ICAR RESEARCH COMPLEX FOR EASTERN REGION, PATNA

MANDATE
- Strategic and adaptive research for efficient integrated management of natural resources to enhance productivity of agricultural production systems in eastern region.
- Transform low productivity-high potential eastern region into high productivity region for food, nutritional and livelihood security.
- Utilization of seasonally waterlogged and perennial water bodies for multiple uses of water.
- Promote network and consortia research in the eastern region.

MISSION
Transform “Low Productivity – High Potential” eastern region into High Productivity region for food, nutritional and livelihood security in a manner that is environmentally sustainable and socially acceptable.

VISION
A broad based institutional framework to address diverse issues relating to land and water resources management, crop husbandry, horticulture, fishery, livestock and poultry, agro-processing, and socio-economic aspects in a holistic manner for enhancing research capability and providing a backstopping for improvement in agricultural productivity and sustainability in the eastern region.

SIGNIFICANT ACHIEVEMENTS
- Of the 19 elite rice genotypes evaluated for submergence tolerance under 16 days of complete submergence IR10L182 (5.95 t/ha), IR09L311 (5.73 t/ha), IR09L337 (5.66 t/ha) and IR09L204 (5.62 t/ha) were found promising over check varieties Swarna (5.57 t/ha) and Swarna sub-1 (5.31 t/ha).
- A total 40 numbers of advanced breeding lines has been evaluated for drought tolerance. Three lines viz., RCPR 8 (for aerobic condition), RCPR 16 (for direct-seeded drought-prone condition) and RCPR 15 (for irrigated condition) ranked first, and 2 lines viz., RCPR 14 and RCPR 11 (for irrigated condition) ranked second in All India Coordinated Rice Improvement Project (AICRIP) trials. These lines could be further utilized for developing drought tolerant rice varieties.
- Of the 15 wheat genotypes evaluated for heat stress tolerance NW 1012, Raj 4238, Kundan, GW 273, HI 1563, HD 2987, Bazz, Lok 1, UP 262 and PBW 154 performed better under late sown heat stress condition, i.e., the last week of December with average productivity of 3.6 to 4.0 t/ha.
- Total 285 nos. of mango genotypes, 46 litchi, 11 sapota, 15 bael, 5 tamarind, 22 guava, 6 peach, 10 pear; 30 lesser-known wild edible spp., 18 mushroom spp., 32 strains of makhana, and the germplasm of rice bean, winged bean, faba bean, valvet bean, ivy gourd, spine gourd, pointed gourd, bottle gourd, Moringa oleifera, custard apple and jackfruit has been conserved at the institute.
- Fifteen varieties of vegetables/rice/makhana have been developed and released for cultivation in eastern region. Quality planting material of mango, litchi, guava and bael (31000 thousand) has also been produced for improving productivity in Hill and Plateau region.
- A total of 2.30 tonnes of breeder/truthfully leveled seeds of different vegetable crops and 3.84 tonnes of mushroom spawn have been produced.
- Participatory Hybrid seed production of Tomato- 50,000 ha area and brinjal in 30,000 ha area.
- Characterization of indigenous Purnea Red and Bachaur cattle, Diara buffalo and Sahabadi sheep has been done in its breeding tract in Bihar.
- Effect of heat stress on biochemical and production characteristics of Murrah buffaloes was studied. The serum cortisol level was found to increase whereas the serum T3 and T4 levels were observed to decrease in response to heat stress at the temperature above 350C. Serum cortisol level in summer was 5.34±0.24 ng/ml in comparison to 3.76±0.21 ng/ml in winter season. Similarly, declining trends were also observed in blood parameters during heat stress.

LOCATIONS OF REGIONAL STATIONS
- ICAR RCER Research Centre, Ranchi, Jharkhand.
- ICAR RCER Research Centre for Makhana, Darbhanga, Bihar.

FIVE BEST TECHNOLOGIES/PRODUCTS
- One variety of rice “Swarna Shreya” and two varieties of faba bean “Swarna Gaurav” & “Swarna Suraksha” were released by the State Variety Release Committee, Bihar.
- Twelve varieties of tomato have been developed and released through SVRC for cultivation in Hill and Plateau region of Eastern India
- Bihar-specific mineral mixture “Swarna Min” developed for dairy animal.
- Integrated Fish-livestock Farming
- Rejuvenation of unproductive mango orchards

NEW INITIATIVES
- Management of low temperature tolerant in boro rice in EIGP and management of high intensity rainfall in Kharif in middle IGM
- Vegetable seed production of 55 varieties in consortium mode
• Extension of TSP programmes in West Bengal, Odisha and Rewa Maheswar Assam.
• Rice-fallow management through conservation agriculture in farmer’s field in Bihar, Jharkhand and Chhattisgarh.
• Integrated farming system for improvement of nutrition and livelihood of farm women
• Systematic approach to research and adoption of SRI in Bihar
• Sustainable & Resilient Farming System Intensification (SRFSI) in Eastern Gangetic Plains
• Improving water for dry season agriculture by marginal and tenant farmers in the Eastern Gangetic Plains
• Farming of Sahiwal cattle at the institute
• Collection & maintenance of indigenous germplasm of ducks.
• Standardization of breeding techniques in ornamental fishes

COLLABORATIVE PARTNERS
The institute has established linkages with national and international organizations like DBT, State Govt., NABARD, TATA Trust, SAUs, MoWR, NBPG, CWC, IWM, IRRI, IPGRI, ACIAR and CIMMYT.

FLAGSHIP PROGRAMMES
• Development of location specific Integrated Farming System (IFS) models for different agro-climatic zone of Eastern region.
• Improving production potential of Wetland Ecosystems through technological interventions.
• Climate resilient agriculture in Indo-gangetic plains.

THRUST AREAS FOR XII PLAN
• Resource based IFS mode of food production system.
• Rehabilitation of wetland eco-system.
• Model watershed development in Hill and Plateau region.
• Domestication of potential wild edibles in farming systems.
• Water productivity enhancement through suitable technological interventions.
• Mechanization for Makhana cultivation.
• Harnessing potential of waste water resources through makhana cultivation.
• Assessment, refinement and transfer of agricultural technologies.
• Impact assessment of agricultural technologies including service delivery.
• Up scaling of quality seed production in consortium mode.

EXTERNALLY FUNDED PROJECTS/ CONSULTANCY
Foreign aided projects: 5
Other sponsored projects: 9 (DBT, AICRP, NICRA, ICAR Platform Research, ACIAR etc)

<table>
<thead>
<tr>
<th>STAFF STRENGTH</th>
<th>Sanctioned</th>
<th>Filled</th>
<th>Vacant</th>
<th>% vacant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific</td>
<td>90</td>
<td>59</td>
<td>31</td>
<td>34.44</td>
</tr>
<tr>
<td>Technical</td>
<td>61</td>
<td>55</td>
<td>6</td>
<td>9.84</td>
</tr>
<tr>
<td>Administrative</td>
<td>35</td>
<td>24</td>
<td>11</td>
<td>31.43</td>
</tr>
<tr>
<td>Supporting</td>
<td>123</td>
<td>79</td>
<td>44</td>
<td>35.77</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>217</td>
<td>92</td>
<td>29.77</td>
</tr>
</tbody>
</table>

QRT
Period: 2006 to 2012
Chairman: Dr. R.P. Singh
Next QRT due for: 2012 to 2017

RAC
Period: 2015 to 2018
Chairman: Dr. A.N. Mukhopadhyay
Next RAC due for: 2018 to 2021

IMC
Period: 2016 to 2019
Chairman: Dr. B. P. Bhatt
Next IMC due for: 2019 to 2022

RFD & COMPOSITE SCORE FOR 4 YEARS

<table>
<thead>
<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
<th>2014-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>99.0</td>
<td>97.6</td>
<td>94.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

STATUS OF ISO 9001
Certified/Not certified, if yes, from where (Name of agency)
P.C. Management System Pvt. Ltd.
134A, 2nd Floor, Taimoor Nagar, Near Friends Colony, New Delhi- 100 065, India.

PUBLICATIONS (previous year)
No. of papers in NAAS rated journals:
(a) No. of papers in score < 6 : 43
(b) No. of papers in score > 6 : 49
Total: 92
Per scientist per year papers: 1.56

FINANCIAL OUTLAY
For Main Institute (Rs in lakh)

<table>
<thead>
<tr>
<th>XI Plan actual utilization</th>
<th>XII Plan proposed</th>
<th>Last year budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RE</td>
</tr>
<tr>
<td>Plan</td>
<td>2466.24</td>
<td>3800.00</td>
</tr>
<tr>
<td>Non-Plan</td>
<td>5795.51</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>8261.75</td>
<td>3800.00</td>
</tr>
</tbody>
</table>

RESOURCE GENERATION FOR LAST 3 YEARS (Rs. In lakhs)

<table>
<thead>
<tr>
<th>2013-14</th>
<th>2014-15</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>94.25</td>
<td>103.43</td>
<td>113.55</td>
</tr>
</tbody>
</table>

Director: Dr. B P Bhatt
Tel: 0612-2223962
Email: directoricarrcer@gmail.com