Madikeri taluk) for fresh and nutritious vegetable consumption, reduction of expenses on procurement of vegetables during the sandy days and additional income by selling of grown vegetables.

IMPACT OF FARMING

BEFORE		AFTER	
Diverse vegetables	: No	Diverse vegetables	: Yes
Additional income / Household	: Rs. 12500	Additional income / Household	: Rs. 22600
Reduced purchase of Vegetables /house hold	: Nil	Reduced purchase of Vegetables /house hold	
Exchange of vegetables among the neighbors	: Nil	Exchange of vegetables among the neighbors	: Rs. 780/week : Yes

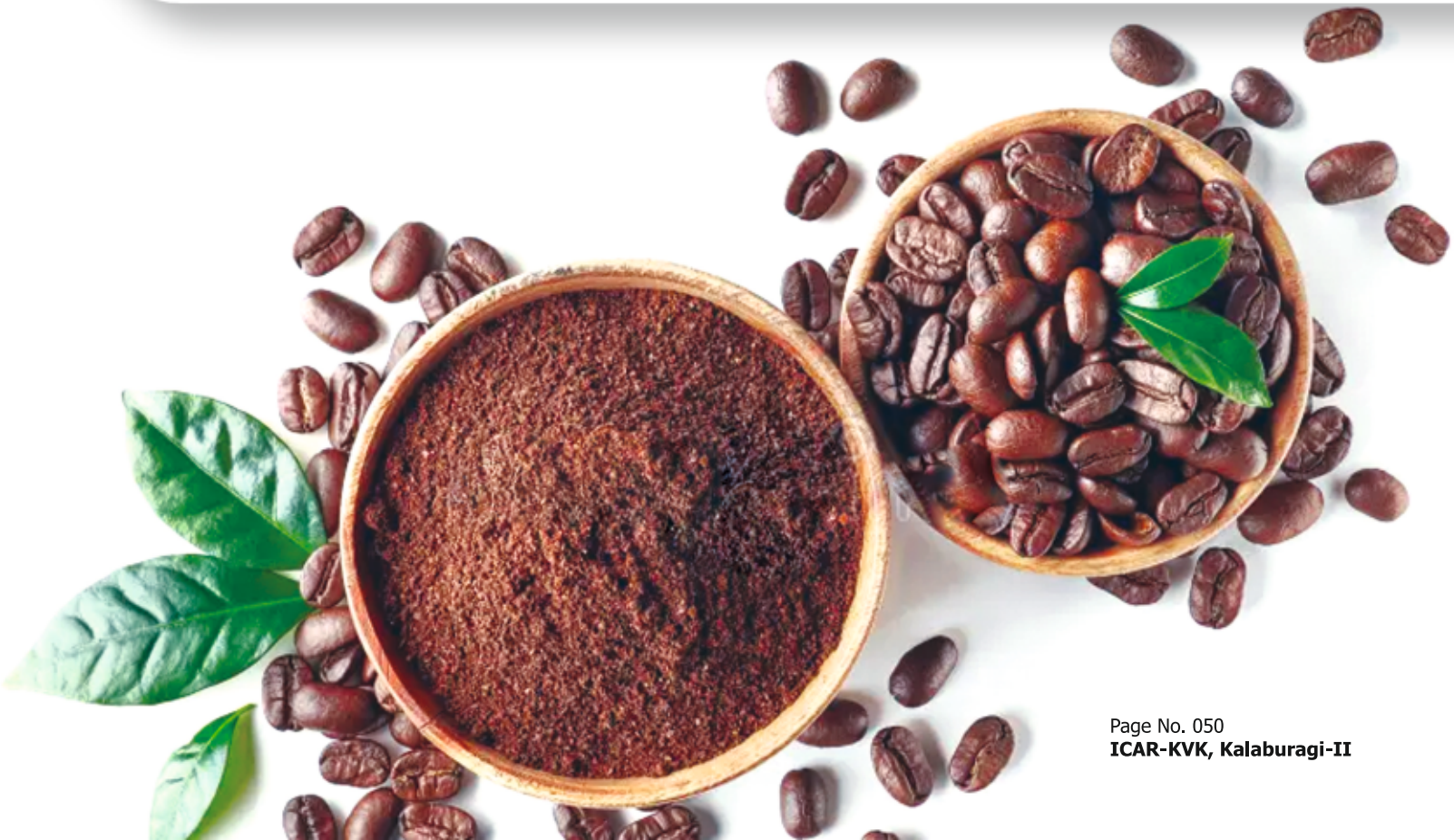
SOCIO-ECONOMIC IMPACT :

Availability of fresh vegetables for long duration in the year leading to improvement in nutritional security of the family members and reduced dependence. Most of the family members continued nutri garden for the second and third year by retaining the self-multiplied vegetables variety seeds. The adoption level slowly increased among the farming community in the village.

"A GOOD DAY STARTS WITH A GREAT CUP OF COFFEE."


ICAR - KRISHI VIGYAN KENDRA
Gonikoppal, Kodagu.
2021-22


NUTRI GARDEN PROGRAM 2020-21
MANAGEMENT OF NUTRITIONAL GARDEN



KVK TIMES
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KOLAR NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	IIHR Model
AREA (GUNTA)	125 Gunta
ENTERPRISES	Nutri-garden
KVK INTERVENTION	✓ Establishment of Nutri garden under KVKs special programme by distributing the required seeds, saplings and technologies ✓ The major upswing with the intervention was recorded such as average production of vegetables from Nutri-garden, influence of nutri garden to the farm families, impact of nutritional education on food consumption pattern towards knowledge, attitude and practice of farm women and increase in food uptake and nutrient intake of farm families were also recorded.

IMPACT OF FARMING

BEFORE	AFTER
✓ Per day consumption of vegetables was found to be 150.73 g/day before establishing Nutri-garden.	✓ Per day consumption of vegetables was found to be increased to 272.84 g/day after implementation of Nutri-garden. ✓ The percent increase in per capita consumption of vegetables in turn enhanced the Nutritional security and aided to overcome hidden hunger among the members of farm families. ✓ The healthy chemical free fresh vegetables that are produced in the Nutri-garden were useful to maintain the good health status without any chemical residues

"THE TOMATO OFFERS ITS GIFT OF FIERY COLOR AND COOL COMPLETENESS"

SOCIO-ECONOMIC IMPACT :

One of the numerous issues faced by the socioeconomically disadvantaged portions of our society is ensuring year-round dietary diversity for the family, particularly women of reproductive age and children. The ATARI XI has issued a guideline under a special programme to promote 'nutrition gardens,' with the purpose of increasing nutritional diversity at the household level while also supporting income and employment for the family.

When well-planned, nutrition gardens can produce enough to sell excess after there is a high demand for these veggies and fruits within the villages, as neighbours are aware that they are all organic. Kvk Kolar has demonstrated nutrition gardens utilising the agroecological technique of Sustainable Integrated Farming Systems (SIFS) that can persist all year, are minimal in cost and take up very little space. Because the nutrition garden's goal is to produce all of the dietary diversity from the garden, it's critical to incorporate trees, a composting unit, and other related management measures.



The objective of Nutrition Garden

By recycling home trash, grey water, and other resources, the front yard, backyard, and space around the living space can be used to grow nutrient-dense vegetables and fruits.

The goal is for all family members, particularly women and children, to consume at least 200-250g of green vegetables and fresh fruits per person per day throughout the year.

Integrate backyard poultry and goat farming for improved soil nutrient availability and increased income.





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KOLLAM NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	• 120m² Vegetable Garden: Each participating family cultivated a variety of vegetables to ensure a diverse and nutritious diet. • 2m² Mushroom Cultivation: This component aimed to provide a protein-rich supplement to the family diet, enhancing overall nutritional intake.
AREA	• Vegetable Cultivation: 1.5 hectares directly managed by KVK Kollam. • Community Expansion: 1.8 hectares through local partnerships, ensuring wider community engagement.
ENTERPRISES	Mushroom cultivation, Fruits, vegetables spices and medicinal plant cultivation.
KVK INTERVENTION	1.Dietary Diversification 2. Promotion of Nutrient-Rich Crops, Bio-fortified varieties 3. Nutrition Education, Capacity building programmes 4. Community-Based Approaches 5. School Nutrition Garden 6. Food Fortification 7. Food Preservation and Storage

IMPACT OF FARMING	BEFORE	AFTER
	• Yield(g) 140/120m2/day • Percapita Consumption/g/day-169	• Yield 776 (g) /120m2/day • Percapita Consumption/g/day-316 (86% increase in consumption)

- 61% of the requirement for vegetables (ICMR)met by nutrition garden
- 81% of vegetable consumed by the family is from nutrition garden
- Nutrition education improved the knowledge and attitude
- Horizontal spread of technology through Jeevani and Subiksha Keralam projects.



POTATOES WERE THE FIRST FOOD TO BE GROWN IN SPACE.



SOCIO-ECONOMIC IMPACT :

- Reduced household expenses, boosting incomes.
- Collaboration with local stakeholders promotes socio-economic development.
- Nutri-sensitive agriculture aids in poverty alleviation through sustainable livelihoods.
- Programs encourage community engagement and responsibility in food production.
- Gain gardening and entrepreneurship skills, supporting self-sufficiency and local market growth..
- Sustainable agricultural practices ensure long-term benefits for both the environment and the economy.
- Improved nutrition may lead to reduced healthcare expenses, contributing to overall socio-economic well-being.









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KOPPAL NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	UAS, Bengaluru
AREA (GUNTA)	1 gunta
ENTERPRISES	Nutritional Security
KVK INTERVENTION	• Seeds of Vegetables and Green Leafy Vegetables • Seedlings of chilli, tomato, brinjaland capsicum • Seedlings of medicinal plants (Tulasi, Amrutha balli,Alovera and pudina) • Seedlings of curry leaf, lime, drum stick, mango ,sapotaand guava • Bio-agents – PSB, rhizobium, vegetable specialand neem oil

IMPACT OF FARMING	BEFORE	AFTER
	• The Knowledge, attitude and practice (pre-test) on food consumption pattern before establishment of nutrigarden was found to be 28 %, 24% and 38 % respectively • Average purchase of vegetables was 114 kg/3 months before establishment of nutrigarden • The average mean food intake before intervention for food groups viz., cereals, pulses, roots and tubers, green leafy vegetables, other vegetables and fruits were found to be 285,40, 55,, 45,80 and 40 g/day as against Recommended Dietary Allowance (RDA) • The nutrient intake viz., energy (kcal), Protein (g), fiber (g), Ca (mg), Fe (mg), carotene (µg) and vitamin C (mg) was found to be 1840,35,20,265,14, 1200 and 20 respectively	• Impact of nutrition education on ood consumption pattern towards knowledge, attitude and practice (post-test)of farm women after establishment of nutri garden was found to be 68 %, 84 % and 87 % respectively • Average production of vegetables after establishment of nutrigarden is 225 kg/3 months. • Due to establishment of nutri garden vegetable availiability (g/person/day) is 165g and vegetable adequacy is 62.27%. • The average mean food intake before intervention for food groups viz., cereals, pulses, roots and tubers, green leafy vegetables ,other vegetables and fruits were found to 320,60,120,85,130 and 75 g/day as against Recommended Dietary Allowance (RDA) • The nutrient intake viz., energy (kcal), Protein (g), fiber (g), Ca (mg), Fe (mg), carotene (µg) and vitamin C (mg) was found to be 2110,48,28,430,19,2800 and 35 respectively

"GUAVA HAS A RICH SOURCE OF VITAMIN C, A AND E."

SOCIO-ECONOMIC IMPACT :

- Year round availability of fresh and pesticide free vegetables.
- Children's actively involved in kitchen garden activity.
- Children's and teenage developed positive attitude towards healthy food choices.
- Establishment of nutrigarden increased the consumption of diverse and nutri rich foods.
- Exchanging of vegetables with neighbors which has been grown surplus
- Consuming organically grown fresh vegetables have helped in increasing the nutritional level and health status of the family.
- Due to establishment of nutrigarden 50 per cent savings was observed in purchase of vegetables











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KOTTAYAM NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	Homestead cultivation
AREA	80 cent
ENTERPRISES	Nutrigarden

KVK INTERVENTIO

- Beneficiaries were 25 households of Trikodithanam village
- Conducted baseline survey to assess the consumption pattern of the families, fruits and vegetables already cultivating and existing nutrition problems
- Problem identified were Low Dietary Diversity Score (mean : 6.5) with deficit group green leafy vegetable (GLV), pulses, nuts, and yellow fruits. Adequacy found: meat, fish, Cereals and fruits
- Distributed critical inputs based on nutriplate model including planting materials of Green leafy vegetables, Spice leaves ,Tubers and Other vegetables
- Emphasis was given to include variety of leafy vegetables planting materials
- Bio-inputs like Trichoderma, Pseudomonas, fish amino acid were distributed
- Included Biofortified varieties of tuber sweet potato Bbusona and Bhukrishna
- Indigenous varities of vegetables and fruits like air potatao, clove beans, sword bean, winged bean, kasthurivenda, erumapaval were also included
- Included grafted tomato and cool season vegetables also
- Awareness sessions were given on 'practical tips on homestead vegetable cultiva tion' by horticulturist and nutrition security through nutriplate by Home Scientist
- Continuous monitoring was given by frequent field visits, online consultation and short videos
- Efforts were also made to improve consumption of millets, whole cereals, nuts and pulses to ensure dietary fibre and protein security
- Fruit plants given included vitamin C rich fruits (west Indian cherry,star gooseberry, guava, gooseberry), beta carotene rich yellow-orange fruits (papaya, jack fruit, mango) and multicoloured antioxidant rich fruits (mulberry, sapota, passion fruit)
- To assess the impact compared the pre and post intervention data.

IMPACT OF FARMING



PINEAPPLES CONTAIN THE BROMELAIN ENZYME WHICH CAN BREAK DOWN PROTEINS, SO YOU CAN USE THEM TO TENDERIZE MEAT.

IMPACT OF FARMING	BEFORE	AFTER
Average Time spent for nutrigarden per day (minutes)	15 minutes	30 minutes
Average expenditure for vegetables & fruits per week (Rs)	2000	1600
Daily Dietary Diversity Score (DDS)	6.5 (Range 4-8)	9.8 (Range: 7-11)
Average household consumption of Veg (g/Day)	250(Range: 200-400)	600(Range: 400-1000)
Daily vegetable consumption per person (gram) respondent's consumption	75 (Range: 50-400)	112.5 (Range :70-150)
Daily fruits consumption per person(g)	30	70(Range:25-150)
Average Household Vegetable production(Kg/Week)	0.15	1.25 (Range- 0.15 - 3)

SOCIO-ECONOMIC IMPACT :

- Average expenditure for fruits and vegetables per month reduced from Rs.2000 to Rs. 1600
- DDS improved from 6.5 -9.8 (started including different food groups)
- Household production and consumption of fruits and of vegetable increased
- GLV consumption on daily basis improved from 12% to 48%
- Increase in daily consumption of Vitamin rich fruits (yellow) & vegetables, millets, sprouted pulses.
- Beneficiaries were motivated. Ready to continue nutrigarden in future also



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MALAPPURAM NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	Homestead cultivation
AREA	90 cent
ENTERPRISES	Nutrigarden

KVK INTERVENTION

BASELINE SURVEY

- An initial survey was conducted to assess the nutritional needs and agricultural practices of the participating families. This survey helped identify key issues that needed to be addressed to improve the overall nutritional status and agricultural productivity of the families involved.

PROBLEMS IDENTIFIED

- Low Intake of Fruits and Vegetables
- High Dependence on Market Purchases
- Lack of awareness about the importance of balanced diet, and the benefits of con suming locally grown fruits and vegetables
- Lack of Dietary Diversity

AWARENESS PROGRAMMES

- Multiple awareness sessions were organized to educate the families about the importance of nutrition and the role of Nutri Gardens in providing a diverse and balanced diet

DISTRIBUTION OF SEEDS AND SEEDLINGS

- Various seeds and seedlings were distributed to the families to establish their Nutri Gardens. The distributed plants included:
- **Green Leafy Vegetables :** Excellent sources of vitamins (such as vitamin A, vitamin C, and vitamin K), minerals (such as iron and calcium), and antioxidants
- **Other Vegetables :** Different vegetables provide a range of vitamins, minerals, and phytochemicals essential for overall health and well-being
- **Tubers, especially Biofortified Sweet Potato Varieties**
- **Fruit Plants :** Fruits are rich in vitamins (such as vitamin C), minerals (such as potas sium), antioxidants, and dietary fiber, supporting overall health and providing natural sweetness to the diet
- **Provision of Bio-Control Agents**
- To promote good agricultural practices and improve soil health, the following bio-control agents were distributed :
- **Pseudomonas**
- **Sampoorna**
- **Trichoderma Enriched Coir pith compost**
- **Neem Garlic**

IMPACT OF FARMING PARAMETERS	BEFORE	AFTER
Average expenditure for vegetables and fruits per month (Rs)	1740	1520
Average time spent in Nutri Garden (Minutes)	25	35
Average household fruits and vegetable production (Kg/Month)	2.5	4.0
Average household consumption of fruits & vegetables (g/Day)	200	350
Daily vegetable consumption per person (g)	40	68
Daily fruits consumption per person (g)	50	85
Daily Dietary Diversity Score (DDS)	3.36	5.86

SOCIO-ECONOMIC IMPACT :

Households experienced a reduction in monthly expenditures on fruits and vegetables. Participants spent more time in their gardens, indicating greater involvement. There was a notable increase in both the production and consumption of homegrown fruits and vegetables. The daily consumption of vegetables and fruits per person significantly increased. The increase in the Daily Dietary Diversity Score reflects a broader variety of foods being consumed, contributing to better overall nutrition.

These results underscore the effectiveness of the Nutri Garden initiative in enhancing food security, promoting healthier diets, and reducing household expenditures on fruits and vegetables. The initiative continues to show positive trends in improving the nutritional status and engagement of the participating families.



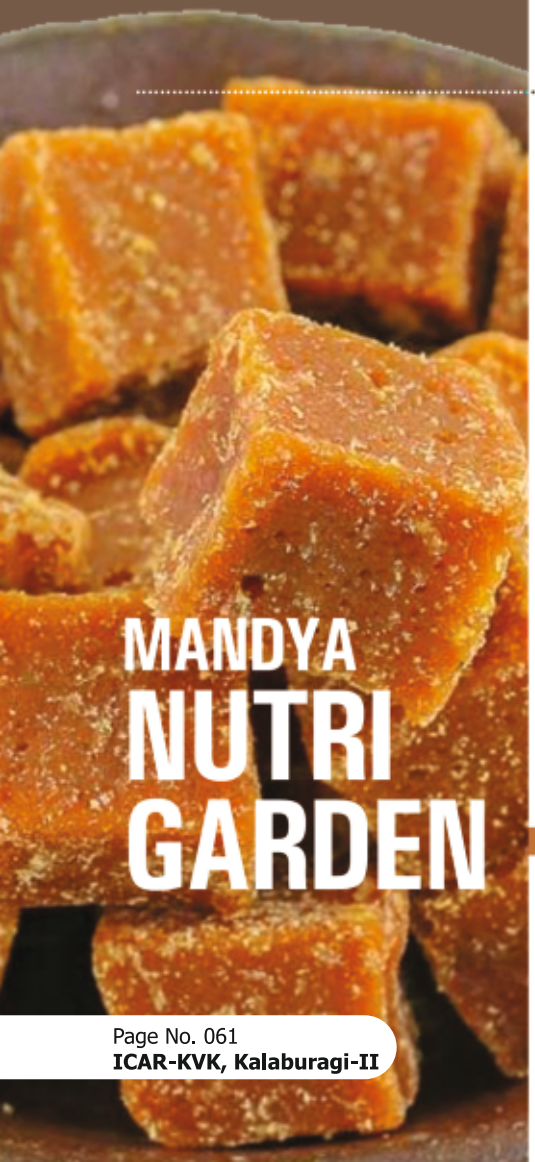






DURING WORLD WAR II, COCONUT WATER WAS USED AS AN IV DRIP BECAUSE THERE WAS NOT ENOUGH BLOOD PLASMA AVAILABLE

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MANDYA NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	IIHR Bangalore, 2012
AREA	10mX10m
ENTERPRISES	• Green leafy vegetables (Palak, Amaranthus, Fenugreek, Dill, Coriander, Multivita min (Chakramuni) and Drumstick) • Other Vegetables (Chilli, Tomato, Okra, Ridge gourd, Beans, Cowpea, Radish and Brinjal) • Fruits (Guava, Sapota, Lemon, Curry leaves)
KVK INTERVENTION	Nutrition education and establishment of nutrition garden for farm families

IMPACT OF FARMING

BEFORE	AFTER
• Consumption of leafy vegetables was only once or twice a week • Purchase of required vegetables from the local market.	• Consumption of fresh vegetables has increased to 4 - 5 times a week • Reduction in procuring daily need vegetables and greens from external source (market, local shops)

SOCIO-ECONOMIC IMPACT :

- The cost incurred (Rs.3736.86/-) towards purchase of vegetables has been fully saved and minimum earning of Rs.1,600/- from selling of excess of vegetables produced.
- The consumption of vegetables per day per person was 172.99 grams. before nutri garden implementation and after implementation it was 357 grams.
- Family members, especially children are involved in nutrigarden maintenance.
- A good habit with positive impact on children education.
- Better leisure time utilization.
- Timely availability of Organic vegetable.
- Better kitchen waste management.
- Kind of recreation.

**PROCESSED SUGAR IS BAD,
BROWN SUGAR AND JAGGERY ARE NOT.**













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MYSURU NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	Campaign on Nuri gardens
AREA	0.05 X 20 Units
ENTERPRISES	Nutri gardens
KVK INTERVENTION	-Money spent on buy the vegetables by schools, farm women and tribal households -Consumption of chemical vegetables -Purchase of vegetables at higher cost -Transportation -Intervention by Nutri gardens -KVK introduced the nutri gardens among schools, tribal areas and farmwomen households.

IMPACT OF FARMING

PARAMETERS	DEMO	CHECK	% CHANGE
Prodn. of vegetables (kg/6 months)	760	Nil	100
Veg. availability (g/person /day)	63.29	12.50	43.54
Vegetable adequacy (%)	14.89	2.94	80.26
Knowledge level: Cultivation & consumption	76.45	34.75	54.55

VEGETABLE YIELD (KG/6 MONTHS)			ECONOMICS			
HIGH	LOW	AVERAGE	GROSS COST	GROSS RETURN	NET RETURN	BCR
1120	400	760	8100	15190	7090	1.86

SOCIO-ECONOMIC IMPACT :

- Money spent to buy vegetables is saved
- Builds confidence and promote consumption. Consumption of fresh
- Organic vegetables regularly help to get better health
- Transportation cost has been saved.

BANANAS ARE AMONG THE MOST IMPORTANT FOOD CROPS ON THE PLANET







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PALAKKAD NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY	
Adopted model	Homestead Kitchen garden	
Area	18 units	
Enterprises	Passion fruit, Custard apple, Lemon, Soursop, Papaya, Chekkurmanis, Agathi cheera, Drumstick, Basella, sweet potato, Cucumber, Green chilli, Mushroom	
KVK intervention	Provided vegetable seedlings and mushroom beds. Capacity building programme	
Impact of farming	BEFORE	AFTER
	Vitamin and mineral deficiencies were observed in children and some of them were anaemic.	Significant improvement in overall health of children. Symptoms related to anaemia disappeared.

SOCIO-ECONOMIC IMPACT :

- Overall improvement in health of children

BANANA FIBER IS MORE SUSTAINABLE THAN MANY OTHER WEAVING FIBERS


GPS Map Cam
Pattambi, Kerala, India
KL SH 39, Pattambi, Kerala 679303, India
Lat 10.807386°
Long 76.186841°
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PATHANAMTHITTA NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL
Indian Institute of Horticulture Research (IIHR)

AREA
One cent model (Pathanamthitta district) in 187 Anganwadies

ENTERPRISES
Nutri-Garden for Integrated Child Development Schemes (ICDS) Anganwadies.

KVK INTERVENTION

- Nutrition gardens to enhance dietary diversity by providing micronutrients through constant supply of fruits and vegetables sufficient in order to meet the family's requirements on "My Plate".
- Promotion of leafy vegetables through "Nutri-Leaf concept to overcome micronutrient deficiency among women and children.
- Colour based "Nutri-Garden" concept for easy adoption.
- Demonstration of bio-fortified varieties (dual purpose sweet potato varieties) and demonstration of nutritious leaf varieties.
- Promotion as recreational activity for Anganwadi children.
- Method demonstration of Nutri-rich recipes using Nutri-garden products.
- Awareness programmes for promotion of Nutri smart village concept

IMPACT OF FARMING

PARAMETERS	BEFORE	AFTER
• Average production of Fruit and Vegetable in Anganwadies per day(g)	0	170
• Average consumption of Fruit and Vegetable in Anganwadies per day(g)	250	420
• Daily fruit and vegetable consumption per child(g)	75	100
• Average time spent for Nutri-Garden per day(Minutes)	0	30
• Total Fruit and Vegetable production under NGP in 90 days (Kg)	0	927
• Total Amount saved during the period (Rs.)	0	52750
• B.C Ratio	1	2.1

HEALTH BENEFITS OF JACKFRUIT

> Maintains Healthy Thyroid
> Strengthens Bone
> Lower High Blood Pressure
> Prevents Anemia
> Controls Asthma
> Boosts Energy

SOCIO-ECONOMIC IMPACT :

- Normally pre-school kid's diet includes cereals, pulses, milk and egg, which lacks the most important food group, "Vegetables", especially the leafy vegetables. Introduction of Nutri Garden had helped them to improve daily intake of green leafy vegetables.
- Bio-fortified varieties and Nutri-garden concept offered a cost-effective, long-term, and sustainable approach in fighting hidden hunger.
- Visible improvement was observed in the dietary diversity score of Anganwadies students (In a 10 point scale, increased from 6 to 9).Increased diversity score indicates increased access to nutritious food.
- Nurtured the habit of eating right food at the right time among pre school children
- Promotion of leafy vegetables through "Nutri-Leaf concept has improved vitamin A and iron intake.
- Remarkable increase in the use of leafy vegetables among the stakeholders and is going on par with the recommended RDA of an adult woman.







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RAICHUR NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	AICRP Model
AREA (GUNTA)	50 gunta
ENTERPRISES	Nutrigarden
KVK INTERVENTION	Production of Vegetables Throughout the Year
IMPACT OF FARMING	---

SOCIO-ECONOMIC IMPACT :

- Around 30-40% of Vitamins, 40-45% of Mineral requirement, 5-10% of Carbo hydrate and Protein requirement was supplemented through nutrition garden - 24 hours diet recall method.
- Round the year easily available vegetables added to food diversity and taste (70%) opined that weekly twice to four times vegetables included in the diet.
- All the beneficiaries opined that fresh vegetables are very tasty
- Chemical free vegetables – All respondents
- Seeds were collected and regrown – 50% (Specially gourds and green leafy).



















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RAMANAGARA NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	UASB 2014
AREA (GUNTA)	20
ENTERPRISES	• Green leafy Vegetables,(Palak, Fenugreek, Coriander, Amaranthus, Shepu • Other vegetables(radish, ladies finger, Tomato, brinjal, chilli, Beans, Ridgegourd, onion • Medicinal plants: Insulin, Doddapatre, • Plants: Lemon, Curry leaf, Chakramuni(Multivitamin Plant) and Drumstick
KVK INTERVENTION	• Establishment of nutri garden • Nutrition education for farm families • Field visits and Fallow up visits • Awareness on health benefits of Fruits and Vegetables in Daily diet

IMPACT OF FARMING

BEFORE	AFTER
• Leafy vegetable consumption was less and 2-3 times/ week	• Availability of leafy vegetable was more and consumption 4-5 times /week
• Purchase of all need based vegetables from nearby markets	• Dependency on Purchase of vegetable from market is reduced and could get fresh vegetables.

SOCIO-ECONOMIC IMPACT :

- With nutrigarden, reduction in cost towards purchase of vegetables from Rs.1220 to Rs. 620 per month/family
- Proper utilization of space & time and education for children also.
- Availability of fresh vegetable and per capita of consumption of vegetables increased and created awareness on health benefits

COCO COIR IS EFFECTIVE SNAIL DETTERENT













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THIRUVANANTHAPURAM NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	Safe to eat vegetable production in homesteads
AREA	50 cents
ENTERPRISES	Vegetable cultivation
KVK INTERVENTION	Supply of planting materials, bio pesticides, bio control agents, method demonstration, field visits, advisory services, FLD & trainings

IMPACT OF FARMING	BEFORE	AFTER
	50 cents of barren land	Vegetable garden comprising of crops such as brinjal, chilly, Amaranthus, Yard long beans, bitter gourd and snake gourd

SOCIO-ECONOMIC IMPACT :

- Nutritional security
- Safe to eat vegetable production in homesteads
- Creative utilization of leisure time
- An estimated savings of Rs. 1.44 lakhs in their annual budget for purchase of vegetables

SAFE TO EAT VEGETABLE CULTIVATION IN NAVAJEEVAN, A DESTITUTE HOME FOR BOYS

Navajeevan is a destitute home for boys in Vellanad panchayath, which has 50 inmates. KVK extended technical support to Navajeevan for vegetable cultivation in 50 cents area so as to ensure the nutritional security of children residing there.

Vegetable seedlings of high yielding improve varieties, bio control agents, bio pesticides etc. were made available to the from KVK. Method demonstrations and field visits were conducted, advisory services were provided. KVK interventions included a front-line demonstration also so as to manage wilt disease in yard long beans.

They were able to raise vegetable crops such as brinjal, chilly, Amaranthus, Yard long beans, bitter gourd and snake gourd so as to ensure nutritional security of the residents. On an average they were able to harvest about 15 kg vegetables per day for about 8 months. The smile that flashes across the resident boys when they engage themselves in various works in the vegetable garden is really overwhelming.



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TUBERS ARE VERY NUTRITIOUS, ESPECIALLY AS A SOURCE OF STARCH









KVK TIMES
A WINDOW TO KVKS OF ICAR-ATARI ZONE XI, BENGALURU
VOL-2, ISSUE -21, 1-15 MAY 2024

THRISSUR NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	Integrated Community-Based Extension Approach
AREA	Key locations selected for these initiatives included Nattika Grama Panchayath, Anthikkad Grama Panchayath, and Kolazhy Grama Panchayath Within these areas, vulnerable groups were identified, and three colonies from each location were selected for the program.. In total, 30 households with 94 members participated in the programme. Area under each group – 0.04ha
ENTERPRISES	Mushroom processing, vegetable processing, and composting unit
KVK INTERVENTION	Technology demonstration of mushroom production, composting techniques. Lay out and supply of planting materials for nutrigarden, nutrition awareness classes, Skill development programme on vegetable cultivation

IMPACT OF FARMING	BEFORE	AFTER
	• Exclusively depended on retail markets for vegetables and mushroom	• Supplied between 36% to 43% of the recommended daily allowance (RDA) for vegetables
	• Consumption of green leafy vegetables were only 20% of the requirement	• Consumption of green leafy vegetables increased upto 70% of the requirement
	• Awareness on micronutrient rich foods were poor	• Increased awareness regarding micronutrient rich foods



MUSHROOMS HELP FIGHT

SOCIO-ECONOMIC IMPACT :

• Purchase of vegetables and fruits incurred around 20- 30 % of their monthly income for almost all families which could be reduced to less than 20% . Mushroom processing and dehydrated and pickling of vegetables has turned as an income generating activity for 33% families









AGE-RELATED DISEASES

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TUMAKURU-I NUTRI GARDEN

PARTICULARS

ADOPTED MODEL

AREA

ENTERPRISES

DETAILS OF TECHNOLOGY

Nutrition garden source: UAS(B) and IIHR

400 Sq ft per family

- Fruits,
- Vegetables,
- Green leafy vegetables
- Roots & Tubers
- Medicinal plants
- Vermi compost

- Nutrition Education
- Demonstration on compost preparation
- Field visits/Follow up visit
- Organic farming
- Awareness programme on importance of consumption of fruits and vegetables in daily diet.



THE HUSK OF A COCONUT CAN ACTUALLY REPELLENT, A PROCESS USED IN MANY

IMPACT OF FARMING	BEFORE	AFTER	
Consumption of leafy vegetables	2-3 times a week	5-6 times a week	
Production of Green leafy vegetables (bundles/year)	405	1335	
Production of other vegetables (kg/year)	100	694	
Total expenditure on purchase of fruits and vegetables per year	7000	4100	
Adequacy of food intake	ADEQUACY OF FOOD INTAKE		% INCREASE
	Green leafy vegetables-80.32 %	Green leafy vegetables - 95.75 %	15.43
	Other vegetable -67.62 %	Other vegetable - 83.06 %	15.44
	Fruits -42.23 %	Fruits - 51.35 %	9.12
Nutrient adequacy against RDA	NUTRIENT ADEQUACY IN PERCENT		% INCREASE
	Fibre - 67.83 %	Fibre - 78.73 %	10.90
	Iron - 50.00 %	Iron - 62.93 %	12.93
	Vitamin-C - 58.83 %	Vitamin-C - 65.72 %	6.89

SOCIO-ECONOMIC IMPACT :

- Nutri-garden indeed has a positive impact in ensuring the food security among rural population. It increased the intake of vegetables and improved availability and accessibility of fruits and vegetables.
- The demonstration on nutri-garden created awareness on health and nutrition as well as in providing fresh fruits and vegetables to the families. The cost incurred towards purchase of vegetables had been saved (41.42 %). The vegetables were exchanged with neighbour and the excess vegetables were sold in the market.



BE BURNT TO ACT AS A NATURAL MOSQUITO
COUNTRIES AROUND THE WORLD

KVK TIMES
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TUMAKURU-II NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY
ADOPTED MODEL	UAS (B) and IIHR
AREA (GUNTA)	1
ENTERPRISES	• Vegetables seed kit, fruits and some medicinal plants seedlings, Vegetable special, Neem soap and Arka Microbial Consortium Booklet of nutrition garden
KVK INTERVENTION	• Training cum awareness programme on importance of fruits and vegetables in daily diet • Input distribution and demonstration on establishment of Scientific nutri garden • Post harvest handling of fruits and vegetables • Method demonstration on waste segregation and compost preparation
IMPACT OF FARMING	









IMPACT OF FARMING

BEFORE	AFTER	
No Nutri garden	Establishment of Scientific nutri garden	
No vegetables production	Production of 479 kg of green leafy vegetables and 1075 kg of other vegetables in Kharif season and 273 kg of green leafy vegetables and 743 kg of other vegetables in Rabi season from 30 demonstrations.	
Total expenditure on purchase of fruits and vegetables per year- Rs. 13,000/-	Total expenditure on purchase of vegetables and fruits reduced to Rs. 4680/- resulting in savings of Rs. 8320/-.	
Consumption of vegetables and fruits against RDA	CONSUMPTION OF FRUITS AND VEGETABLES AGAINST RDA	% INCREASE
Green leafy vegetables - 45%	Green leafy vegetables-85%	40%
Other vegetables - 48%	Other vegetables-73%	25%
Fruits - 45 %	Fruits-75%	30%
Nutrient adequacy against RDA	NUTRIENT ADEQUACY AGAINST RDA	% INCREASE
Fibre (g) -72%	Fibre (g) -82%	10.57%
Iron (mg) -74%	Iron (mg) -89 %	15%
Vitamin C (mg) - 50%	Vitamin C (mg)-65%	15%
Beta-Carotene (mg) - 63%	Beta-Carotene (mg)- 96%	33%
Waste segregation and compost production was not practiced	Waste segregation and production of compost and its utilization in nutri garden was demonstrated	

SOCIO-ECONOMIC IMPACT :

- Improved Nutritional security through increased avail ability of vegetables and fruits and utilization of foods
- Availability of pesticide free fresh vegetables and fruits throughout the year
- Improved health status in farm families. Reduction in micronutrient deficiency symptoms like anemia, bleeding gums, joint pains etc.
- Expenditure on purchase of vegetables reduced





UDUPI NUTRI GARDEN

PARTICULARS	DETAILS OF TECHNOLOGY	
ADOPTED MODEL	Home nutrigarden	
AREA (GUNTA)	2 gunta	
ENTERPRISES	-	
KVK INTERVENTION	Supply of quality seeds of vegetables, fruit saplings, bio fertilizers and technical guidance	
IMPACT OF FARMING	BEFORE	AFTER
	Lack of balanced nutrition in the diet of farmers, Use of fertilizers and pesticides, less yield	Grown variety of vegetables and fruits, Able to get balanced nutrition, promotion of organic vegetable production, extra income through sale of vegetables.

SOCIO-ECONOMIC IMPACT :

Livelihood security for women, balanced nutrition in rural area, community engagement, nutrition awareness and education

FISH IS THE MOST GLOBALLY TRADED FOOD – MORE THAN SUGAR OR COFFEE




ಕೆಳದಿ ಶಿವಪ್ಪ ನಾಯಕ ಕೃಷಿ ಮತ್ತು ತೋಟಗಾರಿಕೆ ವಿಜ್ಞಾನಗಳ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಇಮಪಕ್ಕಿ, ಶಿವಮೊಗ್ಗ
ಭಾರತೀಯ ಕೃಷಿ ಅನುಸಂಧಾನ ಪರಿಷತ್, ನವದೆಹಲಿ
ಭಾ.ಕೃ.ಅ.ಪ- ಕೃಷಿ ವಿಜ್ಞಾನ ಕೇಂದ್ರ, ಬ್ರಹ್ಮಾವರ, ಉಡುಪಿ ಜಿಲ್ಲೆ
"ಪೌಷ್ಠಿಕ ಕೈತೋಟ"
ಪೊರಾಂಗಣ ತರಬೇತಿ ಕಾರ್ಯಕ್ರಮ
ದಿನಾಂಕ: 02-11-2023
ಸಮಯ: ಪೂರ್ವಾಹ್ನ 11.00ಕ್ಕೆ

KVK TIMES
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UTTARA KANNADA NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL	UAS Bengaluru
AREA (GUNTA)	1.75 (20 demos)
ENTERPRISES	Schools and Farmers field
KVK INTERVENTION	Supply of inputs like seeds, seedlings to the farmers and awareness programme for school children and farm women about human nutrition and training on establishment of nutrigarden

IMPACT OF FARMING	BEFORE	AFTER
	Amount spent on vegetables purchase/month/family: Rs. 1280	Amount spent on vegetables purchase/month/family: reduced to Rs. 470

SOCIO-ECONOMIC IMPACT :

Farm women and school kids were able to produce seasonal green leafy vegetables and perennial vegetables through-out the year to meet their nutritional requirement. Benefit cost ratio was 2.32. Farm women got additional income from their garden and they were happy to grow their own vegetables under the guidance of KVK Scientists.



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"CORIANDER MAY TASTE LIKE SOAP TO YOU BECAUSE OF YOUR GENES"





KVK TIMES
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VIJAYAPURA-I NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL
ICAR-nutri garden model

AREA
0.79 gunta (870 sq.ft)

ENTERPRISES
Nutri-garden

KVK INTERVENTION
- Advisory service on ICAR model nutria garden
- Demonstrations
- Trainings
- Field visits
- Storage of vegetables and fruits

IMPACT OF FARMING

PARAMETERS	BEFORE	AFTER
Knowledge on layout planning of nutria-garden	31.33 %	78.50%
Knowledge on vegetables to be sown in different seasons	60.50 %	86.00%
Knowledge on food consumption pattern per day	37.50 %	84.75%
Knowledge on different nutrients available in various fruits and vegetables	13.75 %	68.00%

SOCIO-ECONOMIC IMPACT :

- After adoption of nutria-garden farming families' socio-economic status was improved.
- Their net income was Rs.8050.00 from nutria garden







"RAISINS DON'T CAUSE TOOTH DECAY"

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VIJAYAPURA-II NUTRI GARDEN

PARTICULARS

ADOPTED MODEL

DETAILS OF TECHNOLOGY

Nutri-Farms : (Vegetable Seeds such as Tomato, Capsicum, Chilly, Lady's finger, Brinjal, Beetroot, Cadish, Carrot, Cluster beans, Coriander, French beans, Sweet corn, Onion, Cucumber, Ridge gourd, Bottle gourd, Mesta, Spinach, Fenugreek, Amaranthus, Dill (Sabbasige), Seedlings Of Drumstick, Guava, Custard Apple, Acid Lime, Amla, Curry Leaf)

AREA (GUNTA)	40
ENTERPRISES	Production of vegetables through Nutri-Farms
KVK INTERVENTION	Provided different vegetable crop seeds, fruit crop saplings suitable for kitchen garden and given plan for year-round production. Guided and monitored year-round production of vegetables

IMPACT OF FARMING	BEFORE	AFTER
	Lack of awareness about nutritional value of vegetables and fruits and no diversification in consumption of vegetables. There is an expenditure of 2000Rs. / Month per family	Availability of vegetables, roots, tubers, and other vegetables was increased per family/month (34kg/ month) Saving of monthly expenditure of a family and additional income was generated with net profit per family is Rs. 5170/-

SOCIO-ECONOMIC IMPACT :

1. Availability of vegetables and fruits in the own farm increases the frequency of consumption.
2. Availability of fresh vegetables regularly.
3. Expenditure on purchase of vegetables is reduced.
4. Nutri-garden helps in consumption of all types of vegetables.



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ACID LIMES ARE GREAT FOR YOUR HEALTH!

KVK TIMES
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WAYANAD NUTRI GARDEN

PARTICULARS

DETAILS OF TECHNOLOGY

ADOPTED MODEL
SAU recommended model

AREA
25 cents (1 cent /farmer)

ENTERPRISES
- Mushroom Cultivation
- Value addition
- Vegetable cultivation

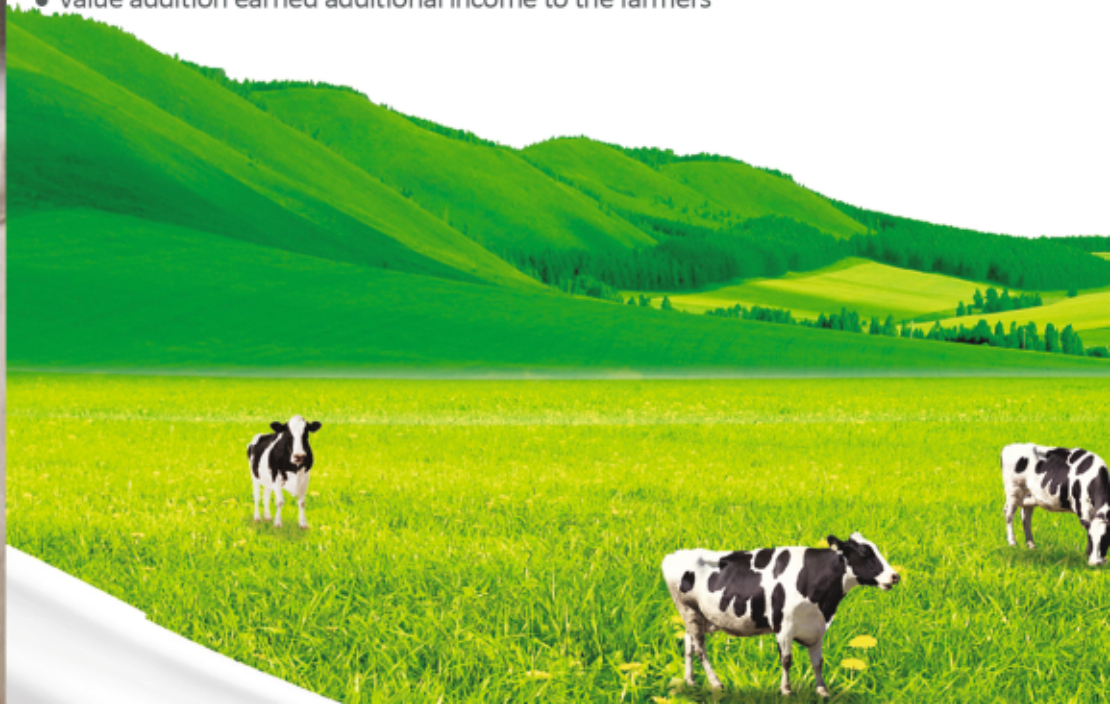
KVK INTERVENTION
- Distribution of inputs
- Training programme

IMPACT OF FARMING

BEFORE	AFTER
➢ Depended on vegetables from market	➢ Safe to eat vegetables
➢ Lack of knowledge on nutrition	➢ Leafy vegetable included in the diet
➢ Least consumption of leafy vegetables	➢ Increase in consumption of vegetables
➢ Unaware about the technology of mushroom cultivation and its medicinal properties	➢ Nutrition education improved the knowledge and attitude
	➢ Could afford the cost of mushroom by own cultivation

SOCIO-ECONOMIC IMPACT :

- Average expenditure of fruits, vegetables and mushroom reduced.
- Positive attitude towards this new innovative model of nutri-garden
- Empowerment of women in skill development
- Improved nutritional status
- Better use of household resources and improved eating habits
- Value addition earned additional income to the farmers



PANEER CONTAINS ZERO FIBER







GLIMPSES OF IXTH SAC MEETING













EAT THE RAINBOW

Fruits and vegetables definitely add texture and color to our plates.
You can enjoy a rainbow of colors, greens, reds, oranges, whites and even purples,
in varieties of fruits and vegetables.

Fruits and vegetables have natural substances that give fruits and vegetables their vibrant colors,
called phytochemicals. Certain phytochemicals may help protect against some cancers,
heart disease, and other chronic health conditions.

Eating a variety of fruits and vegetables from each color group will help get these
rich phytochemicals and other vitamins and minerals in our diet.
Variety in the types of fruits and vegetables that we eat, as well as the color
spectrum will yield the best health benefits.

ICAR-KRISHI VIGYAN KENDRA, KALABURGI - II

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