

## GSFC in the Service of Farmers

**GSFC, since its inception is focused towards agriculture development by taking latest technologies in all areas of agriculture for better farm productivity. Recognising the need that water is very critical after seed and land, the company has started promoting Micro Irrigation in Gujarat. The company has also taken up production and marketing of bio-fungicide and eco-friendly pesticides and fungicides. It is also contemplating to take advantage of global demand for agriculture products making the farmers to prepare to diversify their crop pattern towards value added crops. In this direction, the company is already in advanced stage of setting up information kiosks in the fertiliser depots located in different districts of Gujarat. Thus, the company continues to provide total solutions for improving farm productivity and farmer prosperity.**

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**T**HE GOVERNMENT, IN ALL FIVE YEAR plans, gave adequate emphasis on agriculture and formulated a comprehensive package for reforms and policy changes. However, the poor implementation affected the rate of growth of agriculture: therefore, there is a yawning gap between the performance and potential in agriculture sector. Hence, there is a setback affecting resource utility and to the diversification process towards cash crops, fall in input growth and declining factor productivity which calls for special attention.

The Tenth Plan has assessed that agriculture production would grow at the rate of 4.0% but the stark reality is that in the first three years of the plan, the country was not able to ensure even 1.5% rate of growth. It is timely to give a new thrust on farm and farmer prosperity so that formulated policies are a reality.

In the ever-changing market environment, especially in fertiliser sector, the only way to woo the farmers to take the purchase decisions is to understand their problems and respond accordingly by offering them not only the customised products but also the total solutions for farm productivity. Therefore, the entire set of requirements for a total agri value chain which commence with providing services like soil testing, selection of crops, credit, farm management and sales of farm produce to make them avail better price for their output. Indian fertiliser companies have understood these realities and are slowly

moving in this direction. GSFC has understood this fact from very beginning in sixties and is working in these areas to enhance farmers prosperity. GSFC's corporate philosophy transcends mere marketing approach and strategy and seeks to serve the farmer's interest.

Since its inception on 15<sup>th</sup> February 1962, GSFC has come a long way and has turned into a multi-product, multi-dimensional, multi-locational and fully integrated fertilisers and petrochemical complex offering a wide-range of fertilisers and agro products, various types of services to farmers, various industrial products, industrial gases and chemicals to the industrial consumers and end users.

### GSFC NETWORK FOR FERTILISER MARKETING AND AGRICULTURE DEVELOPMENT

THE COMPANY IS MARKETING UREA, AS, DAE APS and Gypsum since 1967. Recently, by taking into account the need for potash along with N and P, GSFC has introduced 12-32-16. The company has an extensive marketing network to promote use of fertilisers in several states. Company's field force conducts various types of promotional programmes at the grass-roots level not only to promote use of fertilisers but also package of scientific agricultural practices to boost up agricultural production in general and foodgrain production in particular. GSFC is one of the major supplier of fertilisers in the states of Gujarat, Rajasthan, MP,

Maharashtra, Punjab, Haryana, UP, AP and Karnataka. GSFC "Sardar" fertilisers enjoy excellent brand preference in these states.

The company's present sales of fertilisers is about 13.50 lakh tonnes (3 lakh tonnes of urea, 2.65 lakh tonnes of AS, 6.75 lakh tonnes of DAP and 1.10 lakh tonnes of APS) as against the sales of 91,000 tonnes in 1967-68.

#### GSFC's fertiliser marketing network

Regional offices	(11)
Area offices	(19)
Company operated retail points in state of Gujarat	(133)
No. of dealers	(571)
No. of agri-personnel	(275)

#### Agricultural Development and Agro Services

To promote the fertiliser use and bring the technology from lab to field, GSFC has set up a separate department called "Agricultural Development and Agro Services" whereby the farmers are provided with the latest agricultural know-how. This division formulates action oriented schemes and programmes to achieve the short-term as well as long-term objectives in terms of the national imperatives such as generation and promotion of scientific agro-technologies, orientation of farmers, training of farm youths, raising their standard of living and enriching their lives with meaningful future. In the implementation of these agro-

promotional programmes, involvement of farming community is achieved on a full scale with the ultimate objective of creating confidence in them for absorbing the impact of transfer of modern and high-tech agriculture technology.

GSFC believes in its continuing commitment and dedication to augment the overall prosperity of the farmers and **make** them self-reliant. GSFC's motto is *Nourish the Land and Flourish the Future*.

### Major Activities

- ◆ Promoting activities related to agri-development and input usage
- ◆ Guidance on agri-business
- ◆ Farm management practices
- ◆ Soil and water sample testing
- ◆ Social welfare and health care programmes
- ◆ Crop demonstrations
- ◆ Research and development of HYV seeds
- ◆ Trading of seeds
- ◆ Biofertilisers supplementing nutritional needs of soil
- ◆ Publication of vernacular magazine – **Krishi Jiwan**
- ◆ Training farm youths

### Other Activities

- ◆ Production and marketing of bio-pesticides and fungicides
- ◆ Production and marketing of micro-mix and water soluble fertilisers
- ◆ Production and marketing of banana tissue culture
- ◆ Micro irrigation system

### GSFC'S APPROACH TO RURAL DEVELOPMENT

#### Farm Information Centre-cum-Depots (*Krishi Mahiti Kendra*)

When GSFC was conceived in 1962,

there was no scientific agriculture in the state and agriculture productivity was very low. Farmer's plight was very poor. Consumption of chemical fertilisers was meager, only 11000 tonnes. GSFC understood this fact from very beginning and adopted the slogan *GSFC's progress with rural prosperity*. Its marketing policy is backed with strong rural and agricultural programmes designed with the sole concept of modern farming by disseminating technical know-how and undertaking

water soluble fertilisers, micronutrient fortified fertilisers, banana tissue culture plants and also carry out the promotional and extension activities. These centres have worked as "catalyst" and helped immensely in building up the brand image of SARDAR fertilisers. The promotional and extension activities carried out by GSFC has paid rich dividend and today the state of Gujarat has made a big leap from consumption of 11000 tonnes of nutrients to 11.46 lakh tonnes of nutrients.

Consumption of fertiliser nutrients in Gujarat (000 mt)				
Year	Consumption in Gujarat			
	N	P	K	Total
1960-61	7.44	3.5	0.1	11.0
1970-71	105.7	51.9	6.6	164.3
1980-81	204.1	117.2	35.5	356.9
1990-91	430.8	217.1	58.5	706.4
2004-05	754	296.3	96.2	1146.50

various schemes and programmes for enhancing rural prosperity. To popularise the use of fertiliser among farming community and to educate these rural folk on scientific agriculture by adopting package of practices, GSFC started the unique channel of distribution, namely, Farm information centres-cum-depots. GSFC progressively established nearly 230 such centres, practically one at each taluka in the state of Gujarat. Today, we have about 133 depots which are manned by agricultural graduates who work as Friends and Philosopher of farming community.

Nos. of GSFC's FIC/depots	
Year	Nos.
1968-69	200
1970-71	210
1975-76	230
2000-01	161
2005-06	133

These depots not only sell fertilisers but also sell seeds, pesticides, bio-fertilisers,

To convince farmers to accept farming as a business, GSFC adopted various plans and projects:

#### 4 P Plan

During the year 1970-71, GSFC introduced 4 P Plan (Package of Practices for Productivity and Prosperity) in the districts of Kheda, Banaskantha and Vadodara for potato and subsequently for cotton crops. The specialty of this project was not only to provide agriculture inputs but to see that they are applied scientifically under the supervision of experienced technical field staff to increase the fertilisers use efficiency and hence higher productivity.

#### Crop Insurance Project

It was for the first time in the history of Indian agriculture that crop insurance cover was provided to farmers who participated in GSFC's Crop Insurance Project on a pilot scale. This project was undertaken from the year 1972-73 to 1975-76 in various cotton growing districts of Gujarat under different climatic conditions.

Crop insurance project (1972-73 to 1975-76)					
Year	District	Area (acres)	Insurance premium on cost of cultivation	Claim paid by GIC to farmers	Premium collected by GIC
1972-73	Vadodara Surat	963	2%	Rs. 17944/-	Rs. 33705/-
1973-74	Vadodara	927	2%	Rs. 509639/-	Rs. 32445/-
1974-75	Sabarkantha Surat	493	3%	Rs. 144469/-	Rs. 33278/-
1975-76	Bharuch Vadodara Sabarkantha Bhavnagar	486	3%	Rs. 424786/-	Rs. 32076/-

The insurance was provided to them with meager insurance premium by 2 to 3% of cost of cultivation.

### Leap Forward Project

To uplift the rural and backward adivasi farmers of Chhota Udepur taluka, GSFC started Leap Forward Project in the year 1972-73. The Rathwa tribal farmers of this taluka used to do their farming by age old methods. GSFC provided them fertilisers and other inputs free of cost in the first year with technical know-how which enhanced their yield by four times. This project covered 2000 hectares of land and benefited over 5000 farmers

belonging to 100 villages. This project had a socio-economic impact also. Their living standard improved significantly and the number of school going children also increased. Due to this project, fertiliser consumption increased from 260 tonnes in 1972-73 to 2500 tonnes in the year 1984-85. This project was also extended in the districts of Panchmahal, Khedbrahma, Sikka and Vyara.

### Intensive Fertilisers Promotion Campaign

In state of Gujarat, in the districts of Gandhinagar, Mehsana and Banaskantha, inspite of good irrigation

facility, the yields were low due to low fertilisers consumption. With the objective of enhancing the yield in these districts, Intensive Fertilisers Promotion campaign was launched in the year 1976. GSFC conducted field demonstrations on various crops on farmers fields, organised night meetings, training programmes, door to door contact, participation in fairs, festivals, exhibitions, distribution of scientific literature, providing technical know-how, free soil and water testing facilities and recommended fertiliser dosage to the farmers. Crop production increased by manifold. Thereafter, IFPC was included in Action Programme for the productivity and was conducted in the districts of Banaskantha, Gandhinagar and Panchmahal during the year 1981-85. Later, this campaign was conducted in Banswara and Udaipur districts in Rajasthan.

### Dry Farming Project

To develop the dry land areas, GSFC launched dry farming project in 8 villages of Lakhtar and Vadhan taluka of Surendranagar district from the year 1985 on 393 farmers' fields. In the project area, the average increase in the yield of cotton was by 42% as compared to the non-project areas which adopted the local practices. On the basis of the excellent results, this project was extended to Bhavnagar and Rajkot districts in Gujarat, Dhar District in Madhya Pradesh and Dungarpur in Rajasthan state from 1987.

### Village Adoption

GSFC adopted two villages, Heranj in Kheda district and Ratanpura in Banaskantha district. There was a significant boost in crop production due to utilisation of package of practices. The average yield of paddy crop was increased from 25 quintals to 48 quintals while Bajari yield increased from 1-3 quintals to 7.1 quintals at Ratanpura. The people of the villages were also helped in establishing libraries, water works, youth clubs, mahila mandals, fisheries, health centres, molls and school building. Within five years, all round development of the village was achieved.

Increase in income of adivasi farmers due to LFP					
Year	Total area (ha.)	Total no. of participants	Gross income of farmers under LFP (Rs)	Gross income of farmer under LFP (Rs.)	
				Per ha	Per capita
<b>Panchmahal Dist.</b>					
1981-82	400-00	660	806000	5038	1221
1982-83	400-00	660	824000	5150	1248
1983-84	400-00	656	904000	5650	1378
1984-85	400-00	531	901000	5630	1428
<b>Chhota Udepur</b>					
1980-81	627-00	1017	1726543	7163	1767
1981-82	650-00	1196	1530928	5888	1280
1982-83	650-00	1116	1251110	5688	1121
1983-84	550-00	889	1422735	6468	1600
1984-85	300-00	613	860250	7168	1402
<b>Khedbrahma</b>					
1984-85	250-00	520	763750	7638	1469
1985-86	400-00	625	1205900	7538	1925

Promotional activities carried out in IFPC districts - Gujarat (1981 to 1985)				
Activities	Banaskantha	Gandhinagar	Panchmahal	Total
Demonstrations	321	139	405	865
Villages visited	9277	3418	9453	22148
Meetings held	2863	1408	2598	6869
Participation in fairs/festivals	51	3	116	170
Literature distributed	20145	6878	161589	188612
Sdi samples collected	3967	1244	8518	13729
Water samples collected	147	72	633	852

Increase in yield of cotton crop-dry farming project					
Name of village	Total farmers participated	Area under cotton (ha.)	Av. yield under project (kg/ha.)	Av. yield as per local practice (kg/ha.)	Yield increased due to project (%)
Kothariya	60	24.00	577.83	362.50	59.40
Vadla	48	16.40	550.00	362.50	51.70
Zampoded	50	20.00	469.50	362.50	29.50
Dedadra	62	24.80	516.65	362.50	42.50
Adalsar	50	20.00	492.65	350.00	40.00
Kadu	18	7.20	477.05	350.00	36.30
Kalam	34	9.60	426.10	350.00	21.70
Dervada	70	23.20	548.45	350.00	56.70
Av. of 8 villages	49	18.15	507.28	356.25	42.23

## ONGOING PROGRAMMES

### Soil and Water Testing Facilities

Soil health is the prime requirement for higher productivity. GSFC has started the analysis of soils of farmers' fields and irrigation water free of cost through its static laboratory in Gujarat in 1969. Mobile soil testing-cum-audiovisual vans have also been introduced since 1989 in MP and Rajasthan. These laboratories have so far analysed 7.13 lakh soil samples and 76593 samples for micronutrients and sulphur content in the soil. On the basis of scientific analysis of soil samples, the soil status report is provided to farmers with

application of necessary fertilisers and micronutrients and other recommendations to increase fertilisers use efficiency. This has helped immensely in promoting the concept of balanced fertilisation among farmers. GSFC has also published the booklet on *Soil Fertility Status in Gujarat - GSFC Approach*.

### Water Sample Analysis

In our laboratory, so far 44000 water samples have been analysed. The samples are analysed from the point of view of its pH, electrical conductivity, content of calcium, magnesium, chlorine, carbonate, bi-carbonate, sulphur and

Number of soil and water samples analysed by GSFC								
Year	Static Gujarat		MSTL-I MP		MSTL-II Rajasthan		Total	
	Soil	Water	Soil	Water	Soil	Water	Soil	Water
<b>Free</b>								
1969-89	288056	22043	-	-	-	-	288056	22043
1989-99	157786	13429	124250	1058	112923	1497	394959	15984
<b>Total</b>	<b>445842</b>	<b>35472</b>	<b>124250</b>	<b>1058</b>	<b>112923</b>	<b>1497</b>	<b>683015</b>	<b>38027</b>
<b>Chargeable</b>								
2000-2005	12387	3335	5500	275	12694	2704	30561	6314
<b>G. total</b>	<b>458229</b>	<b>38807</b>	<b>129750</b>	<b>1333</b>	<b>125617</b>	<b>4201</b>	<b>713576</b>	<b>44341</b>

farmers are advised regarding the quality of irrigation water.

Number of micronutrient samples analysed by GSFC	
Year	Micronutrient samples analysed
1989-90	3115
1990-91	5940
1995-96	14580
2004-05	4411

### Soil Health Card

GSFC also extended help to the Government of Gujarat for analysing soil samples so that Soil Health Card can be issued by the state Government to the individual farmers and also soil map can be developed which would help in making generalised macro and micronutrient recommendations by various extension agencies involved for promotion of high tech agriculture to tap the opportunity created by Sardar Sarovar.

Soil sample analysis allotted by Govt. of Gujarat for preparation of Soil Health Card (Nos.)			
District	2003-04	2004-05	2005-06
Anand	3703	6400	1004
Banaskantha	12795	7800	9924
Patan	4901	5420	7856
Vadodara	15314	15180	3808
Rajkot	8566	3640	1200
<b>Total</b>	<b>45279</b>	<b>38440</b>	<b>23792</b>

### Farm Youth Training Programme

To train the young farmers regarding the latest agro-techniques and to expedite their hidden potential, GSFC is conducting the Farm Youth Training Programme four times in a year since 1986 in collaboration with Gujarat Agricultural University. So far, GSFC has conducted 74 programmes and covered 2317 participants belonging to 2125 villages. For ex-participants the refresher programme is also conducted. After going in their village, these farm youths form SUKH club (Sardar Yuva Krishak Harmayee) for undertaking overall development of their village.

Farm youth training programmes conducted by GSFC			
No. of programmes conducted till Jan. '06		74	
No. of farm youth-trained		2317	
No. of villages covered		2125	
No. of reorientation programmes conducted		10	
No. of active club		44	
Year	Programmes	Trainees	Villages
1986-87	5	149	138
1990-91	4	101	80
2000-01	3	114	104
2005-06	3	86	80
Total	74	2317	2125

### Crop Demonstrations

GSFC strongly believes in principle of Seeing is Believing and carries conviction as no words can ever do. Thousands of crop demonstrations and special trials have been conducted by GSFC on farmers fields to demonstrate importance of chemical fertilisers and their efficient utilisation, biofertilisers, micro nutrients, new varieties, tissue culture plants, bio-pesticides, bio-fungicides, bio-tech products, etc. The programme has been a great success to disseminate improved farm technologies.

Demonstrations conducted by GSFC	
Year	Field/crop demonstration
2002-03	196
2003-04	195
2004-05	494

In Narmada Command Areas, Government of Gujarat conduct the demonstrations on farmers fields. GSFC help the state Government in this noble work by financing the cost of these demonstrations. During the year 2004-05, GSFC provided finance worth Rs 3.19 lakhs and the demonstrations were conducted in the districts of Vadodara and Panchmahal. During 2005-06, GSFC will provide more than Rs 6.00 lakhs and demonstrations will be conducted in the districts of Vadodara, Panchmahal, Ahmedabad and Gandhinagar.

### R&D of Seed Varieties

To bring the green revolution at home, improved and hybrid varieties of seeds have played a vital role. GSFC has its own

research farm and has started systematic crop improvement work since 1994 with a view to evolve high yielding varieties/ hybrids in selected crops (bajara, tur, cotton) with inbuilt genetic resistance to major diseases/pests, improved quality and other attributes. For conducting plant breeding research work, GSFC has about 218 acres of farm land area at Fertilisernagar. GSFC has the strong research and cooperative research arrangement with ICAR and with state agriculture universities for field testing.

Sales of seeds developed by GSFC (mt)			
Year	Cotton	Tur	Bajari
2002-03	0	0	8.05
2003-04	1.07	1.57	39.45
2004-05	0.70	0.68	103.27
2005-06 (Upto Jan)	1.23	0.91	75.91

To provide the quality seeds to the farmers, GSFC has entered into trading agreement with GUJCOMASOL and Seed Corporation and various other reputed seed suppliers. During the year 2005-06, till January, GSFC provided seeds worth Rs 2.54 crores.

GSFC also provides the vegetable seeds to the farmers by procuring them from the reputed seed suppliers. 200 tonnes of potato seeds also have been provided by GSFC to farmers.

### Riofertilisers

GSFC is one of the leading companies in India producing biofertilisers. After isolation and experimentation for 3 years, GSFC has commercialised biofertilisers

under the brand name of Sardar way back in 1984. GSFC is having about 135 different bacterial cultures, which are checked for their efficiency every season. Sixty six strains are of our own isolates while remaining have been procured from renowned institution like IARI, GAU, ICRISAT and NIFTAL.

At present GSFC is producing mainly two types of Sardar biofertilisers, i.e., nitrogen fixing biofertilisers and phosphate solubilising biofertilisers. The production capacity of biofertilisers at GSFC is 600 mt per annum. Till January 2006, 15 lakh packets (250 gms. of each) of Sardar biofertilisers were sold.

### Nitrogen fixing biofertilisers

*Azotobacter* culture  
*Azospirillum* culture  
*Rhizobium* culture  
 Super culture (*Acetobacter diazotrophicus* based)

### Phosphate solubilising Biofertilisers

Phosphate culture (*Pseudomonas* based)

GSFC is also conducting demonstrations on farmers fields through its marketing network to create awareness amongst farming community regarding use and benefits of biofertilisers.

The results of biofertiliser demonstrations conducted on different crops alongwith the chemical fertilisers from 2001-02 to 2003-04 were quite impressive.

### Tissue Culture

GSFC commercialised bio-technology by offering high quality tissue culture plants of banana not only in Gujarat but also in

Results of biofertiliser demonstrations									
Crop	2001-02			2002-03			2003-04		
	Yield on demo. plot	Yield on farmer plot	% Var.	Yield on demo. plot	Yield on farmer plot	% Var.	Yield on demo. plot	Yield on farmer plot	% Var.
1 G'nut	1320	1080	22	1000	655	53	1144	973	18
2 Bajri Kf	800	650	23	1126	786	43	1160	981	18
3 Paddy-Kh	2316	1683	38	2025	1699	19	1940	1546	25
4 Cotton	500	400	25	911	715	27	833	788	6
5 Wheat	1592	1341	19	1496	1256	19	1668	1475	13
6 Maize	1350	1100	23	940	875	7	1190	980	21
7 Curmin	290	259	12	285	230	15	296	246	20
Average	1167	930	23	1109	888	26	1176	998	17

the states of MP, Maharashtra, AP and Karnataka. During the year 2003-04, GSFC had sold 80000 plants of banana tissue culture and during 2005-06, this will be around 25 lakh plants, a quantum jump in sales of banana tissue plants.

With the sole objective of providing better service to farmers, GSFC has established a well-equipped tissue culture laboratory for mass multiplication of healthy, disease free, high yielding saplings of important varieties of banana like Grand Nine, Robusta and Srimanthi. GSFC has developed the infrastructure facility to produce about 30 lakh banana plants. It has erected many net houses on farmers fields, which will be given to the farmers after 3 years. Company has also planned to develop the technology for plantation crops like sugarcane, papaya, fruit tress like pomegranate, citrus and other ornamental plants.

#### Publication of Vernacular Magazine - *Krishi Jiwan*

With a view to disseminate the knowledge regarding scientific agriculture. GSFC publishes since its inception a monthly magazine called *Krishi Jiwan* in vernacular language. The subscription of Gujarati *Krishi Jiwan* is about 60000 nos., however, this vernacular magazine has got the largest readership and has touched the level of 3.00 lakhs. It provides information on latest research and new technologies on various aspects of agriculture and related fields to farmers from various scientists and experts in respective fields. In the current phase of fast developing agriculture and spread of high tech agro-technologies, this magazine serves as a good source of up-to-date information regarding latest agriculture know-how. The unique thing about this publication is the frequent special issues covering important topics like seeds, plant protection, vegetables, underground water recharging, farm forestry, weather forecasting, dairy, animal husbandry, etc. In view of its coverage, regularity, contents and quality, it has been given International Standard Serial No. (ISSN) - 0971-6440 by the National Standards Bureau.

Expenses incurred by GSFC on promotional and rural activities				
Sr No	Major promotional/ rural activity	Total expenses (Rs. in lakh)		
		2002-03	2003-04	2004-05
1	Farm youth training programme	1.80	1.88	1.95
2	Demonstration	1.12	1.02	2.21
3	Demonstration for Narnada Command area			3.19
4	Promotional Literature	22.88	31.73	23.02
5	Exhibition	10.14	14.67	47.60
6	Biofertilisers	46.86	52.27	49.85
7	Advertising	25.00	25.50	30.00
	<b>Total</b>	<b>107.80</b>	<b>127.07</b>	<b>157.22</b>

Subscription - <i>Krishi Jiwan</i>		
Year	Numbers	
	Gujarati	Hindi
1968-68	2905	---
1970-71	5903	---
1980-81	44	---
1990-91	50500	---
2002-03	61637	3675
2005-06	60000	7200

*Krishi Jiwan* in Hindi is also published once in a quarter and has got the spread of 7200 in the nearby states. GSFC also publishes *Sardar Krishi Mahiti Patrika* in Gujarati from July, 2004 which contains the information on the farming operation which the farmers have to carry out. The region Specific Information is provided to the farmers which also contains the information on agricultural commodity prices. This is provided free of cost to the farmers. Crop and product literature is also provided to the farmers.

#### Gujarat Green Revolution Company

Enhancement of water use efficiency is the need of the hour as water is a scarce commodity. To promote the concept of Micro Irrigation System, Government of Gujarat has promoted GGRC through GSFC, GNFC and GAIC whereby the farmers are educated on benefits of Micro Irrigation System. The scheme is implemented through 133 depots of GSFC located in various parts of Gujarat. Under Micro Irrigation System, it has been planned to cover about 20000 hectares of gross cropped area by the end of March 2006.

#### Bio-technology Products

GSFC has also entered into marketing of

bio pesticides in order to promote organic farming. To serve the farming community, GGRC is coming with *Sardar Ecogreen* a bio-fungicide which control the soil born diseases caused by fungal pathogens. The know-how has been obtained from National Botanical Research Institute (NBRI).

With a view to keep the pace with the latest development in bio-technology field and to serve the farming community by providing them, the latest available products. GSFC has started to procure various bio-tech products from reputed suppliers. It has also been planned to produce various bio-tech products like Gibberalic acid *Sardar amin*, *Sardar amin granules*, *Sardar neem*. Protein hydrolysate, etc., at GSFC.

#### Water Soluble Fertilisers

With a view to enhance the income of the farmers by supplying The Total Solutions to the farming community under one umbrella, GSFC also provide water soluble fertilisers say 19:19:19 to farming community. By taking into account, the increasing deficiency of zinc and other micronutrients in the soil, GSFC has started to produce *Sardar micro mix*, which contains zinc, ferrous, copper, manganese and boron.

#### Expenses incurred on Promotional and Rural Activities

Sizable amount is spent by GSFC in conducting various promotional/rural activities. Agricultural Development and Agro Services division is engaged in major promotional/rural activities. We also have 120 depot managers who carryout promotional activities and are in direct contact with farmers.