**ICAR RESEARCH COMPLEX FOR NEH REGION, MEGHALAYA**

**Mandate**
- Develop and improve sustainable farming systems for different agro-climatic and socio-economic conditions of NEH region, including organic agriculture.
- Improve crops, horticulture, livestock and fishery and to impart training for development of local competence for efficient management of resources.
- Collaborate with State Departments for testing and promotion of improved farming technologies.

**Mission**
Enhancing agricultural productivity through development of cutting edge technology, efficient technology dissemination, entrepreneurship and human resource development.

**Vision**
Agricultural research of excellence to ensure food, nutrition and livelihood security in the North eastern hill region.

**Significant Achievements**
- Fifty six crop varieties including rice (34), pulses (7), oilseeds (1), tuber crops (2), tomato (6), brinjal (2), turmeric (1), papaya (1), pineapple (1) and Jatropha (1) had been released by the institute for the North East region.
- For low land areas seven different intensive farming system models were evaluated during the last 10 years for sustainable productivity. Out of these models, crop-fish-poultry-multipurpose tress was the most profitable followed by crop-fish-dairy-mushroom-vermicompost-horticulture-hedgerow.
- Amelioration of acid soils in NE region using locally available cheap organic amendments and alternately, use of low cost lime mud, application of lower doses of lime (200-400 kg ha-1 at furrows), use of weed biomass, integration with poultry manure (2.5 t/ha) and broadcasted lime @12.5% lime requirement (L.R) of total requirement once in two years significantly increased the productivity of major crops etc. while at the same time, restored the soil health. Paper mill sludge was identified as suitable material for acid soil amelioration which could enhance productivity of maize by about 20%.
- A rapid soil health test kit was developed for estimating 5 soil parameters (pH, organic carbon, available N, P and K).
- Rice and maize productivity under zero tillage was similar to conventional tillage after 2 to 3 years. In rice fallow crops like lentil (1.2 t/ha), pea (5-7 t green pod) and toria (0.6-0.8 t/ha) were identified suitable for cultivation under zero tillage. These are low cost technology, easy to adapt and eco-friendly.
- In sloping lands (35% slope), among the different cropping systems, fodder crop based system registered maximum soil organic carbon (1.80%) and SOC stock (29.7 t/ha) accumulation followed by cover crop based system (1.61%, 26.8 t/ha), at the end of three cropping cycles.
- Modelling study in DSSAT platform indicates increase in upland rice productivity at Umiam, Meghalaya and Lambhalpet, Manipur by 6-7 and 3-4.5%, respectively, if maximum temperature rose by 20°C above current normal and level of CO2 concentration increased to 450 ppm from present 392 ppm.
- Productive and reproductive performance of Turkey (Meleagris gallopavo) was evaluated under agro-climatic conditions of Meghalaya and found to be suitable economic turkey meat production.
- Successfully sequenced, assembled and published India’s first insect (Henosepilachna pusillanima) complete mitochondrial genome.
- An artificial diet for rearing of citrus trunk borer grub was prepared for the first time in India by using saw dust, gram powder, agar agar, ascorbic acid, asorbic acid and multi-vitamin capsule. Ninety per cent survival of the grub was recorded on this diet.
- Successful spawning of pond reared Labeocalbasu was observed at different temperatures (21-260°C) and high altitude (900m) by using both Carp pituitary extract, Ovatide and Ovaprim as stimulating agents.
- Under TSP, about 11,000 farmers per year were trained during the last three years under various aspects of farming.
- KIRAN-A web portal of stakeholders of Agriculture has been launched for the benefit of farmers in this region (www.kiran.nic.in).

**Locations of Regional Stations**
- Arunachal Prasesh Centre, Basar; Manipur Centre, Imphal; Mizoram Centre, Kolasib; Nagaland Centre, Jhamanapi; Sikkim Centre, Tadong, and Tripura Centre, Lembucherra

**Five Best Technologies/Products**
- Zero-till production of Pulses (Pea, Lentil) and Oilseeds (rapeseed, mustard) under rice fallow.
- An improved low cost portable dummy sow assembly unit with mating grunt voice system.
- Development of a novel toxiod-vaccine for salmonellosis.
- Hypo-card’: Product containing parasitoid, Hyposoter ebeninus G. Coconos
- Rapid Soil Health Testing kit for on farm soil fertility testing.

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NEW INITIATIVES
- Sustainable agriculture for food, nutritional and ecological security and for ameliorating climate change impacts in the North Eastern Himalayan region.
- Evaluation and assessment of location specific conservation agriculture based farming system to fit into different climatic zones, different land holding sizes and different socio economic situations.
- Mega project on pig aimed at breed improvement, standardization of semen preservation and AI low cost feed, disease management and housing.
- Skill and capacity enhancement of farmers through technology demonstration and training under Tribal Sub Plan (TSP) and Mera Gaon Mera Gaurav.
- Emphasis on truthfully labelled seed production (TEL) and breeder seed production of important crops under ICAR Seed Project and Breeder Seed Project.

COLLABORATIVE PARTNERS
This Institute has developed effective linkages with different national institutes like, DST, CTCRI, CAU, IARI, DSR Mau, CRIDA, IARI, IVRI, NDRI, IIHR, IMD, Pune, CITH, J&K, HHR, CRRI, DRR, DMR, HPR, VPKAS, IGFRI, NRCAF, NRSA, CSWCRTI, MANAGE, CRIDA, NESAC, NRC on Pig, NRC on Mithun, MRC on Yak.

FLAGSHIP PROGRAMMES
- Jhum Improvement
- Transboundary diseases surveillance and control measure.
- Temperate Horticulture Improvement.
- Network programme on medicinal and aromatic plants for development of case effect drugs, neutraicals etc.

THRUST AREAS FOR XII PLAN
- To evolve sustainable integrated farming systems for jhum improvement and restoration of degraded lands.
- To increase the overall productivity of different crops through research in cereals, pulses, oilseeds, horticultural crops including temperate horticulture, agro forestry species, fisheries and other economical crops.
- Development of feed and fodder resources including locally available fodder for livestock.
- Improvement of citrus plantation to reinvigorate the citrus industry.
- Animal health coverage and improvement of livestock production system including trans-boundary diseases.

RFD 7 COMPOSITE SCORE FOR 4 YEARS

<table>
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<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
<th>2014-15</th>
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<tbody>
<tr>
<td>Score</td>
<td>96.4</td>
<td>96.1</td>
<td>93.2</td>
<td>96.19</td>
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</table>

STAUS OF ISO 9001
Certified/Not certified, if yes from where
Certified No.:PCMS/QMS/1050-2013 issued on 11/01/13
(Name of Agency) PCMS Pvt. Ltd.

EXTERNALY FUNDED PROJECTS/ CONSULTANCY
Externally Aided Projects: - 61 (DBT, DST PDFSR, NBFSFARA, PPVAFRA, Ministry of Earth Science, Ministry of Water Resource, NABARD, NHB, etc.)
Foreign Aided Projects: - 1 (BMGF)

STAFF STRENGTH

<table>
<thead>
<tr>
<th></th>
<th>Sanctioned</th>
<th>Filled</th>
<th>Vacant</th>
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<tbody>
<tr>
<td>Scientific</td>
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<td>131</td>
<td>51</td>
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<tr>
<td>Technical</td>
<td>252</td>
<td>197</td>
<td>55</td>
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<td>Administrative</td>
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<td>32</td>
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<td>Supporting</td>
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<td>Total</td>
<td>677</td>
<td>518</td>
<td>159</td>
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QRT
Period: 31.03.2013 to 31.03.2017
Chairman: Dr. S. S. Baghel
Next QRT due for: 01.04.2016 to 2017

RAC
Period: 2014 to 2015
Chairman: Dr. K. R. Dhiman
Next RAC due for: 2015-2016

IMC
Period: 01-04-2014 to 31-03-2015
Chairman: Dr. S. V. Ngachan
Next IMC due for: 01-04-2015 to 31-03-2016

PUBLICATIONS (PREVIOUS YEAR)
No. of papers in NAAS rated journals:
(a) No. of paper in score < 6: 73
   No. of papers in score > 6: 162
(b) Total in five years: 840
(c) Per scientist per year papers: 6.41
   Average NAAS rating : 5.31

FINANCIAL OUTFLAY (Rs. in lakh)

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<th>XII Plant actual utilization</th>
<th>Last year budget</th>
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<td>RE Actual expenditure</td>
<td>% Utilization</td>
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<tr>
<td>Plan</td>
<td>5042.27</td>
<td>4364.46</td>
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<td>18778.50</td>
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<td></td>
<td>6950.92</td>
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<tr>
<td>Total</td>
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<td>23142.96</td>
<td>8347.95</td>
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<td>8259.49</td>
<td>98.90%</td>
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RESOURCE GENERATION FOR LAST 3 YEARS (RS. IN LAKHS)

<table>
<thead>
<tr>
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<th>2012-13</th>
<th>2013-14</th>
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<tbody>
<tr>
<td></td>
<td>160.66</td>
<td>412.67</td>
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Director: Dr. S V Nagachan
Tel : 0364-2570257
Email : svngachan@rediffmail.com