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D.O. No. 1-8/2019-Desk (MDM)

Dated 15th October, 2019

Dear Sir/Madam

As you are aware that setting up of School Nutrition (Kitchen) Gardens may achieve the goal of learning a lifelong skill which is of critical importance in the arena of rapid urbanization and environmental issues which shapes the behavioural pattern of the students. It is just one step in right direction for school students to engage and participate meaningfully in the activities so as to inculcate the habit of growing own vegetables and fruits in the schools and in their homes.

2. We have already issued guidelines related to School Nutrition (Kitchen) Gardens in month of May-June, 2019 when PAB-MDM meetings were held and copies were distributed to all Secretaries during PAB-MDM meetings for further circulation in their respective States/UTs.
3. These guidelines are further elaborated to aid and guide the States/UTs and the same are being issued now (copy enclosed).
4. It is therefore, requested to kindly issue necessary instructions as per the Guidelines on School Nutrition (Kitchen) Gardens to your State/UT for setting up of Kitchen Gardens in all schools.

With regards,

Yours sincerely,

(R.C. MEENA)

The Special Chief Secretaries/Addl. Chief Secretaries/Principal Secretaries/ Secretaries (Education) of all States/UTs.





सत्यमेव जयते

Government of India

Ministry of Human Resource Development
Department of School Education & Literacy



School Nutrition (Kitchen) **GARDENS** GUIDELINES



CONTENTS

| S.No. | Chapters | Page No. |
|-------|--|----------|
| | Executive Summary | 2-4 |
| 1 | Objectives of School Nutrition (Kitchen) Garden | 5-8 |
| 2 | Setting up of School Nutrition (Kitchen) Garden and Planning and Monitoring | 9-17 |
| 3 | Setting up of School Nutrition (Kitchen) Garden in the Schools which don't have land | 18-21 |
| 4 | What shall we grow in the School Nutrition (Kitchen) Garden? | 22-25 |
| 5 | What parts of the plant can we eat? | 26-27 |
| | Newspaper Clippings | 28-32 |



Executive Summary

School Nutrition (Kitchen) Garden

**“I saw a hungry man...”
I taught him how to fish”**

Most people will be familiar with these lines which highlight the critical importance of learning a lifelong skill. Setting up a School Nutrition Garden (also called Kitchen Garden) seeks to achieve a similar goal as it is both a place and an activity where children learn the skill of growing their own food.

The concept of a School Nutrition (Kitchen) Garden is not new, however, the unique features of the current initiative being promoted by the MHRD are refreshingly novel, namely.

1. **Teaching students that a Nutrition (Kitchen) Garden can actually be set up anywhere, even in a School in a crowded urban area.** This learning is critical because most people feel that a Nutrition Garden requires a large plot of vacant land. However, the fact is that healthy vegetables, fruits etc. can be grown in pots and containers on terraces, roofs or even in the entrance area of the School. Climbing varieties such as the snake gourd can be cultivated as they will creep up the walls and need no land at all.



2. **Teaching students that, with a few exceptions, every part of the vegetable or fruit can be eaten.**

In many parts of the country, different parts of vegetables such as the flowers, the leaves, and the stems, are all eaten. For example while banana flowers are considered a delicacy in some cuisines, papaya leaves are in the limelight for their medicinal properties. Thus, instead of throwing all leaves and stems away children should be encouraged that most parts of the vegetable and fruit can be eaten, and to include these in their diets.

Cooking competitions should accordingly be organized to support cooks in the Mid Day Meal programme to come up with innovative recipes using all parts of vegetables.

3. **Teaching students to think out of the box and find a way.** No land available in the school? Not enough rainfall? Let these not be reasons not to start Nutrition Gardens.

Children should be encouraged to work actively in their School Eco-Clubs to identify local species which are best suited to local conditions of topography, land and climate and also identify different ways to provide water such as simple methods of drip irrigation. Schools can invite local experts and farmers to share their expertise with the children. The focus should be on finding innovative solutions.





4. **Teaching students to follow the same learning and start a School Nutrition (Kitchen) Garden in their own homes.** The purpose of setting up such a Kitchen Garden in Schools is to give students a lifelong skill and to encourage them to go home and start their own garden, in whatever space is available using their knowledge learnt in School.
5. The MHRD has asked all schools both in rural and urban areas to develop and maintain a School Nutrition (Kitchen) Garden with teachers, students, parents and even local residents being involved. Technical assistance, training, provision of seeds, sapling, organic manure etc can be obtained in **convergence** with various line departments/agencies like Krishi Vigyan Kendras, Department of Agriculture/Horticulture, Food & Nutrition Board, State Agriculture Universities, Forest Department etc. Moreover, activities like construction of boundary wall, levelling of land etc can be taken up under MGNREGA.
6. Working in the open and cultivating their own food is one of the finest examples of experiential learning for school children and the benefits of setting up these gardens in schools are manifold. The joy of watching something they have planted is untold and students learn about responsibilities, about learning to care for living organisms, teamwork, social skills and about healthy food alternatives. These activities can also be used for numeracy skills including measurement, areas and volumes, data gathering and presentation.
7. Plantation in the School Nutrition (Kitchen) Garden may be carried out under the activities of Eco-Clubs, which is being set up in every school. An Eco-Club is a group of children and teachers in schools who work to contribute towards improving environmental conditions. Eco-Clubs in schools shall empower students to participate and take up meaningful environmental conservation activities and projects.

Each child should be encouraged to plant a tree on his/her birthday. If land is not available for plantation, they can grow plants in small containers, dibbas, broken sink etc.

Chapter 1 : Objectives of School Nutrition (Kitchen) Garden

The main objectives of School Nutrition (Kitchen) Garden are as follows:

- a) To help in addressing malnutrition & micro nutrient deficiencies by consumption of freshly grown vegetables.
- b) To give children first-hand experience with nature and gardening.
- c) To enhance the knowledge of children regarding nutritional aspects of vegetables and harmful effects of junk food.

Need and benefits of School Nutrition (Kitchen) Gardens:

School Nutrition (Kitchen) Gardens have many advantages; some of them are as under:

- i. **Good for learning:** School Nutritional (Kitchen) Gardens are good for learning: they are highly practical and a direct form of education, where children can learn how to grow good food, which not only improves health, but also provides opportunities for livelihood and increased self-sufficiency. Apart from practical skills in agriculture and horticulture, gardens are a living laboratory for the study of environmental issues and life sciences.



- ii. **Essential for children's health:** These Gardens are good for children's health and education: A good diet is essential for cognitive abilities which help in learning. Children who eat well are likely to learn well. School Nutrition (Kitchen) Gardens are not just for food, but for better eating and they can make a direct and immediate improvement in children's diet. They can provide fruit and vegetables, rich in vitamins and minerals, add nutritional value to Mid-Day Meals, increase the variety that is so important for health and growth, and help children to appreciate and enjoy this variety.

iii. Improve environment: School Nutrition (Kitchen) Gardens improve the environment: Respect for the immediate environment begins at home - and also at School. The school grounds have elements of the natural environment, the built environment and the social environment: earth, plants and trees, insects and wildlife, sun and shade; water supply and sanitation facilities, paths and fences, buildings and shelters; places for recreation and study, social life and contacts with the outside world. Children's awareness of these, and the way they learn to treat them, will help them to grow into responsible adults.

iv. School Nutrition (Kitchen) Gardens are good for the earth: Organic gardening conserves the soil, protects the environment and works with nature rather than against it. It is a method of growing food that relies on the earth's natural resources, such as land, sun, air, rainfall, plants, animals and people. It uses natural methods to keep the soil fertile and healthy and to control insects, pests and diseases. Organic methods can help keep our water sources clean and free of chemicals. It is also safer for children because there are no dangerous chemicals.

v. Good for child's well being

Children who are close to nature relate to it as a source of wonder, joy, and awe. Wonder, rather than books, words, or learning all the facts, provides the direction and impetus for environmental education in early childhood. Environmental education during the early years should be based on this sense of wonder and the joy of discovery.

vi. Increases confidence in students

It is a forum through which students can reach out to influence, engage their parents and neighbourhood communities to promote sound environmental behavior. It will empower



students to explore environmental concepts and actions beyond the confines of a syllabus or curriculum. While everyone, everywhere, asserts the importance of 'learning to live sustainably,' environment largely remains a peripheral issue in the formal schooling system. Students of all the Schools need to be encouraged to participate in the Eco- Club as an active member.



Impact of Climate Change and how School Nutrition (Kitchen) Gardens will be helpful :

There is overwhelming evidence that human activities are affecting the climate and this has implications for human health.

Role of School Nutrition (Kitchen) Gardens in reducing the negative impact of climate change:

Plants, trees, vegetable and fruits play an important role in reducing the harmful effects of climate change. Deforestation is one of the major reasons why the quality of air has degraded to an all-time low. The loss of trees and other vegetation can cause climate change, desertification, soil erosion, fewer crops, flooding, increased greenhouse gases in the atmosphere etc.

According to scientists, planting of trees, vegetable and fruits is the biggest and cheapest way to tackle the climate crisis. As trees grow, they absorb and store the carbon dioxide emissions that are driving global heating. Planting of new trees can help mitigate against climate change by removing CO₂ from the atmosphere. Combined with the sun's energy, the captured carbon is converted into trunks, branches, roots and leaves via the process of photosynthesis. It is stored in this "biomass" until being returned back into the atmosphere, whether through natural processes or human interference, thus completing the carbon cycle.



The School Nutrition (Kitchen) Garden is therefore not only good for the School but it is also good for the environment because it reduces the carbon footprint of food by decreasing the number of miles it takes to get vegetables, fruits, legumes and pulses from the farm to Mid Day Meal kitchen . **If plants, trees, vegetable and fruits are planted in the School Nutrition (Kitchen) Garden and at home, it will help store carbon from the atmosphere into the soil.**

Organic local vegetable and fruits that are in season may be planted in the School Nutrition (Kitchen) Garden rather than transporting food from far away, whether by truck or jeep which uses fossil fuels for fuel and for cooling to keep foods in transit from spoiling thereby increasing the carbon footprints.

Planting trees in the School Nutrition (Kitchen) Gardens shall be an initiative towards reducing the harmful effects of climate change. There are approximately 11.75 lakh Government and Government aided schools India and these School Nutrition (Kitchen) Gardens can have a very substantial impact on the climate.



Chapter 2 : Setting up of School Nutrition (Kitchen) Garden: Planning and Monitoring

Set up Eco-Clubs in all Schools

The Eco Clubs established in the School shall be headed by the Principal/Headmaster/Head Teacher. Preferably, two teachers per School and one class in charge will assist in carrying out activities. All the Students, teachers, and parents of the children may be members of Eco Clubs. The Students Coordinator, in each class may encourage the participation of students. The head of the Eco –Club shall be responsible for execution of the activities of the Club with the help of another Teacher. Plantation activities may be carried out under Eco-Club activities.

The Principal / Head teacher may be the team leader for establishment and maintenance of the School Nutrition (Kitchen) Gardens at School level with the help of students, SMC members, and interested persons from community etc. It is also a good idea to establish an executive team of senior students who will be able to carry on the activities without much supervision after training.

A committee may be formed at district level under the chairpersonship of District Collector / CEO of Zilla Parishad with the following members:

- i. District Collector / CEO of Zilla Parishad - Chairperson
- ii. KVK in-charge from the district
- iii. Representative from Forest Department
- iv. Representative from Rural Development,
- v. Representative from Agriculture/Horticulture department
- vi. Child Development Project Officers.
- vii. District Education Officer - Convenor



The District Magistrate may tie up with all schools for the setting up of School Nutrition (Kitchen) Gardens in every School by converging with concerned local departments, agencies and experts.

The place outside the School boundary may also be used for the School Nutrition (Kitchen) Garden. As the involvement of children is the foremost purpose, it does not matter even if the school has little space. Three or four small beds (Kyaries) can make up a model School Nutrition (Kitchen) Garden. In general, it is advised to choose crops, plants and trees that are adapted to local conditions, easy to cultivate and fit into the School term and are culturally accepted in the area. The produce should fit in with local food habits. Most important of all is to have a supportive Head teacher who fosters the interest of the whole school i.e., teachers, students, members of School Management Committee, Parent-Teacher Association etc.

Under the 'flexi fund component for innovative interventions' in Mid Day Meal Scheme, an amount of Rs 5000/- per School Nutrition (Kitchen) Garden may be utilized for purchase of seeds, equipment, compost etc. on sharing basis between Centre and States & UTs. Moreover, as the power for implementing the scheme with minor modifications from the existing guidelines has been delegated to District Level Committee chaired by the District Magistrate, the committee may rationalize and allot funds on the basis of School specific requirement, within the overall average of Rs 5000/- per School Nutrition (Kitchen) Garden.

i. Planning and Monitoring of School Nutrition (Kitchen) Gardens

Schools may consider each class putting in one to two hours a week, with children taking on occasional extra responsibility for an extra half hour to an hour a week on a voluntary basis or in rotation. Each class can work separately from the others, with some coordination to avoid overlap. The class can be divided into teams or groups which can work on their own beds and also contribute to assigned tasks. This arrangement can foster class pride. Individual students or small teams can specialize in particular technical responsibilities, with impressive titles such as "Pump Engineer", "Tool Manager", "Security Team" and "Compost King".

Children should be able to call on these "specialists" for information and advice. It is very important to decide on a calendar of activities. It is vital to incorporate the activities of School Nutrition (Kitchen) Garden – e.g. when does the garden season begin and end, timings for different activities, planting of vegetables etc. Children should inspect their crops every day - on the way to class, during breaks, or going home. Establishing this habit early in the year by leading the whole class out for five minutes every morning will be very beneficial. Younger children can observe and report orally; older students can collect measurements and data to produce weekly reports to be kept in a portfolio or in their group's Garden File.



involved as much as possible. They can participate by mapping and studying the site, discussing and researching supplies and equipment needed, observing and recording garden works, guiding visitors round the site and keeping families informed, studying garden layout and garden beds.

Discussions may be carried out with SMC members and community to decide on what measures to be taken to save School Nutrition (Kitchen) Garden from chicken, birds, goats, wild pigs, buffalo, monkeys etc

ii. Preparing the site and layout:

Plain Terrain is most convenient. Steep slopes need terracing. Stones and pebbles can be used for making walls. Tools may also be provided by KVKs. Some schools manage without any tools or equipment of their own at all.

The main elements are beds, paths, plant nurseries, compost heaps and a garden shed. Activities like construction of boundary wall, levelling of land etc can be take up under MGNREGA. Good water supply provides an opportunity to decide when to plant and when to harvest. If water is scarce or expensive, measures like water conservation, drip irrigation may be taken to optimise water use. Remember that plants need plenty of sunlight (at least eight hours a day).



iii. Composting

Compost is rich in nutrients. It is used, in gardens and organic farming. The compost itself is beneficial for the land in many ways, including as a soil conditioner, a fertilizer, addition of vital humus or humic acids, and as a natural pesticide for soil. Compost is useful for erosion control, land and stream reclamation, wetland construction, and as landfill cover.

At the simplest level, the process of composting requires making a heap of wet organic matter (also called green waste), such as leaves, grass, and food scraps, and waiting for the materials to break down into humus after a period of months.

Composting is an aerobic method (meaning that it requires the presence of air) of decomposing organic solid wastes. It can therefore be used to recycle organic material. Composting requires the following three components: human management, aerobic conditions, development of internal biological heat.

Composting organisms require four equally important ingredients to work effectively:

- i. Carbon — for energy; the microbial oxidation of carbon produces the heat, if included at suggested levels. High carbon materials tend to be brown and dry.
- ii. Nitrogen — to grow and reproduce more organisms to oxidize the carbon. High nitrogen materials tend to be green (or colorful, such as fruits and vegetables) and wet.
- iii. Oxygen — for oxidizing the carbon, the decomposition process.
- iv. Water — in the right amounts to maintain activity without causing anaerobic conditions.



Let the children prepare their vermicomposting pits:

Vermicomposting is a type of composting in which worms are used to convert organic materials (usually wastes) into a humus-like material known as vermin-compost. Vermicompost enhances plant growth, suppresses disease in plants, increases porosity and microbial activity in soil, and improves water retention and aeration. Vermicompost also benefits the environment by reducing the need for chemical fertilizers and decreasing the amount of waste going to landfills.



Rules for Vermicomposting are as under:

- i. The school children may be encouraged to carry out the activity.
- ii. A bin made from untreated, non-aromatic wood may be used in the School Nutrition (Kitchen) Gardens for vermicomposting.
- iii. Children may be encouraged to prepare the pit with some form of bedding, such as shredded paper, residues of cereals, pulses and peels of vegetable and fruits from Mid day Meal kitchen

and decaying leaves may be used to fill the bin and mixed with a few handfuls of soil and the worms.

- iv. The vermicomposting process takes three to six months. The quality of the compost depends on many factors. Let the school students explore what they may be.
- v. Earthworms are helpful in a vermicompost. There are two types of earthworms namely burrowing and non-burrowing types. Red earthworm species, like *Eisenia foetida*, are most efficient in compost making. The non-burrowing earthworms eat 10 percent soil and 90 percent organic waste materials; these convert the organic waste into vermicompost faster than the burrowing earthworms. They can tolerate temperatures ranging from 0 to 40°C. The burrowing types of earthworms come onto the soil surface only at night.



- vi. Technical support regarding vermicomposting may also be obtained from KVKs, State Agriculture/Horticulture departments.

Organic solid waste: green waste

Composting is a process for converting decomposable organic materials into useful stable products. Therefore, landfill space can be used for other wastes by composting these materials rather than dumping them on landfills. The green waste from the kitchen of Mid Day Meal may be used to fill the land fill for composting.



iv. Water Harvesting

Water harvesting means capturing rain where it falls or capturing the run off in the School or home and taking measures to keep that water clean by not allowing polluting activities to take place in the catchment. Water harvesting can be undertaken through a variety of ways.

In general, water harvesting is the activity of direct collection of rainwater. The rainwater

collected can be stored for direct use or can be recharged into the groundwater. Rain is the first form of water that we know in the hydrological cycle, hence is a primary source of water for us. Rivers, lakes and groundwater are all secondary sources of water. In present times, we depend entirely on such secondary sources of water. Water harvesting means to appreciate the value of rain, and to make optimum use of the rainwater at the place where it falls.

The rain water may be stored in school and used to water the plants in the School Nutrition (Kitchen) Gardens. MHRD has issued guidelines for school children on how to save one liter of water per day. Various methods and activities have been suggested to be carried out by school children to use water judiciously.

Importance of Reuse and Recycling of Water:

If school/home water is recycled for use in one area, this means that the school/home does not have to take water from other areas. When the water is recycled, it makes it easy for places like the wetlands to keep their water supplies. Reusing and recycling alternative water supplies is a key part of reducing the pressure on water resources and the environment.

Helping the children to learn about the importance of reusing and recycling water is of utmost importance and it may be one of the activities to be carried out under the Eco-Clubs in schools.

Letting children learn to Reuse and Recycle Water in School and at home: Some of the suggested activities are listed below, which may be carried out in school as well as in homes.

- i. The water that is being used to wash fruits or vegetables is suitable for reuse. This water can be used in School Nutrition (Kitchen) Gardens.
- ii. Water used in boiling vegetables etc. shouldn't be discarded. Instead, once this water has cooled down, it may be used to water the garden or for other purposes at school and home.
- iii. Children should be encouraged that while doing laundry or washing hands, the water that usually goes down the drain should be redirected for other purposes at home and school. For example, water draining from the laundry can be diverted to flush the toilet.
- iv. If a water bottle has been in the fridge for too long or water in kitchen at home is kept for too long, and you do not wish to drink it, then go to the School Nutrition (Kitchen) Garden and feed a thirsty plant with it.



v. Drip Irrigation for School Nutrition (Kitchen) Gardens:

Drip irrigation is a type of micro-irrigation system that has the potential to save water and nutrients by allowing water to drip slowly to the roots of plants, either from above the soil surface or buried below the surface. The goal is to place water directly into the root zone and minimize evaporation. Drip irrigation systems distribute water through a network of valves, pipes, tubing, and emitters.



Water and nutrients are delivered across the garden in pipes called 'dripperlines' featuring smaller units known as 'drippers'. Each dripper emits drops containing water and fertilizers, resulting in the uniform application of water and nutrients direct to each plant's root zone, across an entire field.

Depending on how well designed, installed, maintained, and operated it is, a drip irrigation system can be more efficient than other types of irrigation systems, such as surface irrigation or sprinkler irrigation.

With the technical support from KVKs and the local Horticulture/Agriculture Department a drip irrigation system may be put in place in Schools.



Drip Irrigation is an efficient and simple way to grow plants and the major benefits are as under:

- Higher consistent quality yields
- Huge water savings: no evaporation, no run off, no waste
- 100% land utilization - drip irrigates uniformly in any topography and soil type
- Energy savings: drip irrigation works on low pressure
- Efficient use of fertilizer and crop protection.
- Less dependency on weather, greater stability and lower risks

Involvement of children in drip irrigation

Children should be involved in the drip irrigation process as far as possible.

- Under the activities of Eco-Club children can calculate the water used to irrigate the plants in the School Nutrition (Kitchen) Garden through traditional methods and the amount of water used via drip irrigation.
- This activity will enable the Students to learn the actual requirement of water in cultivating plants, and therefore how to save water.



vi. Using the water from the MDM kitchen in the School Nutrition (Kitchen) Garden:

The water used in the Mid- day Meal kitchen for washing the cereals and pulses may be utilized to water the plants in the School Nutrition (Kitchen) Garden. Students should be encouraged to start this practise in their own homes also.

Methods may also be developed to store the water used in MDM kitchen for future use in the School Nutrition (Kitchen) Garden if required.

vii. Support from Experts of the Krishi Vigyan Kendras

Krishi Vigyan Kendras work under the Indian Council of Agriculture Research. Presently, 706 KVKs are functional under the jurisdiction of 11 Agricultural Technology Application Research Institutes (ATARIs) across the country.

KVKs are an integral part of the National Agricultural Research System (NARS), which aims to identify location specific technology modules in agriculture and allied enterprises, through technology assessment, refinement and demonstrations.

KVKs have been functioning as Knowledge and Resource Centers in agricultural technology supporting initiatives in the public, private and voluntary sectors.

KVKs can play a crucial role in the establishment of School Nutrition (Kitchen) Gardens through provision of technical support, free seeds/seedlings, sapling, organic manure, and training of all the stakeholders at all levels as well as continuous capacity building.

viii. Support from Experts of the Forest Department

The Forest Department in every State/UT is a rich source of expertise and plant saplings. All schools should work actively with the local Dept.

Child safety in the garden

It is essential that the garden is safe for children and to ensure this please do the following:

- Select the correct-sized tool.
- Keep sprays and fertilizers out of reach.
- Do not use chemicals. Garden organically whenever possible.
- Provide safe storage for equipment and tools.
- Secure fences and gates.
- Limit the exposure to high sunlight and warm temperature.
- Make sure that where it's appropriate, children wear suitable clothes.
- Do not leave buckets of water unattended around very young children.



Getting children interested in gardening

Children can be involved and motivated to create a garden by letting them carry out the following activities:

- Simple activities under Eco-Clubs for gardening.
- Give them their own garden space, this does not have to be big and you can start with a large container or a few pots.
- Involve older children in the planning and design of the garden.
- Use lightweight, easy-to-handle, correct-sized tools and garden equipment.
- Encourage children to dig in the soil. (younger children love making mud structures)
- Grow interesting plants such as sunflowers, corn, pumpkins, tomatoes and potatoes
- Plant flowers that attract butterflies, ladybirds and other interesting insects or birds.
- Install a water feature (a birdbath).
- Set up a vermicomposting pit.
- Visit community gardens, children's farms or botanic gardens for ideas



Chapter 3 : Setting up a School Nutrition (Kitchen) Garden in schools which don't have land

i. Benefits:

Today with the rapid rate of urbanization, many Schools do not have free space to grow vegetables etc. For them there is an effective alternative that is simple and practical way i.e. gardening in "Containers". **Such a garden has many benefits for Schools in urban areas as they help to "green" the school and reduce air pollution.** Other major benefits are:

- a. Students learn to grow vegetables and fruits in containers, understanding that a large piece of land is not essentially required for this.
- b. Utilizes and reuses discarded containers
- c. Organic garbage such as kitchen scraps and anything that decays, can be processed into compost in such containers
- d. Through a careful selection of the plants, the temperature of the immediate area of the School can be lowered. This is very useful in the hotter parts of the country.



- e. Students will learn to think creatively and out of the box, understanding that a garden can be effectively created everywhere.
- f. The greenery will definitely beautify the School and make it a visually more appealing place.
- g. It will enable school children to practice "intensive" gardening through maximum utilization of limited space.
- h. It will provide an opportunity to practice "intercropping" (i.e planting a variety of plants in one container) which ensures the health of plants due to diversity.
- i. Such gardens "make use of unused School spaces" (vacant staircases, school entrance sites, etc.)

ii. Selection of Plants

Climber vegetables may be grown because they need less space to grow and almost all the parts of the plant are edible. Climbers can also be moulded into different shapes of arches and railings.

Though most climbers are grown against walls and pulled upto to the next floor, the container should be slightly away from the walls and after the plant is put in it, the roots may be covered with soil and pressed. If the climber has tendrils then some kind of net can be hung from the maximum height of the wall. The tendrils will hook themselves on to the net and keep pulling themselves up. Thin ropes and string can also be used. Tendrils or winding shoots will gradually climb up the wall.

Best climbing vegetables are:

- a. Pumpkin (Kaddu)
- b. Bottle Gourds, (lauki) Ridge Gourds, Bitter Gourds
- c. Cucumbers
- d. Beans
- e. Tomato
- f. Tinda





iii. Containers which can be used to grow plants

- While most containers can be used, it is essential that no container which earlier held any material that could be considered poisonous (e.g kerosene) is used. This kind of garden is an excellent way to reuse discarded items that would otherwise have reached the landfill sites only. Pots and containers viz., cement pots, damaged bowls / water tanks/ buckets, tin boxes, boxes, crates,bags, unused water cans, drums of different sizes, damaged sink / wash basin, etc can be used for growing fruits and vegetables.
- Earthen pots made of burnt porous clay in various sizes can be used to hold enough quantity of soil for cultivation. They have straight sides and are wider at the top than at the bottom to hold the compost and also facilitate easy removal of soil. In India, pots of varying sizes viz., tube pots, ¼ size, ½ size and ¾ size are used commonly.



- Old plastic pots of round and square types can be used for raising plants.



- Old polythene bags with punched holes at the bottom for drainage and filled with a porous rooting medium can be used for propagation. Sometimes, young seedlings which are raised in the nursery are subsequently transplanted in these polythene bags (e.g., papaya, curry leaf etc.). The soil mixture is filled in polythene covers and used for the cultivation of vegetables like tomato, brinjal, chilli, turmeric, coriander, etc.



Chapter 4 : What shall we grow in the School Nutrition (Kitchen) Garden?

A huge range of vegetables and fruits including roots & tubers, pulses & legumes, medicinal plants and herbs can be grown in School Nutrition (Kitchen) Gardens.



- a) Roots and tubers (e.g. sweet potato, potato) are very good sources of carbohydrates, energy and some vitamins, but have less protein than cereals. They can be eaten with many other foods and can be grown in the School Nutrition(Kitchen) Gardens as per the season.
- b) Legumes (e.g. cowpeas, chickpeas, beans, soya beans)are a rich source of protein. Some also have fat, vitamin E, calcium, iron and zinc, which children need to grow for the development of their brains.
- c) Vegetables and Fruits: are rich in many different vitamins and minerals and other substances which protect health, especially dark green leafy vegetables and yellow or orange fruits and vegetables (e.g. pumpkin, yellow/orange sweet potatoes, papaya, mango, carrots). Dark green leafy vegetables release all their nutritional value when combined with other foods. It is essential to select only those vegetables and fruits for the SNG which are local and best suited for the topography and weather conditions. Please consult your local KVK, and also ask experts including farmers for their advice before making the final selection. Some suggested vegetables and fruits which are appropriate for the SNG are:



Vegetables

- Amaranth Leaves (Chaulai)
- Ash Gourd (Petha)
- Brinjal Eggplant (Baigan)
- Beetroot (Chukandar)
- Bitter gourd (Karela)
- White gourd (Lauki /ghia)
- Cabbage (Patta Gobi)
- Carrot (Gajar)
- Capsicum (Shimla mirch)
- Cauliflower (Phoolgobhi)
- Cluster Beans (Guar ki phalli)
- Cucumber (Kheera)
- Fenugreek leaves (Methi)
- Spinach (Palak)
- Mushroom (Khumb)
- Mustard leaves (Sarso ka Sagg)
- Okra, lady finger (Bhindi)
- Pumpkin (Kaddu)
- Potato (Aloo)
- Turnip (Shalgam)
- Tomato (Tamatar)
- Moringa (Drumstick) (Sehjan)
- Jack fruit (Katahal)

Fruits

- Apple (Seb)
- Banana (Kela)
- Black currant (Falsa)
- Black berry (Jamun)
- Custard apple (Sharifa)
- Fig (Anjeer)
- Gooseberry (Amla)
- Grapes (Angur)
- Guava (Amrud)
- Mango (Aam)
- Orange (Santara)
- Papaya (Papita)
- Pear (Nashpati)
- Pineapple (Annanas)
- Pomegranate (Anar)
- Sweetlime (Mausmi)
- Water-melon (Tarabooj)
- Plum (Allobukhara)
- Peach (Aadoo)
- Mulberry (Shahatut)
- Grapes (Angoor)
- Muskmelon (Kharabooja)

d) Suggestive Plants (Medicinal):

Medicinal plants, also called medicinal herbs, are a good option which may also be grown in School Nutrition(Kitchen) Gardens in schools. These plants have been used in traditional medicine practices and many are helpful in the treatment of common diseases.

i. Papaya Leaves:

Papaya leaves have high levels of antioxidants, like saponins, flavonoids, tannins, and alkaloids. These antioxidants, along with vitamins C and A, improve blood circulation count. It is claimed that papaya leaves help the body to heal faster from dengue fever by increasing the platelet count drastically.



ii. Tulsi

For centuries, Tulsi (the queen of herbs), has been known for its remarkable healing properties. Tulsi is taken as a herbal tea and its juice gives relief in cold, fever, bronchitis and cough. It is very effective against indigestion and headaches.

iii. Aloe Vera

Sap from aloe vera is extremely useful to speed up healing and reduce the risk of infections for wounds, cuts, burns and for reducing inflammation. Apart from its external use on the skin, aloe vera is also taken internally in the treatment of digestive problems.

iv. Ginger:

Ginger is one of the most delicious and healthiest spices. It is full of nutrients and bioactive compounds that are beneficial for the brain and the body, helping to alleviate symptoms of motion sickness, chronic indigestion, etc.



v. Garlic:

This has a unique flavor, which makes it an indispensable element in many dishes. It has several health benefits which make it a very desirable part of any SNG.

vi. Curry leaves:

Curry leaves or curry patta is popular because of its aroma. The leaves are rich in Vitamin A,B, C and B2. They are also a good source of iron and calcium.

vii. Moringa:

Fresh Moringa leaves are incredibly nutrient dense and they are rich in Antioxidants.



Chapter 5 : What parts of plants can we eat?

Most plant foods are grouped into two categories i.e. vegetables and fruits. We usually eat the roots, leaves or fruits of the plant. But some parts of some plants, which we may not usually eat and discard, are very nutritious. For example, Beet greens have more than 8 times the nutritional content of beet roots.

Some parts of plants which have high nutritional content other than the Vegetable and fruit are:

i. Pumpkin leaves and flowers

Pumpkins are very versatile in their use for cooking. Most parts of the pumpkin are edible, including the fleshy shell, the seeds, the leaves, and even the flowers.

ii. Potato's skin

The skin of the potato is rich in fiber and many recipes can be prepared with this.

iii. Carrots tops

Carrot tops are rich in vitamin A and minerals that can be added to vegetable curries.

iv. Cauliflower Leaves

Often cut off at source, these leaves are just like cabbage and can be used in preparing a meal as they are a good source of iron.

v. Pea-shoots

The young leaves and tendrils of pea plants taste like peas. These can be lightly cooked or eaten raw and are rich in proteins

vi. Beet root leaves

Beetroot leaves can be used as spinach, in salads or can be added to pulses also.

vii. Sweet potato leaves

They have edible leaves and tendrils which make a nice spinach substitute and the greens are easier to grow than the tubers.



viii. Banana stem and flower:

Banana stem and flower are good sources of Iron and minerals which can be used in the preparation of vegetables.

ix. Citrus peel:

Peels of citrus fruits (such as lemons) can be used as flavouring agents in vegetables and pulses. They are rich in vitamin C.

It is recommended that these parts of such vegetables should be used in the Mid Day Meal prepared in the School. Competitions can be organized and the cooks who prepare the best meals may be appreciated.



Newspaper Clippings

Times of India, Newspaper, Lucknow, 19th August, 2019

Govt school kids to raise own kitchen garden

NehaShukla@timesgroup.com

Lucknow: Students of government-run schools will now raise their own kitchen garden and eat fruits and vegetables they choose to grow.

Ministry of human resource development (MHRD) has issued instructions to all government schools up to Class 8 to include the produce from the kitchen garden in mid-day meal.

"When children will work hard to grow vegetables and are asked to eat it, the vegetable will taste different to them for the simple reason that they would already have had developed a connect," said sources in the

state government, adding that the idea was to boost the nutritive value of mid-day meal.

MHRD will allocate Rs 5,000 per year per school for the purpose and each school will have to work out its own plan considering what variety of vegetables or fruits can be grown in the locality.

Mid-day meal has already been a turnaround story for primary school education in the country and adding a vegetable to the mid-day meal will further boost the scheme.

The schools that do not have land available can raise a terrace garden and use



Over 2,500 schools in the state already have their kitchen garden

pots, containers or bags. The gardens will have to be managed by children mainly with the help of staff and teachers. In UP, it will be done with the help of the Central Institute of Subtropical

Horticulture (CISH). "We are seeking expert advice to make proper use of fund so that money is not wasted due to lack of planning," an official said.

About 2,500 schools in the state already have their kitchen garden raised by teachers and students much before these instructions came.

Such schools can play a major role in helping others on deciding things like who would take care of the garden when the school is closed.

The state government will organise a workshop at Central Institute for Subtropical Horticulture (CISH) in

the first week of August wherein teachers, staff and students of some of the schools will be called and their doubts, if any, cleared. They will also be taught gardening.

Director, CISH, Shalendra Rajan, said: "The workshop will also guide participants on collective growing of vegetables and fruits on the land available to them."

Besides improving the nutritive value of mid-day meal, it will also make children aware of seasonal vegetables. The activity may also bring a change in the food habits of the families of these children," Rajan said.

Dainik Jagran, Newspaper, Delhi, 05th October, 2018

मिड-डे मील के लिए बच्चों ने उगाई ऑर्गेनिक सब्जियां

तुलना ठाकुर • वडोदा

चंडीगढ़ के सेक्टर 47 मिडल गवर्नमेंट स्कूल सीनियर सेकेंडरी स्कूल के बच्चों ने बेहतर फल की है। स्कूल में परोसे जाने वाले मिड-

डे मील के लिए वे खुद ही ऑर्गेनिक सब्जियां उगा रहे हैं। जो खाने, पार खाने पहले शुरू हुईं सब्जियों की पैदावार आज किचनगार्ड में पहुंच गई है।

बच्चों द्वारा उगाई जा रही सब्जियों उनके लिए स्कूल में बन्दे काले मिड-डे मील में तो इन्हें फल तो ही खी है साथ ही आसपास के अन्य स्कूलों में भी पहुंचाई जा रही है। ऑर्गेनिक सब्जियों को उगाने की पहल करने वाला यह स्कूल (जीएमएसएसएस-47) देश का पहला स्कूल बन गया है, जहाँ पर मिड-डे मील की पौष्टिकता खुद बच्चे

बाल किसान

- चंडीगढ़ के गवर्नमेंट स्कूल सीनियर सेकेंडरी स्कूल में पैदा हो रही 20 किंटल सब्जी
- जार खाने पहले बच्चों ने स्कूल गार्डन में ही शुरू की थी ऑर्गेनिक खेती

सरकारी स्कूल में ऑर्गेनिक खेती उगाने की पहल को अलग रिसोर्स मिल रहा है। दूसरे स्कूल भी इसे फॉलो कर रहे हैं। दूसरे शहरों के स्कूल भी यहां से जानकारी ले रहे हैं। यह प्रयत्न सफल है।

बसो रतन शर्मा, शिक्षा सचिव, चंडीगढ़

तब करते हैं। स्कूल में ऑर्गेनिक खेती की शुरुआत प्लाज से की गई थी। जो कि बाद में आलू, कद्दू, धनिया, बैंगन, गाजर, मूली, फलक जैसी सब्जियों के रूप में आगे बढ़ती चली गई। इस साल सर्दियों में स्कूल ने दो किचनगार्ड प्लाज पैड किया। प्लाज के अलावा अन्य सब्जियों



चंडीगढ़ - गवर्नमेंट स्कूल सीनियर सेकेंडरी स्कूल सेक्टर-47 में ऑर्गेनिक गार्डन में उगाए गए आलू और प्याज दिखाते छात्र • जलकला

की आठ किचनगार्ड पैदावार हुई। उसके बाद बरसात के सीजन में वह पैदावार दस किचनगार्ड तक पहुंची। जिसमें धिंधी से लेकर, तोरी और चीन्हा भी शामिल थे। इस समय सर्दियों के सीजन की सब्जियों को खेती जा चुका है जो कि नवंबर से मिड-डे मील के लिए तैयार होना शुरू हो जाएगी।

यहाँ मिड-डे मील में स्टूडेंट्स को खाने के साथ भरपूर सलाद भी परोसा जाता है। मूली, खीरा और प्याज के अलावा सलाद में अन्य सब्जियों का चयन स्टूडेंट्स ही करते हैं। पहली से अठारवीं कक्षा के डेढ़ हजार स्टूडेंट्स को यहाँ पर मिड-डे मील रोजन्ड परोसा जाता है। इसमें मेन्स के

बच्चे करते हैं मेहनत, सीखते हैं ऑर्गेनिक खेती

इस गार्डन को पलाने का कार्य बच्चों खुद करते हैं। स्कूल के दैनिक कार्यक्रम में से कुछ समय किचनगार्ड में वैजिक खेती में निरुत्था हासिल करते हैं। स्कूल के अनेक बच्चे यहाँ में भी इस पद्धति से खेतीया उगा रहे हैं। इस स्कूल के बच्चों की पहल को सरकार की तरफ से भी सम्मान मिल चुका है। इस तरह का प्रयोग देशभर के अन्य स्कूलों में भी शुरू किया जाने की बात कही गई है।

मुताबिक ज्वननों के साथ-साथ एक हरी सब्जी अवश्य परोसी जाती है। जीएमएसएसएस-47 में सब्जियों की पैदावार बढ़ाने के बाद वह सब्जी खाने के आसपास के स्कूलों में भी मिड-डे मील के लिए सप्लाई होने लगी है। शहर के सार स्कूलों में मिड-डे मील की खेती है।

special **మన కూరగాయల** 5

కిచెన్ గార్డెన్.. భజా

- వల్లభాపూర్ పాఠశాలలో కూరగాయల సాగు
- నాలుగేళ్లుగా పాఠశాలలో సాగుచేస్తున్న చైతన్యం
- పాఠశాల కూరగాయలతోనే మధ్యాహ్నం వంటల తయారీ



వల్లభాపూర్ ప్రాథమిక పాఠశాల

చేంబల(కులూచ): కొండల పేరట్లోలో కూరగాయల సాగుచేస్తూ ప్రత్యేకతను తెలుపుతుంటారు. మరికొందరు సాగుచేయడం వల్ల కూరగాయల సాగు చేస్తుంటారు. ఇంకొందరు ఇంటి వంటల కోసం వాటిని తయారు చేసుకుంటారు. అయితే వల్లభాపూర్ ప్రాథమిక పాఠశాలలో ఏకంగా కూరగాయల సాగుతో తయారు చేసే ప్రత్యేకతను తెలుపుతుంటారు. ఉపాధ్యక్షులు విద్యార్థులు, అంతేకాదు పాఠశాలలో ఉన్న స్టాఫ్ లో కూరగాయలను పెంచేందుకు వాటిని మధ్యాహ్నం భజానీ ఉపయోగిస్తుంటారు. మండలంలోని వల్లభాపూర్ ప్రాథమిక



వల్లభాపూర్ ప్రాథమిక పాఠశాల అవరణలో పెంచుతున్న పాలకూర

పాఠశాలలో కూరగాయలను సాగుచేయడం ద్వారా అనేక ప్రయోజనాలు ఉన్నాయి. అందులో కొంత ప్రకారం పాఠశాలలో వేయిగా మారు రోజులకోసారి మధ్యాహ్నం భజానం వంటలో వినియోగించారు. ఏడాది వరకు ఉపయోగపడింది. అప్పుడే నుంచి వల్లభాపూర్ ప్రాథమిక పాఠశాలలో విద్యార్థులు, అందరినీ కూరగాయల మొక్కలతో పాటు పాలకూర, గోంగూర వంటి అనుభవజన్య పాఠశాల అవరణలో పెంచడం ప్రారంభించారు. పాఠశాలలో విద్యార్థులు అప్పుడప్పుడు కూరగాయల మొక్కలను నీటిని అందరినీ మొక్కలకు నీటి సౌకర్యం కల్పిస్తుండగా మధ్యాహ్నం భజానం నిర్వహించడం కూరగాయల మొక్కలను కాపాడుతున్నారు. పాఠశాలలో పెంచిన కూరగాయలతో తయారీ ఉపయోగం ఉన్నందున మధ్యాహ్నం భజానం నిర్వహించడం

విద్యార్థులు, ఉపాధ్యక్షులు అనేక ప్రయోజనాలతో పాటు అవరణలో పాటు గ్రామంలో ప్రకారం మొక్కలను వాటి వాటిని కాపాడాలని గ్రామస్థులను కోరుతున్నారు. మొక్కలను పెంచుకోవడం విద్యార్థులు ఓపికగా మార్చుకునేందుకు పాఠశాలలో ఏర్పాటు చేసినట్లు పేరట్లోని ఏకంగానే ఉపయోగపడుతుందని నిజమైపోయింది. ప్రధానోపాధ్యక్షులు మరమ్మత్తులకు కృషి చేస్తుంటారు.



కాశీపూర్ పాఠశాల



కూరగాయల మొక్కలతో పాఠశాల అవరణ

ఇటీవల స్కూలులో ఉన్న విద్యార్థుల చేతుల్లో ఉత్తమ ఉపాధ్యక్షుడిగా తిరుగు పేరుగా అందరినీ అందుకున్నారు.

నాలుగేళ్లుగా కూరగాయల తోట



పాఠశాలలో నాలుగు సంవత్సరాల క్రితమే కూరగాయల సాగును ప్రారంభించారు. ఈ కూరగాయలను మధ్యాహ్నం భజానంలో ఉపయోగించుకోవడానికి వీలు జరిగింది. తయారీలో ప్రభుత్వం అన్ని ప్రభుత్వ పాఠశాలలో కిచెన్ గార్డెన్ ఏర్పాటుకు ప్రోత్సాహం చూపించాలని అధికారులు కోరారు. అందు ప్రకారం కూరగాయల సాగును విజయవంతంగా నిర్వహించడంలో

Dinakaran Newspaper, Tamil Nadu, October 2018

పள்ளి సారణర్ పడై శార్పిల్

తెన్నె మరక్కళ్ళు వుంకల్

తిరుత్తురైప్పూణ్డి, అక్.4: తిరుత్తురైప్పూణ్డి అరక ఆణ్ణకన్ మేల్తిలైలప్పన్లీయిల్ నాడ్డు నలప్పణి తిడ్డమ్ మరియు కాన్తిణ్ణి సారణర్ పడై శార్పిల్ 150 తెన్నె మరక్కళ్ళు వుంకల్ మరియు తిక్కుళ్ళి నడై పెర్ణు. తలైమెయిరియర్ తిరుమాణ్ తలైమె వకిత్తార్.



ఉతవి తలైమెయిరియర్ కప్పిరమణియన్, తిరుత్తురైప్పూణ్డి డవున్లయన్ల కిణప్ప తలైవర్ ముత్తుక్కుమరన్, శెయలార్ కరైణ్ణ్ ఆకియోర మున్ణిలై వకిత్తనర్. తమిళియర్ బాల్కరన్ వరవేర్ణార్. పన్ణి మాణ

తిరుత్తురైప్పూణ్డి అరక ఆణ్ణకన్ మేల్తిలైలప్పన్లీ నాడ్డు నలప్పణి తిడ్డమ్ మరియు కాన్తిణ్ణి సారణర్ పడై శార్పిల్ ఆశిరియర్లన్, మాణవర్కకు తెన్నె మరక్కళ్ళు వుంకల్.

వర్కన్ మరియు మరియు ఆశిరియర్లన్ 150 పెర్కుక్కు తెన్నె మరక్కళ్ళు తలైమెయిరియర్ వుంకల్

కిణార్. ఇతిల్ ఉడర్ కల్ వి యక్కునర్ బాలముక్కున్, ఆశిరియర్లన్ ముక్కురైక్,

బాలకప్పిరమణియన్, అక్బర్ అలి, కన్తర్ ఉన్లీడ్డోర్ కలన్తు కొన్డనర్. శక్ కరబాణి నన్త్రి కుత్తిణార్.

Schools turn nutrition gardens in Mizoram district

Self-sufficiency in fruits, vegetables helps them nourish children when the villages remain cut off in monsoon

RAHUL KARMAKAR
GUWAHATI

It takes a powerful SUV almost nine hours on non-rainy days to cover 296 km from Mizoram capital Aizawl southward to Lawngtlai, headquarters of the State's remotest district Lawngtlai bordering Bangladesh and Myanmar. Loaded commercial vehicles take much longer, and those carrying perishables mainly from Assam's Sillchar, 180 km north of Aizawl, take ages. By the time the pick-up or mini-trucks reach Lawngtlai, the fruits and

vegetables are usually not fit to be consumed and the best of the lot are too expensive for many to buy. This was what Shashanka Ala noted when she was posted as the Deputy Commissioner of Lawngtlai, Mizoram's most backward and disaster-prone district where a fourth of some 170 villages remain cut off during the monsoon. It didn't take her long to relate the shortage of quality fruits and vegetables with the deficiencies in the district's children belonging mostly to the Chakma and Lai ethnic minorities.



New idea: The first phase of the programme to create edible gardens has been launched in 213 schools and anganwadis.

Lawngtlai has 35.3% stunted, 21.3% underweight and 5.9% severely wasted (low weight-for-height)

children under 5 – highest on all counts in Mizoram. Ms. Ala and her team designed a remedy: Kan

Sikal, Kan Huan. In the Mizo language, it means 'My School, My Farm'. "Vegetables and fruits available in Lawngtlai town are costly. But the townspeople at least get them unlike the villages where transporting perishables is unthinkable. So we thought of involving school children, their parents and teachers to create a nutrition garden in each school," Ms. Ala told *The Hindu*. The first phase of the programme covering 213 schools, Anganwadi centres and childcare institutes was

launched a few days ago. Another 188 would be added in the second phase while the third phase focussing on livestock and poultry farming would cover all 776 schools and centres to benefit 15,042 children. "The aim is to make every school, Anganwadi, child care institution and hostel in Lawngtlai self-sufficient in the local variety of fruits and vegetables by March 2020. This is to reduce malnutrition stuntedness among children," Ms.



Nai Dunia Newspaper, Chhattisgarh, 8th August, 2019

पेंड़ा ब्लॉक के मुरमुर में पढ़ने वाले आदिवासी बच्चों का प्रधान पाठक मरावी रख रहे खास ख्याल नर्सरी की सब्जियां व फल खाते हैं आदिवासी बच्चे

साथकिशन ग्रामा
बिलासपुर। नईदुनिया

वन क्षेत्र पेंड़ा ब्लॉक के ग्राम मुरमुर के प्राथमिकी स्कूल के प्रधान पाठक टिकाराम मरावी आदिवासी बच्चों का भविष्य संवार रहे हैं। आदिवासी बहल गांव के सरकारी स्कूल में पढ़ने वाले बच्चों के स्वास्थ्य का भी बराबर ख्याल रखा जा रहा है। स्कूल परिसर में किचन गार्डन के बजाय प्रधान पाठक व शिक्षकों ने मिलकर नर्सरी विकसित कर दिया है। मर्यादा भोजन के दौरान बच्चे नर्सरी की हरी सब्जियां खाते हैं। भोजन के बाद इनको मौसमी फल भी दिया जाता है ताकि बच्चों का स्वास्थ्य अच्छा रहे और सुपोषित रहकर पढ़ाई के प्रति अपना ध्यान लगा सकें। खास बात ये कि इसके लिए हेड मास्टर मरावी को किसी तरह की सरकारी मदद नहीं मिलती। वे अपने वेतन के पैसे से स्कूल का कक्षाकक्ष तो किया ही साथ ही नर्सरी में हरी सब्जियों के अलावा फलदार पौधे भी लगाया है।

वनाग्राम मुरमुर के स्कूल भवन और यहां की नर्सरी में रंग बिरंगे फूलों के अलावा फलदार पौधे और हरी सब्जियों की खेती को लेकर ऐसा नहीं लगता कि यह सरकारी स्कूल है। निजी स्कूलों में इतनी व्यवस्थित नर्सरी देखने को नहीं मिलती। यह कमाल यहां पश्य



बिलासपुर। स्कूल की नर्सरी में लगाए गए कैले व पपीते के पौधे के साथ हरी सब्जियां।



बच्चों में शिक्षा के प्रति अपर्याप्त पैदा करने के लिए कुछ नया करने के लिए हमें ऐसा किया जा रहा है। वनवासी बलिफार पढ़ लिखकर आगे बढ़े इस उद्देश्य को लेकर कार्य किया जा रहा है। आदिवासी बच्चों के स्वास्थ्य का भी ध्यान-ध्यान रखा जा रहा है। नर्सरी की हरी सब्जियां बच्चे मर्यादा भोजन में खाते हैं। भोजन के बाद फल भी दिया जाता है।

-टिकाराम मरावी

प्रधान पाठक, प्राथमिकी शाला मुरमुर

इंतजाम भी कर रहे हैं। स्कूल भवन को देखकर यह नहीं लगता कि दूरस्थ वर्मांचल में किसी सरकारी स्कूल की तस्वीर कुछ इस तरह हो सकती है। स्कूल की दीवारों पर भरपूर शिक्षण सामग्री के अलावा परिसर की सफा-सफाई देखकर ऐसा लगता है कि प्रधानमंत्री नरेंद्र मोदी की स्वच्छता अभियान की अमरती तस्वीर मुरमुर स्कूल परिसर में ही दिखाई देती है। स्कूल परिसर में फूलों के इतने पौधे किसी प्राइवेट नर्सरी में भी देखने को नहीं मिलते। विज्ञान के उपकरणों को कुछ इस अंदाज में रखा गया है। शिक्षा के प्रति बच्चों में उत्सुकता जगाने विज्ञान के उपकरणों को कुछ खास अंदाज में सजा कर रखा गया है। इसमें पीछे कम से कम संसाधनों में बच्चों को अधिक आउटपुट देना माना जा रहा है।

हरी सब्जियों की भरपूर खेती

स्कूल के नर्सरी में गोभी के सैकड़ों पौधों के अलावा मेथी, लाल भजी, लहसुन, अदरक, मिर्च, आलु, सेमी, बरबड़ी, भिंडी, टमाटर सहित अन्य सब्जियां लगी हुई हैं। खास बात ये कि मर्यादा भोजन में किचन गार्डन की हरी सब्जियां बचियां कर ही रहे हैं। साथ ही फलकों व ग्रामीणों को भी शिक्षा और स्वास्थ्य का महत्व भी समझा रहे हैं। आदिवासी ग्रामीण जिनका

खाती है। हरी सब्जियों को भरपूर मात्रा में बलिफार पौधों को खिलाया जाता है। भोजन के जर्जरिषक व पूरा स्टॉक मौजूद रहते हैं। सब्जियों के अलावा नर्सरी में पपीता, कैला, आम, मुन्गा, अमरुद, जलमून सहित अन्य फलदार पौधे भी लगे हुए हैं। पढ़ाई और अक्षर ज्ञान से कोई वास्ता नहीं है वे अपने बच्चों को अपना पेट काटकर स्कूल भेज रहे हैं और उनकी पढ़ाई का

மகத்துவம் வாய்ந்த திட்டம்!

● சென்னையில் பசுமை தவறும் அரசு பள்ளி ● காய்கறி தோட்டத்தில் மாணவர்கள் அசத்தல்



■ தோட்டத்தில் செவ்வக வரிசை - நறு திருப்பர் - 'வந்த' புழுக்கு மேல், பசுவையை இறந்து தவிக்கும் சென்னையில், அமைப்புக்கும் முயற்சியை எடுக்க, ஒரு கிரவுண்ட் நிவர்திம், பசுவை போன்றவை உருவாகி, செவ்வக அமைப்பில் உயர் அளவு பயிர் செய்வதில், சிறப்பை படைத்துள்ளனர்.



■ காய்கறி தோட்டத்தில் பசுவை உயர் - காய்கறி தோட்டத்தில் பயிர் செய்து வெண்கல அமைப்பு குறித்து காண்பிக்கும் மாணவர்.

கடந்த சில வருடங்களில், 'வந்த' பசுவை, சென்னையில் மட்டுமே, பசுவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர்.

மாணவர் குழுவை கொண்டு, பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர்.



■ காய்கறி தோட்டத்தில் பயிர் செய்த வெண்கல அமைப்பு குறித்து காண்பிக்கும் மாணவர்.

கடந்த சில வருடங்களில், 'வந்த' பசுவை, சென்னையில் மட்டுமே, பசுவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர்.



■ தோட்ட பசுவை உயர், மாணவர் குழுமம், தாமரை ஆசிரியர் - நடுவில் திருப்பர்.

மாணவர் குழுவை கொண்டு, பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர். இதுமட்டுமல்லாமல், பசுவை போன்றவை தோட்டத்தில் கொண்டு வந்தனர்.

MAGNIFICENT BLOCK IN RAISING KITCHEN GARDEN

Vardah major cyclonic storm brought Chennai to a standstill and made landfill and uprooted as many as one lakh and above trees in Chennai alone. The Head Master along with the National Green Corps student's teams planned and have made a giant leap in creating a green revolution in their higher secondary school located in MMDA colony MGR Street, Arumbakkam Chennai. This team along with the school watchman, who is basically a farmer executed this plan, planted paddy and various other vegetable producing plants and have successfully, produced different kind of vegetables. These are being utilized in the MDM and also gifted to the students. The Head Masters from other schools in Chennai have been insisted to visit this school by the Chief Educational Officer.

"GARDENERS DREAM BIGGER THAN EMPERORS"



■ GUMMILARU GUM



■ UMARU GUM

योजना : छात्रों को पौष्टिक भोजन देने का उद्देश्य

कोटीगांव संकुल में मिनी किचन गार्डन किया जा रहा विकसित

हरिभूमि न्यूज १५५ हरिखबर

छूटा ब्लॉक के सबसे सुदूर अंचल के जंगल व पहाड़ी के बीच कोटीगांव संकुल केंद्र में शासन के योजना अनुसार स्कूलों में मिनी किचन गार्डन का निर्माण किया गया है। लोक शिक्षा संचालक इतीसगढ़ रायपुर ने 24 जुलाई को जारी आदेश में कहा गया कि राज्य सरकार की महती योजना "नरवा, गरुवा, धुरुवा अउ बारी" योजना के अंतर्गत शाखाओं में भी पौष्टिक आहार मिलने इस उद्देश्य को लेकर किचन गार्डन बनाने का आदेश जारी किया गया। इससे शिक्षकों एवम छात्र-छात्राओं में खुशी की लहर है। इस योजना के बेहतर से बेहतर बनाने में छूटा ब्लॉक के कोटीगांव संकुल के समन्वयक विनोद सिन्हा एवम शिक्षक गण लगे हुए हैं। कोटीगांव संकुल समन्वयक विनोद सिन्हा



ने बताया कि राज्य सरकार को इस महती योजना का क्रियान्वयन कोटीगांव संकुल में करने का प्रयास किया जा रहा है। इससे यहाँ

पढ़ने वाले छात्र- छात्राओं को पौष्टिक भोजन के साथ साथ ताजी और हरी सब्जियाँ मिल सकें।

इन स्कूलों में की लगाई गई है किचन गार्डन

कोटीगांव संकुल के अंतर्गत प्राथमिक तथा पाठ्यशास्त्राध्यक्ष संवित बटुवा कलेज स्कूलों में किचन गार्डन को विकसित करने में यहाँ के शिक्षक एवम छात्राण लगे हुए हैं। इन किचन गार्डन में विभिन्न प्रकार के सब्जी फल उगाए जा रहे हैं।

बोई गई हैं कई सब्जियाँ

कुम्हारान ताजी लैबरी जरी सिद्धी प्रभोत प्रकाश ताजी कलेज संवित बटुवा प्रकाश के स्कूलों का उपचारण करने में लगे हुए हैं। ताजी बच्चों को पौष्टिक सब्जी मिल सकें। अंतरकर के इन उद्योगधंधारी योजना से बच्चे काशी प्रसन्न हो रहे हैं। इन योजना के फायदे छात्रों को अलग अलग तरह के सब्जी विविधता के बिना विदेश पर हो रहा है।

Nav Bharat, Newspaper, Delhi, 5th November, 2018

किचन गार्डन में उगाई गडेरी

संवाद सूत्र, गरुड़ : शिक्षा विभाग द्वारा स्कूलों में किचन गार्डन को बढ़ावा देने के प्रयास रंग लाने लगे हैं। विभिन्न स्कूलों में किचन गार्डन में उगाई गई ताजी सब्जियों का मध्याह्न भोजन के साथ उपयोग होने लगा है। ऐसा ही एक सुन्दर प्रयास किया है गरुड़ विकासखंड के सुदूरवर्ती स्कूल राजकीय जूनियर हाईस्कूल रौल्याणा के शिक्षकों और बच्चों ने।

इस विद्यालय में उन सब्जियों को उगाया जा रहा है जिन्हें बंदर नुकसान नहीं पहुंचाते। इस विद्यालय के प्रधानाध्यापक नीरज पंत बताते हैं कि स्कूल के सेवित क्षेत्र में बंदरों का बड़ा आतंक है। लीफनी, कद्दू और खीरे को बंदर नुकसान पहुंचाते हैं। इस नुकसान से बचने के लिए शिक्षकों और बच्चों ने गडेरी, पिन्गलु, अदरख, मेथी और हरी सब्जियाँ किचन गार्डन में उगानी शुरू की। बन्दर इन सब्जियों को नुकसान नहीं पहुंचाते और एमडीएम में भी ताजी सब्जियों का उपयोग होने लगा है। बच्चों को शिक्षकों की मेहनत ने रंग लाई और इस समय बड़ी मात्रा में गडेरी का उत्पादन हुआ है। बच्चे और शिक्षक गडेरी का उत्पादन देख कर खुशी से झूम उठे। उन्होंने कहा कि बच्चों को इससे ताजी और हरी सब्जियाँ खाने को मिल रही है।



गरुड़ के राजुहा रौल्याणा में किचन गार्डन की गडेरी के साथ बच्चे © जागहण

बच्चों में स्वावलम्बन का भाव भी ऐसे क्रियाकलापों से जागता है। शनिवार को बाल सभा में किचन गार्डन

की गतिविधियाँ शिक्षक दीपक पाण्डे, भाष्कर पंत और सोनू गोस्वामी के निर्देशन में संपन्न की जाती हैं।



सत्यमेव जयते

Government of India

Ministry of Human Resource Development

Department of School Education & Literacy