CHAPTER : V

COMPARISONS WITH OTHER FERTILIZERS COMPANIES

1. PERFORMANCE OF NFL

2. PERFORMANCE OF IFFCO

3. PERFORMANCE OF KRIBHCO

4. MARKET STRATEGY OF KRIBHCO

5. PERFORMANCE OF INDO GULF FERTILIZERS
1. PERFORMANCE OF NFL

A comparative study of NFL, IFFCO, KRIBHCO & Indo Gulf was made. The comparisons were made on the basis of Plants, Products, Financial Performance, Sales, etc.

Profile of National Fertilizers Limited (NFL)

NFL Schedule-A & Mini Ratna Category- I Company is a market leader in the fertilizer Industry in India with 17.0% share in Urea production during 2004-05.

Major Stake Holder of Urea in the country

NFL was incorporated on 23rd August, 1974 with two manufacturing units at Bathinda and Panipat. Subsequently, on the reorganization of fertilizer group of companies in 1978, the Nangal unit of fertilizer Corporation on India came under the NFL fold. The company expanded its installed capacity in 1984 by installing and commissioning its Vijaipur gas based plant in Madhya Pradesh. NFL, a profitable public sector undertaking operates under the administrative control of Deptt. Of fertilizers in the Ministry of Chemicals and fertilizers.

Centralized plant locations to cover the Nation.

Three of the units are strategically located in the high consumption areas of Punjab and Haryana. The company has an installed capacity of 35.49 lakh MTs of Nitrogenous fertilizers and has recorded an annuals sales turnover of Rs. 3,474 crores during 2004-05. The company’s strength lies in its sizeable presence, professional marketing and strong distribution network nationwide.
**Products**

**Focused product portfolio**

Kisan Urea and Kisan Khad NFL’s popular brands are sold over a large marketing territory spanning the length and breadth of the country. Kisan Urea is a highly concentrated, sold, nitrogenous fertilizer, containing 46.0%. It is completely soluble in water hence Nitrogen is easily available to crops. Kisan Khad is produced at the Nangal Unit in Punjab, NFL’s Kisan Khad is Calcium Ammonia Nitrate (CAN), Nitrogenous fertilizers that contain 25% nitrogen, half of which is in the Ammonical form and half in the Nitrate form.

**Bio-Fertilizers**

NFL also manufactures and markets three types of bio-fertilizers, Rhizobium, Soluble sing Bacteria (PSB) and Azecpobacpor. Starting with a mere 23 MT production in 1995-96, the production has risen to 173 MT in 2002-03. The company presently markets its bio-fertilizers in Madhya Pradesh, Maharashtra, Orrisa, Rajasthan and Punjab.

**Industrial Products**

NFL also manufactures and markets a wide range of industrial products like Methanol, Nitric Acid, Sulfur, Liquid Oxygen, Liquid Nitrogen etc.
Segmental Sales Contribution (2004–05)

Segmental Sales Contribution - 2004-05

- Urea 97%
- Elimination 5 1%
- Others 2%

Figure No. 14

Source: NFL Company Press release July 2005
OPERATIONAL PERFORMANCE

Urea segment dominates:

NFL operates mainly in the fertilizers segment specifically urea which is the revenue earner. The company has its revenues of more than 95% from urea, followed by eliminations and others.

Yearly performance better than quarterly:

NFL in 2004-05 performed better in terms of its operations and the PBDIT was Rs. 345 crores compared to Rs. 328 crores on 2003-04. The Q1 FY 2005-06 PBDIT decreased by Rs. 5 crores with a decrease by 1% in the margin. But on comparison to the yearly margins there was no major change.

FINANCIAL PERFORMANCE:

100% growth in yearly PAT:

The total sale for the year 2004-05 was Rs. 3,459 crore as compared to Rs. 3394 crores, an increase by 2%. The net profit however also showed an increase by 118 % which is a remarkable performance. The net profit touched from Rs. 73 crores in 2003-04 to Rs. 160 crores in 2004-05.
Operational Performance- PBDIT Vs PBDIT Margin

Figure No. 15

Source: NFL Company Press release July 2005
Quarterly performance of NFL- Sales vs. PAT (Rs. Crores)

Figure No. 16

Source: NFL Company Press release July 2005
2. PERFORMANCE OF IFFCO

(As on 31/03/2006)

- Largest producer of fertilizers in the country
- No. of plant locations: five

**Installed Annual Capacity (‘000MT’) of IFFCO**

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity ('000MT')</th>
</tr>
</thead>
<tbody>
<tr>
<td>UREA</td>
<td>3689.4</td>
</tr>
<tr>
<td>NPK/DAP</td>
<td>4335.0</td>
</tr>
<tr>
<td>TOTAL ‘N’</td>
<td>2380.7</td>
</tr>
<tr>
<td>TOTAL ‘P2O5’</td>
<td>1784.5</td>
</tr>
</tbody>
</table>

Table No. 21


- Only fertilizer institution in the country to have surpassed 60 lakh MT per annum in terms of production and 80 lakh MT annum in respect of sales.
- Contributed about 18.3% to the total ‘N’ and 23.0% to the total “P2O5” produced in the country during the year 2005-06.
- Fertilizers marketed through 37424 cooperative societies and 158 farmers’ service centers.
- Services to the farmers through a variety of programmes.
Share Capital of IFFCO
(As on 31\textsuperscript{st} March 2006)

<table>
<thead>
<tr>
<th>Authorized share capital</th>
<th>1000.00 (Rs. Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscribed &amp; paid up capital</td>
<td>422.51</td>
</tr>
</tbody>
</table>

(All share capital by cooperatives only)

Table No. 22


GROWTH IN NUMBER OF MEMBER SOCIETIES OF IFFCO

(As on 31\textsuperscript{st} March 2006)

Cumulative Production of Fertilizers by IFFCO
(As on 31st march 2006- LAKH MT)

<table>
<thead>
<tr>
<th>UNIT</th>
<th>PRODUCT</th>
<th>PRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>KALOL</td>
<td>UREA</td>
<td>127.695</td>
</tr>
<tr>
<td>PHULPUR-1</td>
<td>UREA</td>
<td>129.550</td>
</tr>
<tr>
<td>PHULPUR-II</td>
<td>UREA</td>
<td>70.465</td>
</tr>
<tr>
<td>AONLA-I</td>
<td>UREA</td>
<td>146.956</td>
</tr>
<tr>
<td>AONLA-II</td>
<td>UREA</td>
<td>78.865</td>
</tr>
<tr>
<td>TOTAL</td>
<td>UREA</td>
<td>553.531</td>
</tr>
<tr>
<td>KANDLA</td>
<td>NPK</td>
<td>202.518</td>
</tr>
<tr>
<td></td>
<td>DAP</td>
<td>142.934</td>
</tr>
<tr>
<td>PARADEEP</td>
<td>DAP</td>
<td>0.301</td>
</tr>
<tr>
<td>TOTAL NPK/DAP</td>
<td></td>
<td>345.753</td>
</tr>
<tr>
<td>TOTAL FERTILIZERS</td>
<td></td>
<td>899.284</td>
</tr>
<tr>
<td>NUTRIENTS ‘N’</td>
<td></td>
<td>300.992</td>
</tr>
<tr>
<td>“P2O5”</td>
<td></td>
<td>126.150</td>
</tr>
</tbody>
</table>

Table No. 23

CUMULATIVE ACHIEVEMENTS TILL DATE (IFFCO)
(As on 31st March 2006)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FERTILIZER PRODUCTION</td>
<td>899.284 Lakh MT</td>
</tr>
<tr>
<td>FERTILIZER SALE</td>
<td>946.394 lakh MT</td>
</tr>
<tr>
<td>TURNOVER</td>
<td>69512 crore</td>
</tr>
<tr>
<td>PROFIT BEFORE TAX</td>
<td>5813.1 crore</td>
</tr>
<tr>
<td>PROFIT AFTER TAX</td>
<td>4561.8 crore</td>
</tr>
<tr>
<td>CONTRIBUTION TO EXCHEQUER</td>
<td>3791.3 crore</td>
</tr>
</tbody>
</table>

Table No. 24

KALOL UNIT

- Year of Commissioning Investment: 1975 Rs. 71.23 crore
- Year of Expansion Investment : 1997 Rs. 149.70 crore.

Capacity of Kalol Unit

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TPD</td>
</tr>
<tr>
<td>AMMONIA</td>
<td>1100</td>
</tr>
<tr>
<td>UREA</td>
<td>1650</td>
</tr>
<tr>
<td>‘N’</td>
<td>759</td>
</tr>
</tbody>
</table>

Table No. 25
Source : Fertilizer Statistics 2005-06.
KANDLA UNIT

- Year of Commissioning: 1975
- Investment: Rs. 24.26 crore.
- Year of First Expansion: 1981
- Investment: Rs. 28.60 crore.
- Year of Second Expansion: 1999
- Investment: Rs. 205.30 crore.

Capacity of Kandla Unit

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TPD</td>
</tr>
<tr>
<td>'P2O5'</td>
<td>2890</td>
</tr>
<tr>
<td>'N'</td>
<td>1115</td>
</tr>
</tbody>
</table>

Source: Fertilizer Statistics 2005-06.
PHULPUR UNIT

- Year of Commissioning    1981
- Investment      Rs. 205.2 crore. Phulpur-I
- Year of Expansion  1997
- Investment Rs. 1190 crore. Phulpur- II

Capacity of Phulpur Unit

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TPD</td>
</tr>
<tr>
<td>AMMONIA</td>
<td>2497</td>
</tr>
<tr>
<td>UREA</td>
<td>4290</td>
</tr>
<tr>
<td>‘N’</td>
<td>1973</td>
</tr>
</tbody>
</table>

Table No. 27

Source : Fertilizer Statistics 2005-06.
AONLA UNIT

- Year of Commissioning: 1988
- Investment: Rs. 651.6 crore. Aonla-I
- Year of Expansion: 1996
- Investment: Rs. 954.7 crore. Aonla-II

Capacity of Aonla Unit

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TPD</td>
</tr>
<tr>
<td>AMMONIA</td>
<td>3040</td>
</tr>
<tr>
<td>UREA</td>
<td>5240</td>
</tr>
<tr>
<td>'N'</td>
<td>2410</td>
</tr>
</tbody>
</table>

Table No. 28

Source: Fertilizer Statistics 2005-06.
**PARADEEP UNIT**

- Cost of Acquisition Rs.2589.88 crore (September 2005)

### Capacity of Paradeep Unit

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>TPD</th>
<th>TPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOS. ACID</td>
<td>2650</td>
<td>8,75,000</td>
</tr>
<tr>
<td>SULPHURIC ACID</td>
<td>6970</td>
<td>23,00,000</td>
</tr>
<tr>
<td>( P_{2}O_{5} )</td>
<td>2650</td>
<td>8,75,000</td>
</tr>
<tr>
<td>N</td>
<td>1006</td>
<td>3,32,000</td>
</tr>
<tr>
<td>POWER</td>
<td></td>
<td>2 *55 M W</td>
</tr>
</tbody>
</table>

Table No. 29

Source: Fertilizer Statistics 2005-06.
## Growth In Production Capacities by IFFCO

('000 MT)

<table>
<thead>
<tr>
<th>As on Date</th>
<th>UREA</th>
<th>NPK/DAP</th>
<th>TOTAL FERTILIZERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan.'75</td>
<td>-</td>
<td>415.6</td>
<td>415.6</td>
</tr>
<tr>
<td>Apr.'75</td>
<td>396</td>
<td>415.6</td>
<td>811.6</td>
</tr>
<tr>
<td>Mar.'81</td>
<td>891.0</td>
<td>415.6</td>
<td>1306.6</td>
</tr>
<tr>
<td>Sep.'81</td>
<td>891.0</td>
<td>881.3</td>
<td>1772.3</td>
</tr>
<tr>
<td>Jul.'88</td>
<td>1617.0</td>
<td>881.3</td>
<td>2498.3</td>
</tr>
<tr>
<td>Dec.'96</td>
<td>2343.0</td>
<td>881.3</td>
<td>3224.3</td>
</tr>
<tr>
<td>Aug.'97</td>
<td>2491.5</td>
<td>881.3</td>
<td>3372.8</td>
</tr>
<tr>
<td>Dec.'97</td>
<td>3217.5</td>
<td>881.3</td>
<td>4098.8</td>
</tr>
<tr>
<td>Aug.'99</td>
<td>3217.5</td>
<td>1600.1</td>
<td>4817.6</td>
</tr>
<tr>
<td>Apr.'01</td>
<td>3689.4</td>
<td>1973.6</td>
<td>5663.0</td>
</tr>
<tr>
<td>Apr.'02</td>
<td>3689.4</td>
<td>2191.1</td>
<td>5880.5</td>
</tr>
<tr>
<td>Apr.'04</td>
<td>3689.4</td>
<td>2415.4</td>
<td>6104.8</td>
</tr>
<tr>
<td>Sep.'05</td>
<td>3689.4</td>
<td>4335.0</td>
<td>8024.4</td>
</tr>
</tbody>
</table>

Table No. 30

Source: Fertilizer Statistics 2005-06.
KANDLA UNIT

Kandla Phase- I

IFFCO's Kandla plant is located on the western bank of Kandla creek adjacent to Kandla Port Trust Jetties.

The plants produce NPK/DAP complex phosphatic fertilizers of various grades, namely NPK grades 10:26:26, 12:32:16 & DAP 18:46:00 in terms of N: P2O5:K2O. There are four identical streams A, B, C & D of equal capacity.

The plant originally consisting of only 2 streams A & B with related facilities was designed & erected by M/s Dorr Oliver Inc. USA at a cost of Rs. 30 crores having an annual licensed capacity of 1,27,000 MT P2O5. The plant was commissioned on 28th Nov. 1974 and commercial production declared on 1st Jan, 1975.

With increased demand for complex fertilizers, the capacity was doubled by addition of two more streams C & D designed & erected by HDO, India at a cost of Rs. 28.60 crores. Licensed capacity was increased from 1, 27,000 MT P2O5 per annum to 2, 60,000 MT P2O5 per annum. Construction of C & D streams was completed one month ahead of schedule. The expanded unit was commissioned on 4th June 1981 and the commercial production was started from 6th Sept.1981.

Subsequently due to introduction of production of DAP grade also the total capacity increased to 3, 09,000 MTPA of P2O5.
Kandla Phase-II

Kandla Phase-II NPK/DAP project conceptualized the setting up of two additional E & F streams for manufactures of the same grades of NPK/DAP fertilizers using the latest dual pipe reactor technology with an annual production capacity of 2,52,000 MTPA of P2O5 thus increasing the total capacity from 3,09,000 MTPA of P2O5 to 5,61,000 MTPA of P2O5. The actual cost of the project was Rs. 205.30 crores against a budgeted cost of Rs. 212.20 crores.

The main consultant for the NPK/DAP plant was M/s Hindustan Dorr Oliver, Mumbai with the pipe reactor technology obtained from process licensor M/s grade paroisse France, the construction of E & F streams was completed 77 days ahead of schedule. The E & F streams were commissioned on 10th June 1999 & 9th July 1999 respectively and the commercial production started from 5th August, 1999.
Kandla Unit- Performance data for the last five years

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Units</th>
<th>2000-01</th>
<th>2001-02</th>
<th>2002-03</th>
<th>2003-04</th>
<th>2004-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPK 10:26:26</td>
<td>'000MT</td>
<td>300.40</td>
<td>401.250</td>
<td>279.750</td>
<td>232.050</td>
<td>386.600</td>
</tr>
<tr>
<td>NPK 12:32:16</td>
<td>'000MT</td>
<td>422.70</td>
<td>528.500</td>
<td>579.950</td>
<td>622.450</td>
<td>762.600</td>
</tr>
<tr>
<td>DAP 18:46:00</td>
<td>'000MT</td>
<td>980.1</td>
<td>1129.900</td>
<td>1501.900</td>
<td>1246.000</td>
<td>1290.900</td>
</tr>
<tr>
<td>Total</td>
<td>'000MT</td>
<td>1703.1</td>
<td>2060.000</td>
<td>2361.600</td>
<td>2100.500</td>
<td>2440.100</td>
</tr>
</tbody>
</table>

Table No. 31


Annual Capacity (MT P₂O₅)

<table>
<thead>
<tr>
<th>Period</th>
<th>Capacity (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975-1981</td>
<td>260000</td>
</tr>
<tr>
<td>1981-1999</td>
<td>309000</td>
</tr>
<tr>
<td>1999-2000</td>
<td>519700</td>
</tr>
<tr>
<td>2000-2001</td>
<td>561000</td>
</tr>
<tr>
<td>2001-2002</td>
<td>725000</td>
</tr>
<tr>
<td>2002-2004</td>
<td>825000</td>
</tr>
<tr>
<td>w.e.f. 2004</td>
<td>910004</td>
</tr>
</tbody>
</table>

Table No. 32

### Performance Highlights 2005–2006 (IFFCO)

<table>
<thead>
<tr>
<th>Category</th>
<th>Previous Best</th>
<th>Current Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Production of Fertilizers</td>
<td>61.54 lakh MT in 2004-05</td>
<td>64.34 lakh MT</td>
</tr>
<tr>
<td>Highest Production of Urea</td>
<td>37.14 lakh MT in 2004-05</td>
<td>37.18 lakh MT</td>
</tr>
<tr>
<td>Highest Production of NPK/DAP</td>
<td>24.40 lakh MT in 2004-05</td>
<td>27.17 lakh MT</td>
</tr>
<tr>
<td>Highest Sales of Fertilizers</td>
<td>64.64 lakh MT in 2004-05</td>
<td>81.91 lakh MT</td>
</tr>
<tr>
<td>Profit Before Tax</td>
<td>Rs. 807.1 crore in 2002-03</td>
<td>Rs. 475 crore</td>
</tr>
<tr>
<td>Profit After Tax</td>
<td>Rs. 557.2 crore in 2002-03</td>
<td>Rs. 332 crore</td>
</tr>
<tr>
<td>Highest Turnover</td>
<td>Rs. 7224 crore in 2004-05</td>
<td>Rs. 9500 crore</td>
</tr>
<tr>
<td>Plant Productivity</td>
<td>Rs. 1542 MT in 2004-05</td>
<td>1669 MT per head</td>
</tr>
<tr>
<td>Marketing Productivity</td>
<td>4043 MT in 2004-05</td>
<td>5565 MT per head</td>
</tr>
<tr>
<td>Composite Energy Consumption</td>
<td>6.146 Gael/ MT in 2004-05</td>
<td>5.981 Gael/MT</td>
</tr>
</tbody>
</table>

Table No. 33

IFFCO also received **Several Major Awards** during the year, namely:

- **National Safety Award** by IFFCO Aonla as Runner-up during the year 2004 based on Longest Accident Free Year.
- **Golden Peacock Environment Management Award-2005** by IFFCO Aonla (Certificate of Commendation).
- **National Awards for Excellence in Energy management-2005** by IFFCO Phulpur by Confederation of India Industry (CII).
- “Certificate of Honor” for working more than One million man-hours accident-free and Lowest Disabling Injury Index for IFFCO Kalol and for working more than 3 million man hours (accident free) during 2004 from Gujarat Safety Council for Kandla.
- **First position for the ‘Best Horticultural Maintained Plant’** by IFFCO Kalol from Gujarat Horticulture Association.
- **FAl’s Best Overall Production Performance Award for 2004-05** for complex fertilizers plant for 2004 for Kandla.
- **First Prize for Corporate Films** from Public Relations Society of India.
Kandla Unit- Awards

• 19 Safety Awards from National Safety Council- U.S.A.
• 14 Safety Awards from the National Safety Council, Bombay, Government of India.
• 29 Safety Awards from Gujarat Safety Council, Baroda.
• 01 National Productivity Council (NPC) best productivity Awards for the year 1997-98 in the category of fertilizer Industry- Phosphatic Sector presented in August’00.
• 01 Environment Silver Trophy Award from Green Tech Foundation for the year 2003-2004.
### Annual Consumption of Major Inputs of IFFCO

<table>
<thead>
<tr>
<th>Year</th>
<th>P2O5 (MT)</th>
<th>Ammonia (MT)</th>
<th>Potash (MT)</th>
<th>Urea (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-97</td>
<td>356608.542</td>
<td>154287.912</td>
<td>163953.126</td>
<td>26157.283</td>
</tr>
<tr>
<td>1997-98</td>
<td>487837.260</td>
<td>210434.480</td>
<td>228889.455</td>
<td>37141.986</td>
</tr>
<tr>
<td>1998-99</td>
<td>511840.007</td>
<td>223635.309</td>
<td>214262.647</td>
<td>36336.808</td>
</tr>
<tr>
<td>1999-00</td>
<td>733857.945</td>
<td>317917.778</td>
<td>365047.027</td>
<td>66424.944</td>
</tr>
<tr>
<td>2000-01</td>
<td>659273.180</td>
<td>284003.553</td>
<td>254101.644</td>
<td>66312.626</td>
</tr>
<tr>
<td>2001-02</td>
<td>797511.053</td>
<td>356681.750</td>
<td>328552.389</td>
<td>37890.990</td>
</tr>
<tr>
<td>2002-03</td>
<td>953854.738</td>
<td>418640.258</td>
<td>288353.680</td>
<td>63088.297</td>
</tr>
<tr>
<td>2003-04</td>
<td>839936.861</td>
<td>374535.221</td>
<td>275209.163</td>
<td>49556.931</td>
</tr>
<tr>
<td>2004-05</td>
<td>952216.039</td>
<td>414608.883</td>
<td>382800.465</td>
<td>67315.129</td>
</tr>
</tbody>
</table>

Table No. 34


### Environment Management:

Kandla unit initiated the process of obtaining ISO 14001 certification. National Productivity Council was the consultants for the same. M/S BVQI are the auditors. The final audit for assessment of issue of certificate was carried out and IFFCO Kandla has been certified as Environmental Standards ISO 14001: 1996 company by M/S BVQI for the operational scope of “Manufacture of DAP and NPK fertilizer” with effect from 27th Nov ‘2000.
Efforts to reduce gaseous & particulate matter emissions from the Stacks:

Emissions of ammonia from the stacks, from the earlier range of around 2% of consumption has been reduced to the present figure of around 0.5%, resulting in a saving of Rs. 1.75 crores per annum. This was achieved by replacing the existing scrubber spray nozzles with high efficiency spray nozzles thereby recovering valuable nutrients from the stack gases and also reducing the fertilizer dust emissions.

In order to reduce the dust in the product storage silo, a de-dusting system was designed, fabricated and installed departmentally in the product handling system of NPK plant. This system is performing satisfactorily. Dust scrubbing systems in NPK plant and bagging plant are also monitored carefully and its performance is being enhanced with modifications in the system from time to time, to reduce dust in the plant.

Efforts to conserve water:

The Kutch district where Kandla plant is located suffers from perennial water shortage. Hence IFFCO takes all measures to reduce the consumption of water. It also undertakes various projects to ease the problem of scarce water availability. In order to reduce the water consumption and yet maintain the greenery at the plant site township, schemes for reuse of treated domestic sewage water have been implemented successfully.
A rain water recharging well has been built at the township with a storage pond for conserving rain water which otherwise is drained into the sea thereby increasing the water table & at the same time reducing the salinity.

Other water conservation and preservation schemes in this region of scarce potable water availability are construction of check dams at village Vira and Jogni in Kutch district at a cost of Rs. 25 lakh each. Drinking and irrigation water lines are provided at Panthia villages by IFFCO under the village adoption programmes.

The existing sewage treatment plant at the site was upgraded and its capacity enhanced from 100 cu. Mtrs/day to 250 cu. Mtrs/ day at a cost of Rs. 44 lakh the treated water is used for horticulture purpose, thereby conserving water in this region of scarce supply. At the township a new sewage treatment plant of 600 cu. Mtrs/day capacity at a cost of Rs. 130 lakh was constructed for reuse of treated water for horticulture purpose and for green belt development.

**Green belt development**

Green belt development work has been given utmost importance at Kandla. The soil is high in salinity and adverse to plant growth, however despite this handicap, green belt was develop extensively in the factory premises. The recent cyclone damaged the existing green belt due to the flooding of salty high tide water in the area. The soil has been refilled and green belt development was undertaken on war footing and as a result, a lot of plants have been grown, I and around the plant premises. The limitation of water for
horticulture purpose has also been overcome by using treated water from the domestic sewage water treatment plant at the plant site.
3. PERFORMANCE OF KRIBHCO

From the ancient time India has been the country of farmer and every Govt. from time to time has been trying to push up the farmers and farming. After independence Govt. of India has adopted the polices which were helpful to develop the rural areas through restructuring the pace of farming. India co-operative movement was basically organized against the exploitation of moneylenders, to exonerate the farmer’s community from the web of poverty and indebtedness. A need therefore was left to organize the co-operative through special legislation in 1892. The Madras Govt. appointed Sir Frederick Nicholson to study the theory and practices of agricultural and other banks in Europe and to suggest ways and means by which a similar movement might be popularized in India. The co-operative credit society’s act 1904 was passed. This act is heard in co-operative movement in India.

KRIBHCO was registered as multi-state co-operative society act was more effective for the employment and development and effective fractioning of the multi-state co-operative societies act 1984 come into force in 1985.

Krishak Bharti Co-operative Ltd. (KRIBHCO) come in existence on 17 April 1980; in the form of a national level Co-operative Society with the object of production, marketing and transfer of the latest form of Technology of chemical fertilizer. It took over to help the farmers by providing them better quality of fertilizer and other related facilities. The main objective of KRIBHCO has been to boo Up small co-operative societies through providing them quality fertilizer and launching various promotional and educational programmes. With the
ideal in mind that the farmer can get the advantages of good quality of fertilizer not by and institution, which is confined to produce, but it can be helpful to the farmers if it ensures the delivery of quality fertilizer to the farmers for using it. With this idea the KRIBHCO took over both the production and marketing of fertilizer in fact, this co-operative institute believes in the ideal of marketing ideal fertilizer and get it available to the real users.

One of the most unique features of KRIBHCO is its character of mutual co-operative, which not only keeps its activities to produce and market fertilizer but also to find out most adequate solution to the problem of its member societies.

Agricultural development in India has passed through various stages over the time up to 1947 Agriculture was confined to growing crops only to meet their requirement by farming community. After Independence farmer’s started to take more than one crop on larger area of land. But due to the population increase scarce availability of food was experienced and thus “grow More Food “ complaints was started during this period, use of high yielding varieties and chemical fertilizer become very popular. April 1980 will be regarded as a red-letter day in the annuls of the fertilizer industry and co-operative in the country because this auspicious day witnessed the birth of a giant-Krishak Bharti Co-operative Limited (KRIBHCO). This society was to give to the Indian Farmers the world’s largest fertilizer plant in the co-operative sector, which grew up on the bank of the river TAPTI near Surat in Gujarat at a place called HAZIRA. The KRIBHCO plant which represents the ultimate in the latest
fertilizer technology has been a harbinger of an era of plenty and prosperity for the farmers and the country as well under the administrative control of the department of fertilizer, Govt. of India. Krishak Bharti Cooperative Limited (KRIBHCO), a multi-unit co-operative society was promoted jointly by IFFCO and the agriculture co-operatives all over the Country. Under its objective of production and distribution of agricultural input to farmers through co-operative channel, it is also committed to strengthening and promoting the cause of modern agriculture and agricultural co-operative in the country.

KRIBHCO has fully involved the co-operative philosophy. It aims at ushering in an era of self-sufficiency and prosperity for the farmers at the right time and right place. One of the cardinal principles of KRIBHCO philosophy is to impart training and education in improved and the latest farm technology.

**KRIBHCO has its own**

- Urea- plant
- Bio-Fertilizer plant
- Seed- Multiplication programmer
- It has implemented KRIBHCO INDO BRITISH RAINFED FARMING PROJECT’S.

**Services to co-operative and farmers**

The society continued its vigorous effects towards agriculture technology transfer in farmer’s welfare schemes such as farmers meeting, field work,
demonstrations, soil testing and plant protection campaigners, crop seminars etc. this help and benefits more than three lakhs farmers across the country.

**Vigilance activities**

The society considers vigilance to be an integral part of management function. Executive director’s vigilance posted at corporate office provides direction, guidance and supervision over the vigilance efforts of society. Vigilance office have been posted at the plant and zonal office with a view to increase transparency and accountability in working, steps are taken to sanities the general public by making them aware of their right and advising them to seek redress of grievances, if any. Vigilance seminars are also organized where executives are exposed to the view of the leading vigilance functionaries of the country.

**Financial position**

The society has achieved excellent financial results for the financial year 2003-2004. The society earned pre tax profit of Rs. 219.51 crores during the year and a post tax profit of Rs. 152.70 Crores. The net worth of the society is Rs. 2094.81 crores as on March 31.2004. The financial result of the society is increasing regularly which is a good sign.
## CAPITAL OF KRIBHCO

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<td>Others cooperative</td>
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Table No. 35

Source: KRIBHCO
Figure No. 18

Source: KRIBHCO
FINANCIAL PATTERN (AS ON 31-03-2006) Rs IN CRORES

DISTRIBUTION OF INCOME FOR THE YEAR ENDED 31.03.06

Figure No. 19

Source: KRIBHCO
Figure No. 20

Source: KRIBHCO
SOURCES OF INCOME FOR THE YEAR ENDED 31.03.06 (RS. IN CRORE)

263.89 Other Revenue (15 %)
110.50 Freight Subsidy (6 %)
140.28 RPS (8 %)
1257.30 Net Sales (71 %)

Source: KRIBHCO
4. MARKET STRATEGY OF KRIBHCO

Co-operative plays a vital role in the economy of India as they overcome the defects of capitalism as well as remain away from the evil of communism. Co-operative is considered to be the best organisations suited to the ancient culture and traditions of our country. At present the Indian co-operative system is the biggest in the whole world. In India there are 4.53 lakh co-operative societies of all kinds with membership of 20.40 crores and a working capital of more than Rs. 1, 60,000 crores.

The share of co-operative in National economy has reached a commendable level. Co-operative account for about 57% of the total sugar production, 20% of the export of the cotton yarn, and 27% of the rice procurement, 60% of the total agricultural credit is disbursed through co-operative sector and plays a significant role in production of dairy products, edible oils, etc. In Co-operative there are around 76000 fertilizer retail outlets, which distribute over 30% of total fertilizer consumption. Fertilizer production and distribution is one of the important sectors where co-operative have made tremendous progress. IFFCO was formed during 1967 as an experiment in a sophisticated field which eventually blossomed to occupy a place of pride in the Indian fertilizer project in the world i.e. KRIBHCO.

The important objective of the society are to promote the economic in rarest of its members by undertaking manufacture of fertilizer and allied products with maximum efficiency rendering services to the farmers through the co-Operative channel for uplifting the socio-economic status of the development
of agriculture and rural Development. At the turn of the twenty first century the main concern of the world will be the Global population. This pressure will be the greatest and perhaps uncontrollable especially in economically developing countries like India. There will be more mouths to feed due to the increase in the population. In order to meet their requirements, the domestic agricultural production has to be increased since the land resources are limited efforts are required to be made to increase the agricultural production through the use of fertilizer and their balanced application.

Therefore fertilizer co-operative can play a vital role in this direction. Presently, fertilizer co-operatives are contributing significantly to the total fertilizer production of the country. About 33% of the total fertilizer production handled in India was though co-operative channels. Thus the fertilizer co-operative are general to fulfill the need of the country thereby helping the farmers in increasing the agriculture production in the changed scenario of economic activities and adopt new technologies. Therefore the key to success is in member loyally to the co-operative and the management honesty and efficiency.

**KRIBHCO Marketing Procedure**

KRIBHCO has adopted about 500, village level member societies in 14 states. A variety of facilities are being provided like free availability of the farm implements, furniture’s, face lift, technical assistance, improvement in godown facilities, etc.
**Marketing Strategy**

“Marketing Strategy is a plan for selecting and analyzing a target market and developing and maintaining a marketing mix that will satisfy this target market”. A marketing strategy determines the means for achieving marketing objectives. It is critical to an organization because it is used to assess customer needs and the firm’s potential for gaining a competitive advantage. When a marketing strategy is implemented properly, it achieves the organization’s marketing objectives; these in turn contribute to accomplishing the organizations overall objectives. Thus a degree of overlap exists between organizational strategy and marketing strategy.

The strategy of marketing of KRIBHCO product sales is only through co-operative/ institutional agencies as stated above. In this area it has to face tough competition KRIBHCO has adopted a multi-dimensional policy of marketing which includes the following: -

**Selective approach**

The organization focuses its marketing efforts on this group and tries to meet its specific needs and preferences. When analyzing potential target markets, marketing managers must determine whether the organization has the resources to produce a marketing mix that meets the needs of the target market and whether satisfying those needs is consistent with the firm’s overall objectives. Managers must also evaluate possible markets to see how entering
they would affect the firm’s sales, costs, and profits. Finally managers must consider the size and number of competitors already in that market.

Careful selection of a target market is necessary for an organization to achieve its marketing objectives. Many businesses have floundered or failed because they did not adequately identify the target group at which they were aiming their products and marketing efforts.

KRIBHCO in order to have a comparative advantage and the selected markets for its products has identified the areas for its approach according to the demand for agro products. It gives the good return in Punjab, Haryana, Andhra Pradesh, U.P., Gujarat and Maharashtra, in comparison to Bihar, Rajasthan, West Bengal and Orrisa.

**Product & Productivity**

The product variable is important in marketing strategy decision because it relate directly to satisfying the needs and wants of the target market. Business must find out what customers need and want (through marketing research) and create products with characteristics that fulfill those needs and wants. Businesses may develop other aspects of the product to meet customer’s needs, such as packaging, labeling, warranties, and service.

To satisfy customers and achieve organizational objectives a marketer must continue to develop new products modify and improve existing ones and eliminate those that no longer satisfy buyers and yield acceptable profits.
The development efforts for improving production and productivity of agro products mainly constitute increasing irrigation potential, land holdings, banking facilities, and encouraging use of high quality planting material/ hybrid seed, etc. special efforts are being made to promote the sales of KRIBHCO products.

**Post Harvest Management**
After production of products as urea, seed, and Biofertilizers, Management carefully maintains the quality of products at plant buffer and in transportation.

**Price Variable**
Marketing managers are usually involved in establishing pricing and determining product prices. The price variable is important in the design of marketing strategy because customers are concerned about the value obtained in a purchase and price is the easiest of the marketing mix variable to alter.

**Price, often used as a competition sometimes leads to price wars. But in KRIBHCO government coats case price. So the price of its entire product is too low so that every individual farmer can use them.**
**Packing**

At the plant a separate department for checking the packing material strength and quality has also been maintained. After checking the lot of bags supplied to packing and test the tension, it is ensured that the space in bags is enough to maintain the quality of material and load allotted on the bags also.

**Promotion**

The promotion variable is important in the marketing strategy because it facilitates exchange by informing consumers about an organization and its products. The promotion variable includes advertising, sales, promotion, publicity, and personal selling. Promotion variable is used to increase public awareness of an organization a new product or a new brand. It may also be used to enhance a firm’s image. In addition promotion is used to educate consumer about product features or to urge people to adopt a particular position on a political or social issue.

Larger and small profit and nonprofit organization alike as well as individuals and trade associations rely heavily on promotion. KRIBHCO also use this promotion variable in order to motivate the farmers to use their products, they also give important information to the farmers about crops.

**Quality**

Concept of total quality is being promoted and exports are being motivated to assure quality right from stage first and to maintain the quality chain till the end. Good material, appropriate pre and post harvest management practices,
high-grade packing, etc are the essential ingredient prescribed to active good quality. As a matter of policy quality of products is considered essentially a matter of concern between the buyer and seller and for dispatch quality, inspections are made mandatory by the management. A network of well-equipped labs is being established to facilitate quality control test.

**Infrastructure**

In dealing with the distribution variable a marketing manager attempts to make products available in the quantities desired to as many customers as possible and to keep physical distribution costs (inventory, transportation, and storage) as low as possible. The distribution variable also involves selecting intermediaries (wholesalers and retailers), establishing and maintaining inventory control procedures, and developing and managing transportation and storage systems.

Products can be distributed in numerous ways and innovations in distribution can dramatically improve a firm’s sales. Heavy public and co-operative investment are being made towards creation of establish the chain to transport the material from plant to buffers and 90 thousand MT godowns to handle the product in emergency hours. About 90% material dispatch is done through railways and about 200 Km. Through trucks or local transports.

**Aggressive Marketing**

To promote national market of that brand KRIBHCO established and popularized in 14 states which have a potential market.
The IFFCO and KRIBHCO, both are the co-operative sector organization of fertilizer production and marketing in India. The main competition of KRIBHCO is with IFFCO because the marketing channel and warehouse of both are same, i.e. co-operative societies. KRIBHCO has to face keen competition with IFFCO because of so many reasons, viz: -

a. IFFCO regularly produce and give the complex fertilizer throughout the year and thus having a regular and continuous approach to the society at all times, which is not possible with KRIBHCO.

b. IFFCO’s product prices are less than KRIBHCO which encourage the farmers to use their products, as they have shortage of funds. So the co-operative find it more profitable to keep IFFCO’s product.

c. IFFCO have more branches in Uttarakhand, then KRIBHCO so it’s working is very effective and they fulfilled the demand of the co-operative at right time.

d. Being better organization, IFFCO is in a position to give more commission and rebate on their sales. Anyhow KRIBHCO has also to follow this policy, which by all means, increases its profits.

e. Transportation cost of KRIBHCO are much more than of IFFCO because it has four production plant being Kalol, Kandla, Phoolur and Aonala. While KRIBHCO has only one product unit at Hazira.

f. Another plus point of IFFCO is the production of complex fertilizer throughout the year and thus having a regular and continuous approach to the society at all times. It is not possible to KRIBHCO.

The above analysis of different defects and shortcoming very clearly
prove that KRIBHCO is not working serving and earning to the extent it is supposed to be. If some fruitful solution is found out to the above defect and shortcomings investigator is confined that a new spirit will evolve and KRIBHCO will go a long way in showing an ever increasing strength of working serving and earning and will also be strong enough to face any competition by and like wise organization.
5. PERFORMANCE OF INDO GULF FERTILIZERS

Indo Gulf Fertilizers Limited manufactures/markets fertilizers and other agri-inputs (seeds, pesticides and micro-nutrients), under the umbrella brand Birla Shaktiman. Its main product, Birla Shaktiman urea, a nitrogenous fertilizer, is manufactured at Jadishpur factory district Sultan in Uttar Pradesh. The total current production capability is about 9.95 lakh tonnes, which is about 05% of all India urea consumption. However, since area being bulk product marketing is limited to states in the near vicinity of the plant location and for Indo Gulf Uttar Pradesh, Bihar and West Bengal are the primary markets.

The marketing activities started way back in April 1987, through a unique seeding programme, which was done by sourcing urea from other manufactures and branding/, marketing the same as Shaktiman Urea. The objective was to create brand awareness and also to set up the marketing/distribution infrastructure much ahead of commercial production which strated in October 1988. The brand Shaktiman was positioned as a premium brand in the market on the pivots of “Gun-vatta-quality and sewa-service”. It was a conscious strategy not to sell urea as a commodity by using discounts as a selling tool but as premium brand. This brand equity has been built up over the years by conducting various above and below the line activities specifically focused on creating economic value for the consumers- The Farming Community.
Shaktiman Krishi Sewa Kendra

IN 1987 Indo Gulf opened A Chain of Shaktiman Krishi Sewa Kendra a one-stop multi-input service centers at selected location throughout the marketing territory. Popularly known as “SKSKs”, these centers are run through selected wholesalers and are manned by ‘field assistants’, these field assistants are graduates/post graduates in agriculture and are technically qualified and trained. Each SKSK cover 20 villages within a radius of 10 kms and the field assistants’ cover each and every village on a fixed periodicity based in his daily travel plan.

The efforts of field assistant are further multiplied by the “Shaktiman Farmer” (selected one Shaktiman Farmer each from 20 villages of the command area) who is the most progressive and influential person, albeit a role model for each village. The Shaktiman Farmer is also the company spokesmen for their villages.

These Kendras are well equipped with a meeting place, magazines and journals on latest agriculture practices and is a nucleus for knowledge dissemination.

Various extension education programmes are regularly undertaken through these SKSKs and the details are same as given under the SKSK.
Shaktiman Krishi Swayam Rozgar Kendras (SKSRKS)

After successful implementation of Shaktiman Krishi Sewa Kendra (SKSKs), it was felt desirable to expand the network of these types of Krishi Sewa Kendra for providing better services to farmers at more locations in rural areas. It was with this objective that a new involving unemployed agriculture graduates as entrepreneurs to run similar Krishi Sewa Kendra to provide services to rural farmers. This also helps in generating employment in rural areas. In order to ensure viability of this project, the locations for these SKSRKs (Shaktiman Krishi Swayam Rojgar Kendra) were limited to the economic zone i.e. within a radius of 200km from the plant so that material is made available within short notice directly from our plant by road.

These SKSRKs are exclusive Shaktiman outlets run by agriculture graduates under the supervision of company agronomist. Each SKSRK has a command area of 20 villages around it, i.e., 10 villages in 5km radius, which is the primary command areas, and another 10 villages within the radius of 6 to 10km, which is the secondary command area.

These SKSRKs act as a focal point for carrying out extension education programmes and provide all agriculture inputs and advisory service through a single window. In addition to agri-inputs, agriculture implements such as sprayers’ dusters are also made available to farmers on a token rent of Rs.1 per day. The following activities are organized through these SKSRKs:

1. Soil testing and fertility mapping.
2. Farmers’ training camp.
3. Shaktiman farmers meeting.
4. Field days.
5. Distribution of literatures.
6. Farmers’ tour (farmer’s tour to universities/agriculture exhibition/meals).

**Benefits for the entrepreneur**

1. An opportunity of employment and self-development as an entrepreneur.
2. Material is received at the SKSKs directly from the plant at company rate.
3. Opportunities for further development and growth as a prominent local trader.
4. Technical and product support from the company.
5. A service to local farmers further brings in respect and better image in the community.

**Change Agent**

Retailers are The Most Important Link between the company and the farming community and they play a critical role in dissemination of information. Change agents are selected primarily from the high performing multi agro-input retailers from our supply chain who are self-motivated and have a service oriented approach. On selection they are given initial training to equip them
with the modern agricultural practices. Retailer’s performance in term of participation in our extension education programmes is also given significant weight age for their selection as change agent.

Apart from providing material directly from our plant by road to selected change agents we are also conducting following extension education programmes through the change agents on a cost-sharing basis:

1. Soil testing.
2. Distribution of literature.
3. Farmers’ training camp/farmers group meeting.

At present, we are having 21-nos.of changes for the change agents.

1. Operating as a direct dealing point of the company.
2. Material is received by some of the change agent directly from the plant at company rate.
3. Opportunities for further development and growth as a prominent local trader.
4. Technical and product support from the company.
5. A service to local farmers further brings in respect and better image in the community.

**Six Sigma In Village**

SIX SIGMA IS A RENOWNED MEASURE OF quality that strives for near perfection. Six Sigma is a disciplined data-driven approach and methodology for eliminating defects in any process from manufacturing to transactional and from product to service. The statistical representation of Six Sigma describes
quantitatively how a process is performing. To achieve Six Sigma, a process must not produce more than 3.4 defects per million opportunities. A Six Sigma defect is defined as anything outside of customer specifications. A Six Sigma opportunity is then the total quantity of chances for a defect.

**Six Sigma…the Indo Gulf way**

The implementation of a measurement based strategy on the field with the farmer that focuses on yield improvement and variation reduction through the application of Six Sigma improvement processes. The goal is to have the farmer maximum and best quality yield.

**Objectives of the Sigma Project**

To maximize the yield for the farmer’s field by applying the modern techniques based on soil testing reports with zero defects. This can be further scoped to help farmers become

A. *More profitable.*
   - Grow revenue
   - Cut costs
   - Improve delivery time.
   - Manage/reduce inventory.
   - Increase customer satisfaction/end product.

B. Develop skill such as
   - Decision making on cropping patterns.
   - Problem solving on soil related issues.
• Working as a team for better yield and monetary gains.
• Finding sustainable partners to buy the end product.

C. Making their own field work better a calendar of activities for every farmer is made. This will record the
• Survey of the village.
• Selection of the plot.
• Preparation of the land.
• Soil testing.
• Date of sowing.
• First irrigation.
• Application of weedicide
• First top dressing of urea.
• Application of micronutrients.
• Plant protection measures.
• Second irrigation.
• Second top dressing.
• Harvesting.
• Threshing.
• Field data day-yield-Krishak Divas.

The project started from 12 plots of 6 villages during Rabi 03-04 and average gain yield was found to be from 23% in soil test based. After success of this process the technique process was replicated in 96 plots of 48 villages during Kharif 04. Average gain yield was from 10-25% in Soil test based dose plots as compared to farmers’ own practice. The technique process was further
explored in 164 plots of 121 villages, during Rabi 04-05 it was found that the average grain yield was from 11-20%.

**Neem Coated Birla Shaktiman Krishidev Urea**

During 2004-05, INDO GULF strategically decided to bring in radical innovation as differentiating factors. Providing the farmers with Neem coated Birla Shaktiman Dev urea, a discontinuous leap in the value proposition to them, did this do this? A full-scale launch of the brand Birla Shaktiman Krishi Dev urea Neem coated urea was done during Kharif 2004.

The initial market seeding exercise was done in Rabi 03-04 where only about 250 mt was placed in the market with the basic objective of conducting crop demonstration to establish the agronomic efficacy of coated urea.

During the trial phase extensive crop demonstration trials were conducted on selected plots of farmers where the incremental efficacy of the Neem coated urea vis-à-vis normal urea was statically, successfully validated. As benchmarked with competition this was a significant product/brand differentiation as no other competitor was able to match the quality and volume capability as done by Indo Gulf during 2004-05. The full-scale launch encompassed all aspects of the marketing mix and an innovative brand logo was designed to differentiate the brand visibly at the point of purchase.
Advantages of Neem Coated Urea to Farmers.

The primary reason for coating the Birla shaktiman urea prills with Neem oil emulsion was to prevent leaching and volatilization losses of N. but during field trials and subsequent full scale launch it was evidenced that the farmers were being benefited with other collateral incremental product features, namely,

1. Pest Repellant: Birla Shaktiman Neem coated urea was found to be repelling pests and insects from the field where they were applied. The strong pungent smell of the natural Neem oil was producing such an effect.

2. Prevent marauding of crops by bovine animals (Blue bulls-Nigma). The strong and pungent smell was found to drive away wild bovine in the country (wild bovine contributes to about 20% of the total crop loss).

Shaktiman Farmers

Shaktiman farmer is the most progressive and influential person, albeit a role model for each village. These shaktiman farmers are also the company spokesmen for their villages. The SKSKs and SKSRKs organize the extension education programme through these farmers. In each village in the command area (10 km radius of SKSKs/SKSRKs), one shaktiman farmer is selected for implementation of various extension education programmes conducted through SKSKs/SKSRKs.

For motivation these selected farmers, we are conducting ‘Shaktiman farmers Meeting’ once in every season through the SKSKs/SKSRKs wherein suggestions and the problem of the village farmers are discussed and
Solutions/ remedial measures are given for further implementation/knowledge dissemination in the next season.

Shaktiman Kutumb Gold Club
2. Dissemination of knowledge through focused ‘extension education programmes’ to increase their income and prosperity.
3. To convert them as the “Brand Ambassadors/opinion leaders for Shaktiman, ultimately.”
4. Agriculture department of UP has also started a similar scheme in the name of Kisan mitra for implementation under each Gram Sabha throughout the state. Recently one of the Shaktiman farmer Mr. Dharam Singh Yadav has received first prize, a most coveted award of Krishi Pandit from Hon’ble Agriculture Minister of Uttar Pradesh for the year 2004-05. He has also been given a cash award of Rs 3000/-for his outstanding contribution to agriculture. District Magistrate, Lucknow has also recognized his efforts by awarding a cash prize for his contribution to modern cultivation techniques. Mr.Yadav belongs to village Bajgiha, district Lucknow. This village is under the command area of the SKSK Gangaganj.

Birla Shaktiman Farmer Recognized for Exemplary Growth of Medicinal/Cash Crops under ‘Six Sigma Process’
Mr. Dev Narayan Patel, Birla Shaktiman farmer of village Bachan Kheda under Shaktiman Krishi Sewa Kendra, Ganganj, district Lucknow, Uttar Pradesh, participated in the state level competition on fostering growth of medicinal crops organized at Governor House, UP on 20th February 2005. On the basis of the various medicinal/cash crops as displayed by him, he was awarded a prize on Aswagandha, Isabgol, Satawari and Baghee (medicinal crops) and was also conferred by an award on cauliflower, ratalu (sweet potato) and French beans (cash crops). He was awarded and appreciated by the Hon’able Governor of Uttar Pradesh, Mr. T.Rajeshwar Rao
# Agri-extension services/ CRM activities (Indo Gulf)

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<tr>
<td></td>
<td>B- Non six sigma</td>
<td>610</td>
<td>991</td>
<td>750</td>
</tr>
<tr>
<td></td>
<td>C-Third crop</td>
<td>0</td>
<td>0</td>
<td>200 No.</td>
</tr>
<tr>
<td></td>
<td>D- Medicinal crop</td>
<td>0</td>
<td>12 No.</td>
<td>50 No.</td>
</tr>
<tr>
<td>6</td>
<td>Farmers training camp</td>
<td>174</td>
<td>238</td>
<td>260</td>
</tr>
<tr>
<td></td>
<td>A-Farmers participation</td>
<td>13920</td>
<td>24202</td>
<td>20800</td>
</tr>
<tr>
<td>7</td>
<td>Field days</td>
<td>75</td>
<td>121</td>
<td>242</td>
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<tr>
<td></td>
<td>A- farmers participation</td>
<td>6000</td>
<td>14450</td>
<td>19360</td>
</tr>
<tr>
<td>8</td>
<td>Farmers conducted tour</td>
<td>2</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
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<td>A-Farmers participation</td>
<td>70</td>
<td>1120</td>
<td>1000</td>
</tr>
<tr>
<td>9</td>
<td>Farmers group meeting/chaupals</td>
<td>635</td>
<td>784</td>
<td>1060</td>
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<tr>
<td></td>
<td>A-Farmers participation</td>
<td>50800</td>
<td>91174</td>
<td>106000</td>
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<tr>
<td>10</td>
<td>Veterinary camp/medical health</td>
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<td>136</td>
<td>400</td>
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<td>Checkup</td>
<td>0</td>
<td>23604</td>
<td>3200</td>
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<tr>
<td></td>
<td>A-Farmers participation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>No of Shaktiman farmers</td>
<td>1600</td>
<td>2540</td>
<td>3000</td>
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<tr>
<td>12</td>
<td>Shaktiman Kisan gold club</td>
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<td>0</td>
<td>250</td>
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Table No. 36

Source: Indo Gulf Fertilizers Ltd.
Crop Demonstration On Balanced Fertilizer Usage

For providing impetus and to attract large scale participation, a demonstration plot is laid out on the field of progressive farmers where all the package of practices are personally supervised by the field assistants/ agronomist of the SKSKs. Simultaneously, reference plots are selected as per package of practice actually followed by the farmers for comparing at a later date, the value additions in real terms on maturity of the crops. This process has had a startling effect and electrifying impact on customers who have realized the additional real value generation within the same land and other resources.