Introduction

Education has been the core activity of Sanskriti Samvardhan Mandal (SSM) since its inception in 1959. Through formal and non-formal education we have made a sustainable difference to the lives of thousands who were completely unaware of what they truly deserve. SSM operates preschool to pre university level formal institutions providing education to 4000 children at a place.

Considering remarkable contribution in agriculture development in the area, Indian Council of Agriculture Research (ICAR), New Delhi awarded the Krishi Vigyan Kendra (KVK) to SSM. Actual working of the KVK started in June 2012, serving the farming community in Biloli, Naigaon, Degloor, Mukhed, Kandhar, Loha, Dharmabad and Umari blocks of Nanded District in Maharashtra.

To study socio-economic conditions, farming situations, availability of local resources, agriculture scenario and felt need of the community, conducted Participatory Rural Appraisal (PRA) and approached the Govt. line departments and various organisations for secondary information of the area. Based on this base line survey report, we prepared activity chart and prepared technology inteventory and prepared action plan accordingly.

Mandates of KVK

1. Conducting "On Farm Testing" for identifying technologies in terms of location specific sustainable land use systems.
2. Organize front-line demonstrations in adopted villages on various crops and techniques to generate production data and feedback information
3. Organize short and long-term vocational training courses for the farmers, farm-women and rural youths on various topics of different disciplines to provide them theoretical and practical knowledge of improved and latest agriculture technologies.
4. In-service trainings for extension functionaries.
Activities of KVK:

I) **On Farm Testing:** On farm testing is the first and foremost activity to assess and test the location specificity of technology.

a. **New variety of safflower** i.e. PBNS-40 (High yielding, non-spiny, resistant to aphids, leaf spot, wilt) variety introduced for easiness in harvesting. Most of the farmers using their own seed for sowing which don’t have purity, low yielding, susceptible to aphids, leaf spot, spiny in nature so most of the time labours deny harvesting. So, farmers getting more cost to harvest crop. Farmers are happy with the PBNS-40 variety.

b. **Increase fruit setting of the mango,** as per recommendation by the MKV, Parbhani, the nutritional management and use of the growth regulator was tested on the farmer’s field given optimistic results.

c. **Varietal Assessment in high yielding variety of chilli** i.e. Pusa Jwala was introduced to replace Local Chilli i.e. Shevala Mirchi, farmers are happy with this variety under irrigation farming system.

d. **Shoot and fruit borer in brinjal:** Shoot and fruit borer is most important pest of the brinjal decreased the yield and quality of fruit. Injudicious use of chemical insecticides spray can damage the parasitoids, predator and human health. Application of azadirachtin 1500 ppm @ 1500ml/ha and installation of 5 traps/1000 sq. M. since flower initiation (45 days crop) for mass trapping of shoot and fruit borer moths. Farmers are convinced about the effect of this non-chemical method of pest control and getting more rate and yield as compared to their local method of pest control by reducing the cost of cultivation.
e. **Anoestrous in cattle:** Anoestrous is most important prerequisite for pregnancy establishment. It has been neglected by the farmers. Use of hormonal preparations, GNRH/PGF 2 alpha to induce heat to regulate oestrus in cattle. Animals have come in intense heat with increased conception rate. 18 animals showed in heat out of 25 animals and 12 animals’ conceived out of 18 animals.

f. **Dermatophytosis disease in cattle:** Dermatophytosis is an unusual skin disease with symptoms like Dermatitis, Alopecia, Ugly look and Chronicity of disease of cattle and very commonly found in and around Sagroli. Local application of Bordeaux mixture is proved to be the best and cheaper medicine to cure the dermatophytosis. 100 per cent animals showed recovery out of 20 animals. Other animal owners also purchased the Bordeaux mixture to cure their affected animals. Farmers are happy to get such a cheap and easy way to get rid of such a chronic disease.

g. **Milking stool and stand:** While milking the animals, women has to face problems like Uncomfortable body posture, health problems like joint pain, many times loss of milk due to kicking of animals, contamination of milk due to unhygienic conditions also it is time consuming job. Revolving milking stool and stand was given to increased work efficiency of women at the time of milking the animals. Result showed that it saved 20% time as compare to traditional method of milking. Reduced 90% joints pain by using milking stool and stand. Received optimum milk yield that too requisite time.
h. **Anaemia in school girls:** Anaemia is most prevalent in adolescent girls. To control this problem iron rich soya-poha-laddu (100 gm) /day/girl was given to 20 anaemic girls for 3 months to test the effect. For this test, Hb estimation, weight and height of these adolescent girls were tested by medical officer before and after feeding the laddu. Result shown marked increase in Hb, Weight and Height of the girls. Hence, all girls became healthy and started consuming these laddu regularly of their own. Also many of women demands to show demonstration of soya poha laddu.

II) **Front Line Demonstration:** Front line demonstrations were conducted to assess the potential of technology in the local micro level farming situation.

a. **Annegiri variety in Bengal gram:** Local, low yielding and seed used year after year of Annegiri variety of Bengal gram is being grown in the area. Digvijay variety of Bengal gram is better than Annegiri as it has having more number of pods /plant, and high grain yield 23.14 per cent higher than Annegiri. It is less susceptible to wilt. This variety is suitable for both rain fed as well as irrigated condition. So, recommendation is to cultivate Digvijay instead of Annegiri on medium to black soil in Nanded district.

b. **Use of weedicide in wheat:** Post emergence application of metasulfuron methyl (Algrip) @ 20 gm/ha at 2-3 leaf stage growth in wheat crop able to control broad leaved weeds effectively. (58 % WCE). Mostly weed management through post emergence herbicide reduced the cost of weed management (Rs 1725/ha).

c. **New planting method in chilli** i.e. paired row method found very effective in maximising number of plants per unit area as well as suitable for intercultural operations.
d. **Integrated Pest management in bengalgram** was demonstrated. Pheromone traps monitoring of gram pod borer and need based application of neem oil 1500 ppm and HaNPV-250 LE increases the 10.07 % yield over local check.

e. **Green Fodder production**: To get better forage yield, Napier grass was demonstrated. Green fodder getting round the year from single field with minimum management Fodder production received 7 to 8 cuttings of green fodder round the year and increased milk production by 20%. Jaywant fodder grass should be cultivated and fed to milking animals to receive maximum milk production and fodder yield.

f. **Use of mineral mixture to increase milk yield and improve health status** was demonstrated. Draft and milking animal health found better than early local management of feeding found improvement in health status and working efficiency of draft animal and yield of milking animal (by 15%) of animal.

g. **Household food security by kitchen gardening and nutrition gardening** was demonstrated to 20 families. This includes plantation of Spinach, Fenugreek, Coriander, Beet root, Carrots, Bottle guard, Gawar, Ladies finger, Awara, tomato, brinjal etc. Family got healthy and fresh vegetables and saved money up to 400/- per month.

h. **Smokeless Chula**: Traditional Chula creates lot of smoke while cooking. This smoke causes the eye burning, different health problems and required more time for cooking. Hence, smoke less Chula (ARTI, Pune) was demonstrated to 10 families in three villages. It results, 100% smoke free houses and also time
required for cooking reduced by 1 hr. so women were satisfied. By observing these demonstrations, many of women demand the same.

III) **Training Programmes**: Short and long-term 31 training courses for the farmers, farm-women and 4 courses for rural youths on various topics of different disciplines to provide them theoretical and practical knowledge of improved and latest agriculture technologies and agro based enterprises. Similarly, to update knowledge, 6 refresh courses were also organised to extension functionaries by the KVK.

IV) **Extension activities**: To disseminate technology to doorstep of the farming community, different activities are being conducted at campus, village, field and mass media.

**a. Field day**: 7 field days were conducted to the demonstrations organised on the farmer’s field on safflower, Bengal gram, rabi sorghum, fodder crop and drudgery reduction through implements as smokeless Chula and milking stool and stand. 175 farmers participated in the field day to acquaint with the technology demonstrated.
b. Kisan Mela: One Kisan mela was organised at headquarter as pre-rabi Kisan mela. The scientists from Agriculture University, Dr. Ashok Dhawan, Director of Extension Education and Dr. Vijaya Nalawade, HOD, Dept. of food and Nutrition, College of Home science, Parbhani, also from Cotton Research Institute, Nanded and participated to guide. Exhibition was also organised at KVK in the Kisan mela.

c. Mahila Mela: A mahila mela was organised with theme of drudgery reduction and women health with the participation of Dr. Vishala Patanam, ADP, Home science college, Parbhani on the occasion of maker sankranti which was attended by more than 400 women. Other mela was organised on the occasion of International Women’s Day. The theme of the programme was empowerment of the women by entrepreneurship through SHGs. It was guided by successful business women Miss. Swati Dixit, Saptarang Pratishthan, Degloor.

d. Kisan goshties: To have an informal discussion on the current issues, Kisan goshties were organised. Total 152 farmers participated in 14 goshties to discuss topics as cultivation of crops, vegetable, fruit and social forestry. The formation of the farmers club, self help groups, farmers interest groups, health issues and drudgery reduction are the issues discussed during the goshties.

e. Film/Video shows: The success stories and videos prepared by research institutes are shown to the farmers at village itself at leisure time at night. This implies to motivate farmers to adopt the technology. Total five programmes in different villages were conducted with 156 beneficiaries including farm women.
f. **Diagnostic visits:** Total 96 visits on 290 farmers field were done by KVK scientist to solve farmer’s problems including cattle, crops, fruits and women. Similarly 718 farmers have visited to KVK farm to take advice from KVK scientist.

![Diagnostic visits image](image)

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**g. Lecture delivered in programmes of different agencies:** KVK scientists are being invited by the government as well as non-government organisation on occasion of Kisan mela and training programmes. KVK scientist has given 11 lectures in Nanded district.

![Lecture image](image)

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**h. Mobile Soil Testing Lab** is established at KVK received from Maharashtra state under *Manav Vikas Mission* in Sept. 2012. To get awareness about the soil testing, soil sample collection method 16 soil testing campaign were organised in Biloli, Degloor, Dharmabad, Kandhar and Naigaon blocks. Total 674 soil samples were collected and tested through this campaign.

![Mobile Soil Testing Lab image](image)

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**i. Veterinary Ambulatory Clinic:** Veterinary scientist Dr. Gajanan Dhage visited to check up the animals at their doorstep. 93 animals are checked. Out of which animal were presented for routine health and gynaecological check up, castration, miner operations and feed back of previously treated animals.

![Veterinary Ambulatory Clinic image](image)

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**j. Animal health and infertility campaign:** 12 health camps were arranged in different villages as and when need of animal owners raised. In such camps routine health check-up of animals and treatment of severely sick animals was conducted.

![Animal health and infertility campaign image](image)
Treatment of anoestrus, repeat breeding, pyometra has been carried out and further advice verbally as well as literally given to the farmers.

**k. Radio Talk:** KVK scientist has given 9 radio talks on the FM radio Nanded and Washim on the production technology and animal care.

**l. Bulk SMS:** It is not possible for farmers to reach at KVK and to save time and money and to reach all the jurisdiction area of KVK, we send bulk SMS in local language method to send message to the farmers within time, low cost on registered mobile. Total we reached to 30759 farmers by sending 46 messages in Marathi.

**m. Publications:** KVK trying to reach to farmers through different extension activities in working area i.e. in satellite and focal villages. 17 folders were published to distribute to farmers in Kisan mela, exhibition and other mass activities. Similarly, three articles were published in the local newspaper. Regular activities are published in *Monthly Vidyavratta,* published by Sanskriti Samvardhan Mandal.

**V) Other activities**

**a. Organisation of Scientific Advisory Committee meeting:** To take review of the previous work done and to approve and suggestion to the planned programme of the KVK, the meeting under chairmanship of Hon. Pramod Deshmukh, Chairman, SSM, comprising all district officers of line department and Zonal Project Director was conducted in on 22 Jan, 2013, where we got valuable suggestions and improved linkages with the line department.
b. **Training of Facilitator (TOF):** The training to the Agriculture Assistant of the State Agriculture Department to act as a trainer for their co-workers about the *Organic Farming* was conducted during 07 to 26 Jan, 2013. 20 days programme was so beneficial to the trainees and KVK because the immanent scientists, administrative officers, progressive farmers visited to the class and got valuable guidance to improve our work.

c. **National Horticulture Mission:** Training programme for the improvement of the horticulture status in the district was conducted for 3 days, 2 day and 1 day’s duration under National Horticulture Board. Further farmer’s exposure visits were organised within district on the field of pomegranate of Madhavrao Kawalkhedkar, tq. Udgir and one state level exposure visit to Jalgaon and Krishi Vidyapeeth, Akola. Farmers participated in these programme in contributing in the expenditure over and above. Farmers got satisfaction by visiting to different institute as drip irrigation, fruit and vegetable, research institute and other technology demonstrated by Agriculture University.

d. **Organisation of crop cafeteria:** Krishi Vigyan Kendra tried to demonstrate technology on the KVK farm in Kharif and Rabi season of 2012. In Kharif season, 36 varieties were demonstrated of the Grain as sorghum, Soybean, Pigeon pea, Deshi cotton, Bajara Sesamum, Niger, Mung, Urad, and Cowpea released and recommended by Agriculture Universities of Maharashtra and private sector. Similarly in Rabi season, 40 varieties were demonstrated of Chick pea, Safflower, Linseed, Mustard, Sunflower, Wheat, Rajma, Pea, Rabi grain sorghum. Farmer’s visited to these demonstration observed the differentiation and potential of each variety. So, it was so appreciated by the farmers, officials from ZPD, line department and scientists from Agriculture University.
A fodder cafeteria for demonstration as well as for feeding animal at dairy farm of KVK was established with cultivation of Lucerne, Berseem, oat, Fodder maize, cowpea, Fodder jawar, Hybrid napper-phule yashwant phule jayawant, sampurna (DHN-6), and Hybrid bajara-nutrifeed etc.

e. **Partners with ICRISAT and aAqua.org.** We are working with the ICRISAT, Hyderabad by demonstrating different sweet sorghum varieties on KVK farm as well as on 6 farmer’s field. Similarly, aAqua.org is an institute working for the farmer to provide the information online through website by direct conversation, which is also available to other farmers availing the website and member. We are subscribed as an expert to answer to the farmers questions asked online from different part of the India.

VI) **Linkages:** KVK is working in coordination with the agriculture family i.e. Agriculture university, research institutes, department of agriculture of Zilla Parishad, Sericulture, Animal Husbandry and dairy, Fishery, and other Line department and input provider to farmers. We are trying to have linkages with the Marathwada Agriculture University, ATMA, NABARD, etc.

VII) **Impact of KVK activities:**

1. To increase productivity and profitability through use of improved varieties, in our operational area most of the farmers using traditional varieties, so yield levels are very poor, and these varieties are more susceptible to disease and pest, we have provided seeds of improved variety of Bengal gram, safflower, Soybean etc.
2. By implementing the experiment on brinjal and Bengal gram for pest management, with the use of pheromone trap and neem based bio-pesticides controls the pest. As result farmers demanded the pheromone traps for soybean also in Sagroli, Shimpala and Kedarwadgaon village for the Kharif 2013.

3. We make awareness among the farmer about soil test based fertilizer application. Ultimately, saving in the cost of excess fertilizers and proper crop nutrition.

4. Widely use of efficient and effective use of herbicides in Kharif and Rabi crops for weed management to overcome problem of labour crises.

5. Through fertility campaign and health camp, farmers are regularly getting veterinary services at their door step.

6. Demonstration of new varieties of fodder crop at KVK farm, farmers has taken initiation of growing the green fodder for their animals.

7. By using soybean in regular diet, girls and women get awarded about its benefit on health. Women are demanding training on different soybean recipes. Also, school going boys and girls are now awarded about the importance of balanced diet as we delivered lectures on the food and its importance.

8. KVK and SSM Jointly started soybean processing unit as soyachiwda, soyane, mix dalwada, Bhel soymilk and paneer are the products which are regularly provide to the campus, students and families. These food items are becoming popular in the students and they are demanding regularly.

9. By using seasonal fruits like mango, lemon and papaya, a fruit processing training programme was organised for the women. Jam, Jellies, squash, tooty-fruity and pickles were taught in the training. As an effect, other women demanded same programme and it was repeated second time.

10. As the effect of regular meeting and contact with the Self Help Groups, women get motivated to start an enterprise like masala making and shevaya making, which in the process.
NEWSPAPER COVERAGE:
शंभु महादेव काठी यात्रेनिमित्त
कृषी, पशुप्रदर्शनाला प्रतिसाद
सगरोली परिसरातील शेतक-शाळी गर्दी