APPENDIX I

SUBJECTS ALLOCATED TO DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION
(KRISHI ANUSANDHAN AUR SHIKSHA VIBHAG)

Part I

The following subjects which fall within List I of the Seventh Schedule to the Constitution of India:

1. International cooperation and assistance in the field of agricultural research and education including relations with foreign and international agricultural research and educational institutions and organizations.

2. Fundamental, applied and operational research and higher education including coordination of such research and higher education in agriculture, agro-forestry, animal husbandry, dairying, fisheries, agricultural engineering and horticulture including agricultural statistics, economics and marketing.

3. Coordination and determination of standards in institutions for higher education or research and scientific and technical institutions in so far as they relate to food and agriculture including animal husbandry, dairying and fisheries. Development of Human Resources in Agricultural Research/Extensions and Education.

4. Cess for financing to the Indian Council of Agricultural Research and the Commodity Research Programmes other than those relating to tea, coffee and rubber.

5. Sugarcane research.

Part II

For Union Territories the subjects mentioned in Part I above, so far as they exist in regard to these Territories and in addition the following subject which falls within List II of the Seventh Schedule to the Constitution of India:

6. Agricultural Education and Research.

Part III

General and Consequential:

7. Plant, animal and fish introduction and exploration.

8. All India Soil and Land Use Survey relating to research training, correlation, classification, soil mapping and interpretation.

9. Financial assistance to State Governments and Agricultural Universities in respect of agricultural research and educational schemes and programmes.


11. Indian Council of Agricultural Research and its constituent Institutes, National Research Centres, Project Directorates, Bureaux and All India Coordinated Research Projects.

12. Research and Development on production and improvement of bio-fuels plants.
APPENDICES

APPENDIX II

TOTAL NUMBER OF POSTS AND NAMES OF IMPORTANT FUNCTIONARIES

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NAMES OF THE IMPORTANT FUNCTIONARIES

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<tr>
<td>2.</td>
<td>Shri Sunil Kumar Singh</td>
<td>Additional Secretary and Financial Advisor</td>
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<tr>
<td>3.</td>
<td>Shri Chhabilendra Roul</td>
<td>Additional Secretary (DARE) and Secretary (ICAR)</td>
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<tr>
<td>4.</td>
<td>Shri Ravinesh Kumar</td>
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<tr>
<td>5.</td>
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</tr>
<tr>
<td>6.</td>
<td>Shri Mohinder Kumar</td>
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<tr>
<td>7.</td>
<td>Shri T. Khaling</td>
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</tr>
<tr>
<td>8.</td>
<td>Smt Alka Ahuja</td>
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<tr>
<td>9.</td>
<td>Smt Madhu Bala</td>
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<tr>
<td>10.</td>
<td>Shri Vijay Singh</td>
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<tr>
<td>11.</td>
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<td>12.</td>
<td>Shri P.P. Maurya</td>
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<tr>
<td>13.</td>
<td>Shri T. B. Bhaviskar</td>
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<td>14.</td>
<td>Shri V. Kurien John</td>
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<tr>
<td>15.</td>
<td>Shri Sanjeev Kumar Sharma</td>
<td>Principal Private Secretary</td>
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<td>16.</td>
<td>Dr Puran Singh</td>
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The Budget Estimates (BE) of DARE (Plan, Non-Plan) for 2014–15 is ₹19,000.00 Lakh and ₹1,124.00 Lakh and Revised Estimates (RE) of DARE (Plan, Non-Plan) for 2014–15 is ₹15,401.00 Lakh and ₹1,039.26 respectively. The BE for 2015–16 (Plan, and Non-Plan) is ₹19,800.00 Lakh and ₹1,179.35 Lakh. The detailed break-up of these financial figures are given below in Tables 1, 2.

### Table 1. Budget estimates and revised estimates of DARE/ICAR

(Rupees in lakh)

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Total: ₹19,000.00, ₹1,124.00, ₹15,401.00, ₹1,039.26, ₹19,800.00, ₹1,179.35
### Table 2. Details of financial outlay

Department of Agricultural Research and Education

The gross provision for Demand No. 2 - DARE, excluding (Rupees In crore)

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<td>Plan</td>
<td>Non-Plan</td>
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<tr>
<td>Total</td>
<td>2599.97</td>
<td>2279.96</td>
<td>4879.93</td>
<td>3715.00</td>
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A. The Budget allocations, net of recoveries and receipts, are given below:

(In crores of Rupees)

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<td>Non-Plan</td>
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### DARE/ICAR ANNUAL REPORT 2015–16

#### Table 2 continued

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#### Total

- **Grand Total**: 4884.00

- **Total Payments to Indian Council of Agricultural Research (ICAR)**: 4884.00

- **Total Contributions to Commonwealth Agricultural Bureau, Consultative Group on International Agricultural Research and Association of Asia-Pacific Agricultural Research Institute**: 4884.00
APPENDICES

(B) INDIAN COUNCIL OF AGRICULTURAL RESEARCH

APPENDIX 1

INDIAN COUNCIL OF AGRICULTURAL RESEARCH SOCIETY

i) Minister-in-charge of the portfolio of Agriculture in the Union Cabinet- President of the Society.

1. Shri Radha Mohan Singh Ex-Officio
   Minister for Agriculture and Farmers Welfare, Government of India
   Krishi Bhavan, New Delhi-110 001

ii) Minister of State in the Union Ministry of Agriculture dealing with the ICAR- Vice-President.

2. Dr Sanjeev Kumar Balyan Ex-Officio
   Minister of State for Agriculture and Farmers Welfare, Government of India
   Krishi Bhavan, New Delhi-110 001

iii) Union Ministers holding charge of Finance, Planning, Science & Technology, Education and Commerce (in case the Prime Minister is holding any of these portfolios, the Minister of State in the Ministry/Department concerned)

3. Shri Arun Jaitley Ex-Officio
   Minister of Finance
   Government of India, North Block
   New Delhi-110 001

4. Shri Inderjit Singh Rao Ex-Officio
   Minister of State for Planning
   Government of India, Yojna Bhawan
   New Delhi-110 001

5. Dr Harsh Vardhan Ex-Officio
   Minister of Science and Technology & Earth Science, Government of India
   CSIR Building, 2 Rafi Marg
   New Delhi-110 001

6. Smt. Smriti Zubin Irani Ex-Officio
   Minister of Human Resource Development
   Government of India
   Shastri Bhavan, New Delhi-110 001

7. Smt. Nirmala Sitharaman Ex-Officio
   Minister of State for Commerce & Industry
   Government of India, Udyog Bhavan
   New Delhi-110 001

8. Shri Mohanbhai Kalyanjibhai Kundariya Ex-Officio
   Minister of State for Agriculture and Farmers Welfare, Government of India
   Krishi Bhavan, New Delhi-110 001

iv) ANDHRA PRADESH

9. Shri Prathipati Pulla Rao Ex-officio
   Minister for Agriculture & Animal Husbandry & Fisheries, Government of Andhra Pradesh
   A.P. Secretariat, Hyderabad, Andhra Pradesh-500 022

ARUNACHAL PRADESH

10. Shri Phurpa Tsering Ex-officio
    Minister for Animal Husbandry
    Government of Arunachal Pradesh
    CM Secretariat, Itanagar, Arunachal Pradesh-791 111

11. Shri Tanga Byaling Ex-officio
    Minister for Horticulture
    Government of Arunachal Pradesh
    CM Secretariat, Itanagar, Arunachal Pradesh-791 111

ASOM

12. Shri Rockybul Hussain Ex-officio
    Minister for Agriculture and Horticulture
    Government of Assam
    Janta Bhavan, Dispur
    Guwahati, Assom-781 006

13. Shri Khor Sing Engti Ex-officio
    Minister for Animal Husbandry
    Government of Assam
    Janta Bhavan, Dispur
    Guwahati, Assom-781 006

14. Shri Basanta Das Ex-officio
    Minister of Fisheries
    Government of Assam
    Janta Bhavan, Dispur
    Guwahati, Assom-781 006

BIHAR

15. Shri Awdhesh Kumar Singh Ex-officio
    Minister for Animal Husbandry and Fisheries Resources
    Government of Bihar
    Vikas Bhavan, New Secretariat
    Bailey Road, Patna, Bihar- 800 015

16. Shri Ramvichar Rai Ex-officio
    Minister for Agriculture
    Government of Bihar
    Vikas Bhavan, New Secretariat
    Bailey Road, Patna, Bihar 800 015

CHHATTISGARH

17. Shri Brijmohan Agarwal Ex-officio
    Minister of Agriculture
    Animal Husbandry and Fisheries
    Government of Chhattisgarh
    Sachivalaya, Raipur (Chhattisgarh)

DELHI

18. Shri Gopal Rai Ex-officio
    Minister for Development
    Delhi Secretariat, I.P. Estate
    New Delhi-110 002

GOA

19. Shri Ramesh Tawadkar Ex-officio
    Minister of Agriculture, Animal Husbandry
    Government of Goa, Secretariat,
    Panaji, Goa-403 001

20. Shri Avertano Furtado Ex-officio
    Minister for Fisheries
    Government of Goa, Secretariat,
    Panaji, Goa 403 001

GUJARAT

21. Shri Babubhai Bokharia Ex-officio
    Minister for Agriculture, Fisheries & AH
    Government of Gujarat, Ist Floor, Swarnim Sankul-I
    New Sachivalaya, Gandhinagar, Gujarat 382 010

HARYANA

22. Shri Om Prakash Dhankar Ex-officio
    Minister for Agriculture, Fisheries & AH
    Government of Haryana,
Haryana Civil Secretariat, Chandigarh, Haryana

HIMACHAL PRADESH
23. Shri Anil Kumar, Ex-officio
Minister of Animal Husbandry
Government of Himachal Pradesh
H.P. Secretariat
Shimla, Himachal Pradesh 171 002

24. Shri Rehlit Thakur, Ex-officio
Minister for Agriculture
Government of Himachal Pradesh
H.P. Secretariat
Shimla, Himachal Pradesh 171 002

25. Smt. Vidya Stokes, Ex-officio
Minister for Horticulture
Government of Himachal Pradesh
H.P. Secretariat
Shimla, Himachal Pradesh 171 002

26. Shri Thakur Singh Bharmouri, Ex-officio
Minister for Fisheries
Government of Himachal Pradesh
H.P. Secretariat
Shimla, Himachal Pradesh 171 002

MADHYA PRADESH
37. Shri Gaurishankar Chaturbhuj Bisen, Ex-officio
Minister of Agriculture Development
Government of Madhya Pradesh
Vallabh Bhavan
Bhopal, Madhya Pradesh 423 006

38. Sushri Kusum Mehdele, Ex-officio
Minister of Horticulture, Fisheries & Animal Husbandry
Government of Madhya Pradesh
Vallabh Bhavan, Bhopal
Madhya Pradesh -423 006

39. Shri Eknathrao Ganpatrao Khadse, Ex-officio
Minister for Agriculture, Horticulture
Animal Husbandry & Fisheries
Government of Maharashtra
Mantralaya, Mumbai, Maharashtra 400 032

MANIPUR
40. Shri Mohammed Abdul Nasir, Ex-officio
Minister for Agriculture and Fisheries
Government of Manipur
Secretariat
Imphal, Manipur 795 001

41. Shri Govindas Konthoujam, Ex-officio
Minister for Animal Husbandry
Government of Manipur
Secretariat
Imphal, Manipur-795 001

42. Dr Mukul Sangma, Ex-officio
Chief Minister holding the Charge of Agriculture
Government of Meghalaya
Meghalaya Secretariat (C)
Shillong, Meghalaya-793 001

43. Smt. Deborah C. Marak, Ex-officio
Minister for Animal Husbandry
Government of Meghalaya
Meghalaya Secretariat (C)
Shillong, Meghalaya-793 001

44. Shri R. Lalzirliana, Ex-officio
Minister for Agriculture
Government of Mizoram
Aizwal, Mizoram - 796 001

45. Shri P.C. Lalthanliana, Ex-officio
Minister for Horticulture
Government of Mizoram
Aizwal, Mizoram 796 001

46. Shri C. Ngunlianchunga, Ex-officio
Minister of State for Animal Husbandry
Government of Mizoram
Aizwal, Mizoram - 796 001

47. Shri B.D. Chakma, Ex-officio
Minister of State for Fisheries
Government of Mizoram
Aizwal, Mizoram - 796 001

48. Dr Benjongliba, Ex-officio
Minister of State for Agriculture
Government of Nagaland
Secretariat
Thiruvananthapuram, Kerala 695 001

KERALA
35. Shri K.P. Mohanan, Ex-officio
Minister for Agriculture and Animal Husbandry
Government of Kerala
Secretariat Annexe
Thiruvananthapuram, Kerala 695 001

NAGALAND
48. Dr Benjongliba, Ex-officio
Minister of State for Agriculture
Government of Nagaland
Secretariat
Thiruvananthapuram, Kerala 695 001
49. Shri Kejong Chang  
Minister of State for Horticulture  
Government of Nagaland  
Civil Secretariat Complex  
Kohima, Nagaland 797 004

50. Shri S. Chubalong Kumer  
Minister of State for Animal Husbandry  
Government of Nagaland  
Civil Secretariat Complex  
Kohima, Nagaland 797 004

51. Shri Shetoyi  
Minister of State for Fisheries  
Government of Nagaland  
Civil Secretariat Complex  
Kohima, Nagaland 797 004

52. Shri Pradeep Maharathy  
Minister for Agriculture, Fisheries & Animal Resource Development  
Government of Odisha  
Odisha Secretariat  
Bhubaneswar, Odisha-751 001

53. Sardar Tota Singh  
Minister of Agriculture  
Government of Punjab  
Punjab Civil Secretariat  
Chandigarh, Punjab

54. Sardar Gulzar Singh Ranike  
Minister for AH & Fisheries  
Government of Punjab  
Punjab Civil Secretariat  
Chandigarh, Punjab

55. Shri M. Chandrakasu  
Minister for Agriculture  
Government of Puducherry  
Puducherry 605 001

56. Shri P. R. Siva  
Minister for Fisheries  
Government of Puducherry  
Puducherry 605 001

57. Shri Prabhu Lal Saini  
Minister for Agriculture, Horticulture Animal Husbandry & Fisheries  
Government of Rajasthan  
Rajasthan Secretariat  
jaipur, Rajasthan 302 005

58. Shri Somnath Pudyal  
Minister for Agriculture, Horticulture Animal Husbandry & Fisheries  
Government of Sikkim Secretariat  
Gangtok, Sikkim 737 101

59. Shri R. Vaithilingam  
Minister for Agriculture & Horticulture  
Government of Tamil Nadu  
Chennai, Tamil Nadu 600 009

60. Shri K.A. Jayapal  
Minister for Fisheries  
Government of Tamil Nadu  
Chennai, Tamil Nadu 600 009

61. Shri T.K.M. Chinnavaya  
Minister for Animal Husbandry  
Government of Tamil Nadu  
Chennai, Tamil Nadu 600 009

62. Shri Aghore Debbarma  
Minister for Agriculture & Animal Resource Development  
Government of Tripura

63. Shri Khagendra Jamatia  
Minister for Fisheries  
Government of Tripura

64. Shri Pocharam Srinivas Reddy  
Minister of Agriculture, Horticulture Animal Husbandry & Fisheries  
Room No.261,D-Block  
Government of Andhra Pradesh  
A.P. Secretariat  
Hyderabad, Andhra Pradesh-500 022

65. Shri Harak Singh Rawat  
Minister for Agriculture & Horticulture  
Government of Uttarakhand  
Dehra Dun, Uttarakhand

66. Shri Pritam Singh Panwar  
Minister for Animal Husbandry & Fisheries  
Government of Uttarakhand  
Dehra Dun, Uttarakhand

67. Shri Vinod Kumar Urf ‘Pandit Singh’  
Minister of Agriculture  
Government of Uttar Pradesh  
UP Civil Secretariat  
Lucknow, Uttar Pradesh

68. Shri Riyaz Ahmad  
Minister of State for Fisheries  
Government of Uttar Pradesh  
UP Civil Secretariat  
Lucknow, Uttar Pradesh

69. Shri Moolchandra Chauban  
Minister of State for Horticulture  
Government of Uttar Pradesh  
UP Civil Secretariat  
Lucknow, Uttar Pradesh

70. Shri Anup Roy  
Minister for Agriculture  
Government of West Bengal  
Writers’ Building  
Kolkata, West Bengal 700 001

71. Shri Swapan Debnath  
Minister for Animal Resources (Independent Charge)  
Government of West Bengal  
Writers’ Building  
Kolkata, West Bengal 700 001

72. Shri Chandranath Sinha  
Minister for Fisheries Development Department  
Government of West Bengal  
Writers’ Building  
Kolkata, West Bengal 700 001

73. Shri Krishnendu Narayan Choudhury  
Minister for Horticulture  
Government of West Bengal  
Writers’ Building  
Kolkata, West Bengal 700 001
v) **Member, Niti Ayog In-charge of Agriculture.**
74. Dr Ramesh Chand
   Member (Agriculture) Niti Ayog
   Yojana Bhawan, New Delhi 110 001

vi) **Six members of Parliament—four elected by Lok Sabha and two elected by Rajya Sabha.**
75. Smt. Renuka Chowdhury 2 April 2018
   Member of Parliament (RS)
   H.No.8-1-116, Khanapuram(V)
   Khammam District Andhra Pradesh 507 002
   Smt. Renuka Chowdhury
   Member of Parliament (RS)
   76, Lodhi Estate, New Delhi 110 003

76. Shri D. Bandypadhyay 18 August 2018
   Member of Parliament (RS)
   GD - 89, Sector - III
   Salt Lake, Kolkata
   West Bengal 700 106

77. Shri Dushyant Chautala
   Member of Parliament (LS)
   Till the expiry of term in Lok Sabha
   18, Janpath, New Delhi 110 001

78. Shri Sanjay Dhotre
   Member of Parliament (LS)
   -do-
   28, Dr. Rajendra Prasad Road
   New Delhi 110013

79. Shri Raju Shetti
   Member of Parliament (LS)
   -do-
   226, North Avenue, New Delhi 110 001

80. Shri Ramneet Singh
   Member of Parliament (LS)
   -do-
   28, Dr. Rajendra Prasad Road
   New Delhi 110001

vii) **Director General, Indian Council of Agricultural Research.**
81. Dr S. Ayyappan
    Ex-officio
    Director General
    ICAR, Krishi Bhavan, New Delhi 110 001

viii) **All Secretaries in the Ministry of Agriculture.**
82. Shri Siraj Hussain
     Ex-officio
     Secretary (Agriculture & Cooperation)
     Department of Agriculture & Cooperation
     Krishi Bhavan, New Delhi 110 001

83. Shri Ashok Kumar Angurana
    Ex-officio
    Secretary (ADF)
    Department of Animal Husbandry
    Dairying & Fisheries
    Krishi Bhavan, New Delhi 110 001

ix) **Secretary, Niti Ayog**
84. Shri Amitabh Kant
    Ex-officio
    CEO, Niti Ayog, Yojana Bhawan,
    Sansad Marg, New Delhi 110 001

x) **Secretary, Department of Bio-Technology**
85. Prof. K. Vijay Raghavan
    Ex-officio
    Secretary, Department of Biotechnology
    Block 2, 7th Floor, CGO Complex
    Lodhi Road, New Delhi 110 003

xi) **Director General, Council of Scientific and Industrial Research**
86. Dr Girish Sahni
    Ex-officio
    Director General
    Council of Scientific and Industrial Research
    Anusandhan Bhavan
    2-Rafi Ahmed Kidwai Marg, New Delhi 110 001

xii) **Chairman, University Grants Commission**
87. Prof. Ved Prakash
    Ex-officio
    Chairman
    University Grants Commission
    Bahadur Shah Zafar Marg
    New Delhi 110 002

xiii) **Chairman, Atomic Energy Commission (or Director, Bhabha Atomic Research Centre, if nominated by the Chairman, Atomic Energy Commission).**
88. Dr Sekhar Basu
    Ex-officio
    Chairman, Atomic Energy Commission
    & Secretary to the Government of India
    Department of Atomic Energy
    Anushakti Bhavan
    Chhatrapati Shivaji Maharaj Marg
    Mumbai, Maharashtra 400 001

xiv) **Member, Finance (Secretary/ Additional Secretary) in the Ministry of Finance, Government of India**
89. Shri Ajai Narayan Jha
    Ex-officio
    Special Secretary (Expenditure)
    Department of Expenditure
    Ministry of Finance
    North Block
    New Delhi 110 001

xv) **Four Vice-Chancellors of Agricultural Universities, nominated by the President.**
90. Dr Anil Kumar Singh
    18 Oct. 2017
    Vice Chancellor,
    Kamdhenu University,
    Gandhinagar, Gujarat

92. Dr H.S. Gaur
    18 Feb, 2016
    Vice Chancellor,
    Sardar Vallabhbhai Patel University of
    Agriculture & Technology,
    Meerut 250110, Uttar Pradesh

93. Dr A.R. Pathak
    28 Dec, 2018
    Vice Chancellor,
    Junagadh Agricultural University
    Junagash, Gujarat 362 001

xvi) **Five Technical Representatives, namely Agricultural Commissioner, Horticultural Commissioner, Animal Husbandry Commissioner, Fisheries Development Commissioner, from the Union Ministry of Agriculture and Inspector-General of Forests, Government of India**
94. Dr S.K. Malhotra
    Agricultural Commissioner
    Department of Agriculture & Cooperation
    Ministry of Agriculture & Farmers Welfare
    Krishi Bhavan
    New Delhi 110 001

95. Dr S.K. Malhotra
    Horticultural Commissioner,
    Department of Agriculture & Cooperation
    Ministry of Agriculture.
    Krishi Bhavan
    New Delhi 110 001
APPENDICES

96. Dr Suresh S. Honnappagol  Ex-officio
Animal Husbandry Commissioner
Department of Animal Husbandry, Dairying & Fisheries,
Ministry of Agriculture,
Krishi Bhavan
New Delhi 110 001

97. Dr P. Paul Pandian  Ex-officio
Fisheries Development Commissioner
Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture
Krishi Bhavan, New Delhi 110 001

98. Dr S.K. Khanduri
Inspector General of Forests (NAEB)
Minister of Environment & Forests
Paryavaran Bhawan, B-Block
CGO Complex, Lodi Road
New Delhi 110 003

99. Dr A. Gopalakrishnan
9 January, 2018
Director
Central Marine Fisheries Research Institute
Post Box No. 1603, Ernakulam North P.O.
Kochi (Kerala) 682 018

100. Dr D.P. Singh
(Former VC, JNKVV, Jabalpur)
9 January,2018
House No. 800, Sector-15 A
Hisar 125 001, Haryana

101. Dr G. Trivedi
(Former VC, RAU, Pusa, Samastipur)
9 January, 2018
Matlipur, Via-Piar
Muzaffarpur, Bihar 843 115

102. Dr Kamala Kanta Saharia
9 January,2018
Professor (Extension Education.)
Department of Extension Education, College of Veterinary Science, AAU,
Khanpara, Guwahati, Asom 781 022

103. Dr N.C. Gautam
9 January, 2018
Vice-Chancellor
Mahatma Gandhi Chitrakoot
Gramodaya Vishwavidyalaya
Chitrakoot,
Satna 485334 (Madhya Pradesh)

104. Dr Vijay Singh Tomar
9 January,2018
Vice Chancellor
Jawaharlal Nehru Krishi Viswa Vidyalaya
Krishi Nagar, Adhartal
Jabalpur-482004, Madhya Pradesh

105. Dr K. R. Kranthi
9 January,2018
Director
Central Institute for Cotton Research
P.B.No.2, Shanknagar P.O.,
Nagpur-440010, Maharashtra

106. Dr Umesh Chandra Sharma
9 January,2018
President, Veterinary Council of India
A-Wing, 2nd Floor, August Kranti Bhawan
Bhikaji Cama Place, New Delhi 110 066

107. Dr A.K. Singh
9 January,2018
Managing Director
National Horticultural Board
Ministry of Agriculture & Farmers
Welfare, 85, Institutional Area, Sector-18
Gurgaon (Haryana) 122 015

108. Dr Bhagwati Prasad Bhatt
9 January,2018
Director,
ICAR Research Complex for Eastern Region, ICAR Parisar
P.O.Bihar Veterinary College
Patna-800014 Bihar

109. Dr Jitendra Chauhan
9 January,2018
Head, Department of Agricultural Extension,
RBS College, Bichupur
Agra, Uttar Pradesh 283 105

110. Dr S.S. Sengar,
9 January,2018
Dean, College of Agriculture
Korea, Chhattisgarh 497 335

111. Dr Prakash Shastri
9 January,2018
Professor (Plant Pathology)
College of Animal Husbandry (RVSKV)
Khandwa 450 001 (Madhya Pradesh)

112. VACANT

113. Dr Rashmi Arora,
9 January,2018
Scientist G and Head (ECD), ICMR Hqrs.,
New Delhi

xvii) Fifteen scientists from within and outside the Council including one from the Indian Council of Medical Research

99. Dr A. Gopalakrishnan
9 January, 2018
Director
Central Marine Fisheries Research Institute
Post Box No. 1603, Ernakulam North P.O.
Kochi (Kerala) 682 018

xviii) Three representatives of commerce and industry, nominated by the President.

114. Shri Rakesh Bharti Mittal
1 Oct 2016
VC/MD, Bharti Enterprises Limited
Bharti Crescent, 1 Nelson Mandela Road
Vasant Kunj, Phase-II,
New Delhi 110 070

115. Shri Narendra Murkumbi
1 Oct,2016
Managing Director
Shree Renuka Sugars Limited
7th Floor, Devchand House
Shiv Sagar Estate,
Dr. Annie Besant Road,
Worli, Mumbai 400 018

116. Shri Jayprakash Dandegaonkar
1 Oct,2016
Vice Chairman, Maharashtra State Co-Operative Sugar Factories Federation
Limited, Sakhar Bhavan, 11th Floor, Plot No. 230,
Nariman Point, Mumbai (Maharashtra) 400 021

ix) One farmer from each region of the country as mentioned in Rule 60(a) and four representatives of rural interests, nominated by the President.

117. Chaudhary Gyan Singh
5 March 2016
Village- Sakauti, Post- Gurukul
Narson, District-Hardwar,
Uttarakhand-247 670

118. Shri Fazle Masood
1 Oct,2016
14/627, Murad Ali Lane
Nai Basti, Lucknow
Uttar Pradesh 226 001

119. Vacant

120. Vacant

121. Vacant

122. Vacant

123. Vacant

124. Vacant

125. Shri Sudhir Kumar Bhargava
Director, Agroman Systems Pvt.Ltd.
25/2, Tardeo AC Market
Tardeo, Mumbai, Maharashtra 400 034

126. Shri Ratneshwari Prasad Singh
8 June, 2017
Village - Ratanpur,
Post - Badahrwa,
Distt. - Satmadi 843 315, Bihar

127. Shri Suresh Chandel
8 April, 2018
Ex-member of Parliament,
Village - Beri, Post - Ropa
Distt.-Bilaspur, Himachal Pradesh 174 001

128. Shri Ram Krishna Kusmaria
8 April, 2018
Ex-Agriculture Minister,
Government of Madhya Pradesh,
Village - Sakora, Post - Hinota,
Tehsil-Hata
Distt. - Damoh, Madhya Pradesh 470 661
xx) Four Directors of the Indian Council of Agricultural Research Institutes, nominated by the President

129. Dr A.K. Srivastava 21 May, 2016
Director
National Dairy Research Institute
Karnal, Haryana 132 001

130. Dr P.S. Minhas 8 April, 2018
Director
National Institute of Abiotic Stress Management
Malegaon, Baramati
Pune, (Maharashtra) 413 115

131. Dr S.M.K. Naqvi 8 April, 2018
Director
Central Sheep and Wool Research Institute

Avikanagar, P.O. Malpura
Tonk - District, Rajasthan 304501

132. Dr Bir Pal Singh 21 May, 2016
Director
Central Potato Research Institute
Shimla (Himachal Pradesh)

xxi) Secretary, Indian Council of Agricultural Research-Member-Secretary

133. Shri Chhabilendra Roul
Addl. Secretary (DARE) & Secretary,
Indian Council of Agricultural Research
Krishi Bhavan,
New Delhi 110 001
APPENDICES

APPENDIX 2

MEMBERS OF THE GOVERNING BODY OF THE INDIAN COUNCIL OF AGRICULTURAL RESEARCH SOCIETY

Rule 35(i)
Chairman
1. Dr. S. Ayyappan
Director-General,
Indian Council of Agricultural Research,
Krishi Bhavan,
New Delhi-110 001

Rule 35(ii)
Ex-Officio Members
Member, Finance
2. Shri Ajay Narayan Jha
Special Secretary (Expenditure)
Department of Expenditure,
Ministry of Finance, North Block
New Delhi - 110 001

Rule 35(iii)
Secretary, Niti Ayog
3. Shri Amitabh Kant
CEO, Niti Ayog,
Yojana Bhavan, Sansad Marg,
New Delhi - 110 001

Rule 35(iv)
Secretary, Agriculture
4. Shri Siraj Hussain
Secretary (Agriculture & Cooperation)
Department of Agriculture & Cooperation
Ministry of Agriculture
KrishiBhavan, New Delhi - 110 001
Ex-Officio

Rule 35(v)
Secretary, Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture
5. Shri Ashok Kumar Angurana
Secretary (ADF),
Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, KrishiBhavan,
New Delhi - 110 001
Ex-Officio

Rule 35(vi)
Three Scientists (including one management expert who are not employees of ICAR-nominated by the President)
6. Vacant
7. Vacant
8. Vacant

Rule 35(vii)
Five Vice-Chancellors of Agricultural Universities-nominated by the President
9. Dr Anil Kumar Singh
Vice Chancellor,
RajmataVijayarajeScindiaKrishiVishwaVidyalaya,
Race Course Road, Gwalior
Madhya Pradesh 474 002
18.10.2017
10. Dr H.S. Gaur
Vice Chancellor,
Sardar Vallabhbhai Patel University of Agriculture & Technology,
Meerut 250 110, Uttar Pradesh
18.02.2016
11. Dr Madangopal C Varshneya
Vice Chancellor,
Kamdhenu University,
Gandhinagar, Gujarat 382 010
18.08.2017
12. Dr A.R. Pathak
Vice Chancellor
28.12.2018

Junagadh Agricultural University
Junagadh-362 001, Gujarat
13. Prof. Aditya Kumar Misra
Vice Chancellor
Maharashtra Animal & Fishery Sciences University
Futala Lake Road, Nagpur (Maharashtra) 440 001

Rule 35(viii)
Three Members of Parliament nominated by the President-(Two from Lok Sabha and one from Rajya Sabha)
14. Smt. Renuka Chowdhury
Member of Parliament (RS)
76, Lodhi Estate
New Delhi 110 003
02.04.2018
Smt. Renuka Chowdhury
Member of Parliament (RS),H.No.8-1-116
Khanapuram(V)
Khammam Urban(M), Khammam District
Andhra Pradesh-507 002
15. Shri Sanjay Dhotre
Member of Parliament (LS)At & Post. Paalso, (Badhe),
Tel. Akola,
Distt. Akola (Maharashtra) 444001
11.02.2018
Shri Sanjay Dhotre
Member of Parliament (LS)
AB-95, Shahjahan Road,
New Delhi 110003
16. Shri Ravneet Singh
Member of Parliament (LS)
Village – Kota Afghan,
District Luhshiana- 141416
11.02.2018
Shri Ravneet Singh
Member of Parliament (LS)
H.No. 28, Dr. Rajendra Prasad Road,
New Delhi - 110 001

Rule 35(ix)
Four Farmers/Representatives of Rural Areas nominated by the President
17. Shri Sudhir Kumar Bhargava,
Director, Agroman Systems Pvt. Ltd.
25/2, Tardeo AC Market,
Tardeo, Mumbai (Maharashtra) 400 034
08.06.2017

18. Shri Ratneshwari Prasad Singh
Village- Ratanpur
Post- Badahrwa
Distt. Sitamarhi – 843315, Bihar
08.04.2018

19. Shri Suresh Chandel
Ex- Member of Parliament
Village- Gandhipura
R.O. Beri,
Tehsil & District (Himachal Pradesh) Bilaspur
08.04.2018

F Preferred Contact Address:
20. Shri Suresh Chandel
Ex- Member of Parliament
House No. 70/5, Roura Sector-3
Bilaspur, Himachal Pradesh

21. Dr Ram Krishna Kusmaria
Ex- Agriculture Minister
Govt. of Madhya Pradesh
Village- Sakora, Post- Hinota
Tehsil- Hata, Distt. Damoh, Madhya Pradesh
08.04.2018
Rule 35(x)
Three Directors of Research Institutes of the Council nominated by the President
22. Dr. A.K. Srivastava 21.05.2016
Director, National Dairy Research Institute
Karnal, Haryana 132 001
23. Dr. P.S. Minhas 21.05.2016
Director, National Institute of Abiotic Stress Management, Malegaon, Baramati Pune (Maharashtra) 413 115
Director Central Potato Research Institute Shimla (Himachal Pradesh) 171001

Rule 35(xi)
Four representatives of State Governments to be nominated zone-wise on a rotational basis by Director General, ICAR
25. Shri Parmesh Pandey 15.06.2017
Principal Secretary Department of Agriculture Government of Karnataka Room No. 411
4th Floor, M.S. Building, Bengaluru (Karnataka) 560001
26. Shri Rajesh Verma, IAS 15.06.2017
Principal Secretary Department of Agriculture Government of Odisha

Rule 35(xii)
One representative of Agro and Agro-Processing Industries to be nominated by President
29. Vacant

Rule 35(xiii)
One representative from a distinguished Non-Governmental Organization dealing with Agriculture/Extension nominated by President
30. Vacant

Rule 35(xiv)
Secretary, ICAR- Member Secretary
31. Shri Chhabilendra Roul Additional Secretary(DARE) & Secretary, ICAR, KrishiBhawan, New Delhi- 110 001
APPENDIX 3

SENIOR OFFICERS AT THE HEADQUARTERS OF THE ICAR

1. Dr S. Ayyappan
   Director General, ICAR and
   Secretary to the Government of India, Department of Agricultural Research and Education

2. Shri Chhabilendra Roul
   Secretary, ICAR and
   Additional Secretary to Government of India, Department of Agricultural Research and Education

Deputy Directors General
1. Dr A.K. Sikka (NRM)
2. Dr J.S. Sandhu (Crop Science)
3. Dr N.K. Krishna Kumar (Horticultural Science)
4. Dr K. Alagusundaram (Agricultural Engineering)
5. Dr N.S. Rathore (Agricultural Education)
6. Dr A.K. Singh (Agricultural Extension)
7. Dr Habibar Rahman (Animal Science)
8. Dr Joykrushna Jena (Fisheries Science)

O.S.D.
1. Dr (Mrs.) B. Meenakumari (Agri Edn)
2. Dr W. S. Lakra (Fy Sci.)
3. Dr R. K. Mittal (IR)

Assistant Directors General
1. Dr J.S. Chauhan (Seed)
2. Dr P.K. Chakrabarty (PP&B)
3. Dr B.B. Singh (OP)
4. Dr I.S. Solanki (F&FC)
5. Dr T. Janakiram (Hort.Science-I)
6. Dr S.K. Chaudhari (S&W&M)
7. Dr Kanchan Kumar Singh (FE)
8. Dr R.S. Gandhi (AP&B)
9. Dr B.S. Prakash (ANP)
10. Dr Ashok Kumar (AH)
11. Dr S.D. Singh (Inland Fisheries)
12. Dr P. Pravin (Marine Fish)
13. Dr V. P. Chahal (Extension)
14. Dr G. Venkateshwarlu (EQA&R)
15. Dr M.B. Chett (HRD)
16. Dr P.S. Pandey (EP&HS)
17. Dr A.K. Vasishth (PIM)
18. Dr Shiv Prasad Kimothi (Cdn.)
19. Dr A.K. Vyas (HRM)
20. Dr P.K. Agrawal, ADG (NASF)

Project Director
1. Dr Rameshwar Singh

Principal Scientists
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2. Dr A. Arunachalam (Principal Scientific Officer to DG, ICAR)
3. Dr Rajan (PP)
4. Dr S.K. Jha (OP)
5. Dr Dinesh Kumar (FFC)
6. Dr Y.P. Singh (CC)
7. Dr P.R. Chaudhary (Seeds)
8. Dr Ranvir Singh (HS)
9. Dr Manish Das (HS)
10. Dr Vikramaditya Pandey (HS)
11. Dr B.K. Pandey (HS)
12. Dr P.P. Biswas (Soils)
13. Dr S.K. Dhyani (AF)
14. Dr Adil Islam (WM)
15. Dr B.K. Kandpal (Agronomy)
16. Dr M.K. Agnihotri (Controller of Exam)
17. Dr (Mrs.) Vanita Jain
18. Dr K.L. Khurana (EQA & R)
19. Dr K.P. Tripathi
20. Dr Neeraj Rana (HRD)
21. Dr (Mrs.) Nidhi Verma
22. Sh. Anil Agarwal (M FY)
23. Dr (Mrs) Yasmeen Basade (Inland FY)
24. Dr Devinder Dhiragra (AS & PE)
25. Dr Rajan Gupta (AN)
26. Dr Vineet Bhasin (AG & B)
27. Dr (Mrs.) Jyoti Misri (AH)
28. Dr (Mrs.) Neelam Gupta (Ani Biotech)
29. Dr (Mrs.) Harjit Kaur (Agric. Extn)
30. Dr P. Adhiguru (Agric. Extn)
31. Dr N.K. Jain (HRM)
32. Dr M. K. Tripathi (PIM)
33. Dr P.K. Katiha (PIM)
34. Dr A.S. Misra (Tech. Cdn.)
35. Dr S. Mauria (IPTM)
36. Dr Sanjeev Saxena (IPTM)

Results Framework Document (RFD) Coordination Unit
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1. Dr P. Ramasundaram, Principal Scientist and
   National Co-ordinator
2. Dr R.B. Sharma, Principal Scientist and
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Agricultural Scientists’ Recruitment Board
1. Dr Gurbachan Singh, Chairman
2. Dr V.N. Sharda, Member
3. Dr S K Bandopadhyay, Member (up to 4.12.2015)
4. Dr A.P. Ruhl, Principal Scientist
5. Sh. J. Ravi, Secretary
6. Sh. Rajiv Mangotra, Deputy Secretary
7. Sh. S.P. Sanwal, Controller of Examination
8. Sh. K.N. Choudhary, Deputy Secretary

Directorate of Knowledge Management in Agriculture
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2. Dr (Mrs.) N. Kanakda Durga, Principal Scientist
3. Dr R. Rana, Senior Scientist
4. Dr V.K. Bharti, Chief Production Officer
5. Dr Jagdeep Saxena, Editor (Hindi) and Unit Incharge
6. Dr Aruna T. Kumar, Editor (English) and Unit Incharge
7. Sh Hans Raj, Information System Officer
8. Sh S.K. Joshi, Business Manager
9. Sh Anil Sharma, Public Relations Officer
Administration

**Senior Director**
1. Sh. G.R. Deshbandhu (Administration)

**Directors**
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2. Sh. N.S. Randhawa, Director (AS)
3. Sh. Devender Kumar, Director (F)
4. Sh. V.P. Kothiyal, Director (Works)
5. Sh. S.K. Mitra, Director (GAC)
6. Sh. S. Bilgrami, Director (F)

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1. Sh. Rajiv Maheshwari
2. Sh. P. Sakthivel
3. Ms. Namrta Sharma
4. Sh. P.K. Bage
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6. Sh. S.K. Behera
7. Sh. V.K. Sharma
8. Ms. Roja Sethumadhavan
9. Sh. M.K. Jain
10. Sh. Pushpendra Kumar
11. Ms. Sunita Sharma
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1. Dr Trilochan Mohapatra  
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2. Dr Raj Kumar Singh  
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   Izatnagar – 243 122, Uttar Pradesh  
3. Dr A.K. Srivastava  
   National Dairy Research Institute  
   Karnal – 132 001, Haryana  
4. Dr Gopal Krishna (Acting)  
   Central Institute of Fisheries Education  
   Jaipurakash Road, Seven Bungalow (Versova)  
   Mumbai – 400 061, Maharashtra  
5. Dr D. Rama Rao  
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   Rajendranagar, Hyderabad – 500030  
6. Dr P.S. Minhas  
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7. Dr T.R. Sharma, OSD  
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9. Dr R. Ramani, OSD  
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    Central Institute of Arid Horticulture, Bikaner 334 006, Rajasthan  
14. Dr K.R. Kranthi  
    Central Institute for Cotton Research, Post Bag No. 2, Shankar Nagar P.O. Nagpur 440 010 (Maharashtra)  
15. Dr Shailendra Rajan  
    Central Institute for Sub-Tropical Horticulture, Rehmankhera, PO Kakwai  
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17. Dr R.K. Gupta  
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18. Dr P.K.G. Patil (Acting)  
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19. Dr P. Chowdappa  
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20. Dr Bir Pal Singh  
    (Re-employed pensioner)  
    Central Potato Research Institute  
    Shimla – 171 001, Himachal Pradesh  
21. Dr Ch.Srinivasarao  
    Central Research Institute for Dryland Agriculture  
    Santoshnagar, Saidabad P.O.,  
    Hyderabad – 500 059, Andhra Pradesh  
22. Dr Debasis Nag  
    National Institute of Research on Jute & Allied Fibre Technology,  
    12, Regent Park, Kolkata – 700 040, West Bengal  
23. Dr A.K. Nayak (Acting)  
    National Rice Research Institute  
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24. Dr D.K. Sharma  
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25. Dr P.K. Mishra  
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    Dehra Dun – 248 195, Uttarakhand  
26. Dr D. Damodar Reddy  
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31. Dr U.C. Sud  
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35. Dr Ashok Kumar Patra  
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1. Dr Abraham Verghese  
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APPENDICES

APPENDIX 6

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10. Dr Jai Gopal  
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11. Dr Rameshwar Singh  
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APPENDICES

APPENDIX 7

NATIONAL RESEARCH CENTRES AND THEIR DIRECTORS

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Maharashtra
3. Dr Chirantan Chattopadhyay
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National Research Centre for Litchi
Mushahari Farm, Mushahari,
Muzaffarpur – 842 002, Bihar
5. Dr D. R. Singh
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Gangtok – 737 106 Sikkim
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NRC Integrated Farming System
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Animal Sciences and Fisheries
10. Dr N.V. Patil
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11. Dr B.N. Tripathi
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Assam
15. Dr S.M. Deb
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Arunachal Pradesh

APPENDIX 8

ALL INDIA CO-ORDINATED RESEARCH/NETWORK RESEARCH/OTHERS/PROJECTS

1. All India Co-ordinated Research Project (AICRP)
on Maize,
New Delhi
2. AICRP on Nematodes in Cropping System,
New Delhi
3. All India Coordinated Rice Improvement Project,
Hyderabad
4. AICRP on Chickpea,
Kanpur
5. AICRP on MULLaRP,
Kanpur
6. AICRP on Pigeon Pea,
Kanpur
7. AICRP on Wheat & Barley,
Karnal
8. AICRP on Forage Crops and Utilization,
Jhansi
9. AICRP Sorghum,
Hyderabad
10. AICRP on Pearl Millets,
Jodhpur
11. AICRP on Small Millets,
Bangalore
12. AICRP on Sugarcane,
Lucknow
13. AICRP on Cotton,
Coimbatore
14. AICRP on Groundnut,
Junagarh
15. AICRP on Soybean,
Indore
16. AICRP on Rapeseed & Mustard,
Bharatpur
17. AICRP on Oilseed,
Hyderabad
18. AICRP on Linseed,
Kanpur
19. AICRP on Sesame and Niger,
Jabalpur
20. AICRP on Biocontrol of Crop Pests,
Bengaluru
21. AICRP - Honeybees and Pollinators,
New Delhi
22. AICRP NSP(Crops),
Mau
23. AICRP Fruits (Tropical and Sub Tropical),
Bengaluru
24. AICRP Arid Zone Fruits,
Bikaner
25. AICRP Mushroom,
Solanki
26. AICRP Vegetables,
Varanasi
27. AICRP Potato,
Shimla
28. AICRP Tuber Crops,
Thirumanthapuram
29. AICRP Palms, Kasargod
30. AICRP on Cashew, Puttur
31. AICRP Spices, Calicut
32. AICRP Floriculture, Pune
33. AICRP on Micro Secondary & Pollutant Elements in Soils and Plants, Bhopal
34. AICRP on Soil Test Crop Response, Bhopal
35. AICRP on Long Term Fertilizer Experiments, Bhopal
36. AICRP on Salt Affected Soils & use of Saline Water, Karnal
37. AICRP on Irrigation Water Management Research, Bhubaneswar
38. AICRP Dryland Agriculture, Hyderabad
39. AICRP on Agro-meteorology, Hyderabad
40. AICRP on Integrated Farming System, Modipuram
41. AICRP on Agroforestry, Jhansi
42. AICRP on Weed Management, Jabalpur
43. AICRP on Farm Implements and Machinery, Bhopal
44. AICRP on Ergonomics and Safety in Agriculture, Bhopal
45. AICRP on Energy in Agriculture and Agro based Industries, Bhopal
46. AICRP on Utilization Animal Energy, Bhopal
47. AICRP on Plasticulture Engineering and Technology, Ludhiana
48. AICRP on Post-Harvest Engineering and Technology, Ludhiana
49. AICRP on Goat Improvement, Mathura
50. AICRP on Improvement of Feed Sources & Nutrient Utilisation, Bengaluru
51. AICRP on Cattle Research, Meerut
52. AICRP on Foot & Mouth, Mukteshwar
53. AICRP on Poultry, Hyderabad
54. AICRP on ADMAS, Bengaluru
55. AICRP on Pig, Guwahati
56. AICRP on Home Science

Network Research Projects
1. AIC Research Network on Potential Crops, New Delhi
2. Network Project on Transgenics
3. AINP on Soil Arthropod Pests, Durgapura, Rajasthan
4. AINP on Agricultural Acarology
5. AINP on Pesticides Residues, New Delhi
6. AINP on Arid Legumes, Kanpur
7. All India Network Research Project on Tobacco, Rajamundry
8. AINP on Jute and Allied Fibres, Barrackpore
9. AINP on Vertebrate Pest Management, Jodhpur
10. Network on Insect Biosystematics, New Delhi/Bengaluru
11. Application of Micro-organisms in Agriculture and Allied Sectors (AMMAAS) +Microbial Genomic Resources repository network, Mau
12. Network O&G (included in Directorate)
13. Network on Medicinal& Aromatic Plants, Anand
14. AINP on Biofertilizer, Bhopal
15. Network Programme on Organic Farming, Modipuram
16. Network project on Harvesting, Processing and Value Addition of Natural Resins & Gums, Ranchi
17. Network Project on Conservation of Lac Insect Genetic Resources, Ranchi
18. Network project on Animal Genetic Resources, Ranchi
19. Network on Sheep Improvement, Avikanagar
20. Network Project on Buffalo Improvement, Hissar
21. Network on Gastro Intestinal Parasitism, Izatnagar
22. Network on Haemorrhagic Septcaemia, Izatnagar
23. Network Programme Blue Tongue Disease, Izatnagar
24. All India Network Program on Neonatal Mortality in Farm Animals(NNM), Izatnagar
25. All India Network Program on Diagnostic Imaging and Management of Surgical Condition in Animals, Izatnagar

Others
1. Technology Mission on Cotton (MM-I), Nagpur
2. Technology Mission on Jute(MM-I), Barrackpore
3. Seed Production in Agricultural Crops and Fisheries, Mau
4. National Innovation in Climate Resilient Agriculture, Hyderabad (under CRIDA Hyderabad)
5. Sheep Seed Project, Avikanagar
6. Goat Seed Project (in CIRG)
7. Veterinary Type Culture (as an integral part of NRC), Hisar
8. Poultry Seed Project, Hyderabad
9. Mega Seed Project on Pig, Guwahati
10. Krishi Vigyan Kendras
11. Strengthening and Development of Higher Agril. Education in India
12. CAU Imphal + CAU Barapani
13. Rani Lakshmi Bai CAU, Jhansi
14. RCAU Samastipur, Bihar
15. DARE(NAAS & IAUA)
16. Strengthening of ICAR Headquarters
17. National Agriculture Innovation Fund (NAIF), New Delhi
18. Attracting and Retaining Youth in Agriculture (ARYA)
19. National Agricultural Science Fund, KABJ, New Delhi 110 012
<table>
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<td>Jodhpur</td>
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<td>Jorhat</td>
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<td>Bidhan Chandra Krishi Viswavidyalaya</td>
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<td>Sher-e-Kashmir University of Agricultural Sciences &amp; Technology</td>
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<td>54</td>
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<td>Yettinagunda Campus, Krishi Nagar</td>
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APPENDICES

57. University of Horticultural Sciences
Bagalkot (Karnataka) 587 103
58. UP Pandit Deen Dayal Upadhaya Pashu Chikitsa Vigyan Vishwa Vidhyalaya Evam Go Anusandhan Sansthan
Mathura (Uttar Pradesh) 281 001
59. Uttar Banga Krishi Vishwavidyalaya
P.O. Pundbari, Cooch Behar - 736 165 (West Bengal)
60. Uttarakhand University of Horticulture and Forestry
Bharsar, Pauri Garhwal - 246 123 (Uttara Khand)
61. Vasantrao Naik Marathwada Krishi Vidapeeth
Parabhan (Maharashtra) 431 402
62. West Bengal University of Animal & Fishery Sciences
KB Sarani, Kolkata (West Bengal) 700 037

Deemed University
1. Indian Agricultural Research Institute
Pusa, New Delhi - 110 012.
2. Central Institute of Fisheries Education
Versova, Andheri (West)
Mumbai (Maharashtra) 400 061
3. Indian Veterinary Research Institute
Izatnagar, Barielly (Uttar Pradesh) 243 122
4. National Dairy Research Institute
Karnal (Haryana) 132 001
5. Sam Higginbottom Institute of Agriculture,
Technology & Sciences
Rewa Road, Allahabad (Uttar Pradesh) 211 007

Central Agricultural University
1. Central Agricultural University
Iroisemba Imphal (Manipur) 795 004
2. Rani Lakshmi Bai Central Agricultural University
Jhansi (Uttar Pradesh).

Central Universities with Agriculture Faculty
1. Aligarh Muslim University
Aligarh (Uttar Pradesh) 202 002
2. Banaras Hindu University
Varanasi (Uttar Pradesh) 221 005
3. Nagaland University
Lumani (Nagaland)
4. Visva Bharti University
Shanti Niketan, Birbhum (West Bengal) 731 235
### APPENDIX 10

Total number of employees in the ICAR and its research institutes and number of Scheduled Castes, Scheduled Tribes and Other Backward Classes

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Class of post</th>
<th>Total posts sanctioned</th>
<th>Total employees in position</th>
<th>SC employees</th>
<th>ST employees</th>
<th>OBC employees</th>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>No.</td>
<td>% to total employees</td>
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<td>4,059</td>
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<td>13.08</td>
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<td>Senior Scientist</td>
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<td>948</td>
<td>88</td>
<td>9.28</td>
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<td>c.</td>
<td>Principal Scientist</td>
<td>757</td>
<td>645</td>
<td>61</td>
<td>9.45</td>
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<td>d.</td>
<td>RMP Scientist</td>
<td>172</td>
<td>137</td>
<td>3</td>
<td>2.19</td>
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<tr>
<td>Total</td>
<td></td>
<td>6,485</td>
<td>5,789</td>
<td>683</td>
<td>11.79</td>
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<td>a.</td>
<td>Category I</td>
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<td>2,870</td>
<td>540</td>
<td>18.82</td>
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<td>2,205</td>
<td>357</td>
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<td>Category III</td>
<td>514</td>
<td>479</td>
<td>97</td>
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<td>Total</td>
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<td>994</td>
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<td>Category “A” posts: Senior Registrar/Director/Dy. Secretary/Under Secretary/ CAOs/SAOs/AOs/ CF&amp;AO/SF&amp;AO/F&amp;A/Legal Adviser/Director (OL)/ DD(OL)/AD(OL)PPS</td>
<td>336</td>
<td>281</td>
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<td>18.15</td>
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<td>Category “B” posts: AF&amp;AO/AAO/PS/AD(OL)/ ALA/Assistant/PA/Sr. Sales Assistant/JAO/ALA</td>
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## APPENDIX 11

### ICAR AWARDS

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<td><strong>ICAR’s Large Institutes</strong></td>
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<td><strong>ICAR’s Small Institutes</strong></td>
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<td>National Research Centre on Equines, Hisar (Haryana) 125 001</td>
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<td><strong>SAUs and DUs</strong></td>
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<td><strong>Chaudhary Devi Lal Outstanding All India Coordinated Research Project Award 2014</strong></td>
<td><strong>1. Best AICRP</strong></td>
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<td>All India Coordinated Research Project on Palms Central Plantation Crops Research Institute Kasaragod (Kerala) 671 124</td>
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<td>National Professor</td>
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<td>B.P. Pal Chair (Genetics &amp; Plant Breeding), New Delhi</td>
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<td><strong>Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences 2014</strong></td>
<td><strong>Crop and Horticultural Sciences</strong></td>
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<td>Dr Arvind Kumar Senior Scientist, IRRI, South Asia Hub, ICRISAT, Patancheru Hyderabad (Telengana) 502 324</td>
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<td></td>
<td><strong>Natural Resource Management and Agricultural Engineering</strong></td>
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<td></td>
<td>Prof. Kamlesh Narayan Tiwari Professor, Department of Agricultural &amp; Food Engineering Indian Institute of Technology Kharagpur (West Bengal) 721302</td>
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<td><strong>Animal and Fisheries Sciences</strong></td>
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<td>Dr Sunita Grover Principal Scientist and Head, Dairy Microbiology DivisionNational Dairy Research Institute Karnal (Haryana) 132001</td>
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<td><strong>Lal Bahadur Shastri Outstanding Young Scientist Award 2014</strong></td>
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<td>Dr Aditya Pratap Senior Scientist, Crop Improvement Division, Indian Institute of Pulses Research, Kanpur (Uttar Pradesh) 208 024</td>
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<td></td>
<td>Dr A.Kumaresan Senior Scientist(Animal Reproduction)Livestock Research CentreNational Dairy Research InstituteKarnal (Haryana) 132 001</td>
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<td><strong>Social Sciences</strong></td>
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<td>Dr Shaik N.Meera Senior Scientist (Agriculture Extension) Transfer of Technology and Training Section Directorate of Rice Research (ICAR) Rajendranagar, Hyderabad (Telengana) 500 030</td>
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<td><strong>Panjabrao Deshmukh Outstanding Woman Scientist Award 2014</strong></td>
<td><strong>Dr (Mrs.) Prameela Krishnan</strong></td>
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<td>Principal Scientist, Division of Agricultural Physics Indian Agricultural Research Institute, New Delhi 110 012</td>
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<td><strong>Dr (Mrs) Nirmala B. Yenagi</strong></td>
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<td>Professor, Department of Food Science and Nutrition College of Rural Home ScienceUniversity of Agricultural Sciences Dharwad (Karnataka) 580 005</td>
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<td><strong>Bharat Ratna Dr C. Subramaniam Award for Outstanding Teachers 2014</strong></td>
<td><strong>Dr (Mrs.) Anupama</strong>&lt;br&gt;Principal Scientist, Division of Agricultural Chemicals, Indian Agricultural Research Institute, New Delhi 110 012</td>
</tr>
<tr>
<td></td>
<td><strong>Crop and Horticultural Sciences</strong>&lt;br&gt;<strong>Dr Subhash Chander</strong>&lt;br&gt;Professor and Principal Scientist&lt;br&gt;Division of Entomology, Indian Agricultural Research Institute, New Delhi 110 012</td>
</tr>
<tr>
<td></td>
<td><strong>Natural Resource Management and Agricultural Engineering</strong>&lt;br&gt;<strong>Dr Rangaraju Visvanathan</strong>&lt;br&gt;Professor (Agricultural Processing)Anbil Dharamalingam Agricultural College and Research Institute TNAU, Navalur Kuttappalaitu, Tiruchirappalli (Tamil Nadu ) 620 009</td>
</tr>
<tr>
<td></td>
<td><strong>Animal and Fisheries Sciences</strong>&lt;br&gt;<strong>Dr Bimlesh Mann</strong>&lt;br&gt;Principal Scientist and Head&lt;br&gt;Dairy Chemistry Division National Dairy Research Institute Karnal (Haryana) 132 001</td>
</tr>
<tr>
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<td><strong>Fakhruddin Ali Ahmed Award for Outstanding Research in Tribal Farming Systems 2014</strong>&lt;br&gt;<strong>Dr Suresh Kumar D. S.</strong>&lt;br&gt;Principal Scientist, Division of Livestock Production, ICAR Research Complex for NEH Region, Umroi Road Umiam (Meghalaya) 793103</td>
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<td><strong>Dr G. Kadirvel (Associate)</strong>&lt;br&gt;Senior Scientist ICAR Research Complex for NEH Region, Umroi Road Umiam (Meghalaya) 793103</td>
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<tr>
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<td><strong>Dr Sunil Doley (Associate)</strong>&lt;br&gt;Senior Scientist ICAR Research Complex for NEH Region, Umroi Road Umiam (Meghalaya) 793103</td>
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<tr>
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<td><strong>Dr P. K. Bharti (Associate)</strong>&lt;br&gt;Scientist ICAR Research Complex for NEH Region, Umroi Road Umiam (Meghalaya) 793103</td>
</tr>
<tr>
<td></td>
<td><strong>Dr Badal Bhattacharya</strong>&lt;br&gt;All India network Project on White Grubs and other Soil Arthropod Pests, Department of EntomologyAssam Agricultural University Jorhat (Asom) 785013</td>
</tr>
<tr>
<td></td>
<td><strong>Dr Satyendra Kumar Dutta (Associate)</strong>&lt;br&gt;All India network Project on White Grubs and other Soil Arthropod Pests, Department of Entomology&lt;br&gt;Assam Agricultural University Jorhat (Asom) 785013</td>
</tr>
<tr>
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<td><strong>Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences 2014</strong>&lt;br&gt;<strong>Crop Science</strong>&lt;br&gt;<strong>Dr Divya Balakrishnan</strong>&lt;br&gt;Scientist (Plant Breeding and Genetics)Directorate of Rice Research&lt;br&gt;Hyderabad (Telengana) 502 324</td>
</tr>
<tr>
<td></td>
<td><strong>Biotechnology (Plant/ Animal/ Fisheries)</strong>&lt;br&gt;<strong>Dr Shallu Thakur</strong>&lt;br&gt;VPO. Chowki Khalet, Tehsil: Palampur&lt;br&gt;District Kangra (Himachal Pradesh) 176 061</td>
</tr>
</tbody>
</table>

DARE/ICAR ANNUAL REPORT 2015–16
AWARDS

Dr Rehna Augustine  
Chirayil, Kozha P.O., Kottayam (Kerala) 686 633

Crop Protection
Dr Sandeep Kumar  
Department of Plant Pathology AICRP on MULLaRP, Centre for Pulses Research Berhampur (Odisha) 761 001

Dr Nandita Sahana  
Department of Biochemistry, Faculty of Agriculture Uttarbanga  
Krishi Viswavidyalaya, P.O. Pundbari, Coochbehar (West Bengal) 736 165

Natural Resource Management
Dr Saman Preet Ahuja  
7FF, MIG Flats, F-Block, Bhai Randhir Singh Nagar, Ludhiana (Punjab) 141 004

Dr Venkanna Kandula  
Division of Resource Management  
Central Research Institute on Dryland Agriculture, Santosh Nagar, P. O. Saidabad Hyderabad (Andhra Pradesh) 500 059

Horticultural Science
Dr Govind Kumar Rai  
Scientist, Department of Biotechnology C.G.O., Complex, Lodhi Road, New Delhi 110 003

Dr Pooja Bohra  
Scientist, Division of Horticulture and Forestry, Central Island Agricultural Research Institute, Post Box No. 181 Port Blair (Andaman & Nicobar Islands) 744 101

Agriculture Engineering
Dr Ashish Kumar Srivastava  
Assistant professor/Scientist, SG College of Agriculture and Research Station, Kumhrarwand, Jagdalpur (C.G.) 494 001

Animal Science
Dr Revanaiah Yogisharadhya  
Senior Technical Officer, National Institute of Veterinary Epidemiology and Disease Informatics (NIVEDI)ICAR Campus, Ramagondanalli, Yelahanka, Bengaluru (Karnataka) 560 064

Dr Vikrant Singh Chouhan  
Scientist P and C Division, IVRI Izatnagar, Bareilly, Uttar Pradesh 243 122

Fisheries Science
Dr Neeraj Kumar  
Scientist, National Institute of Abiotic Stress Management, Malegaon, Baramati Pune (Maharashtra) 413 115

Dr Vikas Pattath Ayyappan  
Pattath House, Thazhkkad, P.O. Trichur (Kerala) 680 697

Social Sciences
Dr Sanjit Maili  
Scientist NRC on YakDirang, West Kameng District (Arunachal Pradesh) 790101

Dr Venkatesh Palanisamy  
Scientist, Division of Agricultural Economics, Indian Agricultural Research Institute, Pusa, New Delhi 110 012
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<th>AWARDS</th>
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<tr>
<td>Jagjivan Ram Abhinav Kisan Puruskar / Jagjivan Ram Innovative Farmer Award (National/Zonal) 2014</td>
<td>National Shri Dipen Kumar Mukundbhai Shah 879, Shah’s Street, Near Rameshwar Temple Ta &amp; Distt. Anand, P.O. Kunjrao (Gujarat) 388 335</td>
</tr>
<tr>
<td>Zone 1</td>
<td>Major Manmohan Singh Verka D-107, Ranjit Avenue, Amritsar-142001, Punjab</td>
</tr>
<tr>
<td>Zone 2</td>
<td>Smt. Anita Kumari, W/o Sh. Sanjay Kumar, Vill.-Anantpur, P.O. Madhopur P.S. Chand (Nalanda) 803 108</td>
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<tr>
<td>Zone 4</td>
<td>Sh. Sethpal Singh Vill.-Nandifioripur, Post-Nandifirojpur District-Saharanpur (Uttar Pradesh)</td>
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<td>Zone 7</td>
<td>Sh Subrat Ranjan Prusti Nalini, 3/A, Budheswari Area Bhubaneswar (Odisha) 751 006</td>
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<tr>
<td>Zone 8</td>
<td>Sh Prakash K.S. Sharanappa N. Kuremaganahalli, Chatnarahalli (Post), Harapanahalli (Tq), District Davanagere (Karnataka) 583 125</td>
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<tr>
<td>N.G. Ranga Farmer Award for Diversified Agriculture 2014</td>
<td>Shri Gurpreet Singh Shergill Village Majhal Khurd, P.O.-Panjola, Dist.- Patiala, Punjab</td>
</tr>
<tr>
<td>Dr Rajendra Prasad Puruskar for technical books in Hindi in Agricultural and Allied Sciences 2014</td>
<td>Crop and Horticultural Sciences D. R. Bhardwaj, Indian Institute of Vegetable Research, P.B. No.1, Varanasi (Uttar Pradesh) 221 005</td>
</tr>
<tr>
<td>Swami Sahajanand Saraswati Outstanding Extension Scientist Award 2014</td>
<td>Dr Rakesh Kumar Yadav Subject Matter Specialist (PP) RajmataVijayaraje Scindia Krishi Vishwa Vidhyalaya Krishi Vigyan Kendra, Jhabua (Madhya Pradesh)</td>
</tr>
<tr>
<td>Best Krishi Vigyan Kendra Awards 2014 (National &amp; Zonal) National</td>
<td>Dr S.K. Meti Professor and Head Department of Agricultural Extension University of Agricultural Sciences Raichur (Karnataka ) 580 002</td>
</tr>
<tr>
<td>Zone I</td>
<td>Krishi Vigyan Kendra, Hadonahalli Thubagere Hobli, Doddaballapura Taluk Bangalore Rural District Karnataka-561205</td>
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<td>Zone II</td>
<td>Krishi Vigyan Kendra, Kulluat Bajaura Dist.Kullu (Himachal Pradesh) 751251</td>
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<td>Krishi Vigyan Kendra, Saran, Manjhi, PO-Manjhi, District-Saran (Bihar) 841 313</td>
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</table>
### AWARDS

| Zone III | Krishi Vigyan Kendra, Nalbari, P.O. Milanpur Nalbari (Asom) 781337 |
| Zone IV | Krishi Vigyan Kendra, Sargatia Seorahi, Kushinagar-274406, Uttar Pradesh |
| Zone V | Krishi Vigyan Kendra, Yagantipalle Village, Banaganapallemandal Kumool district (Andhra Pradesh) |
| Zone VII | Krishi Vigyan Kendra, Surguja, Ajirma, Post-Raghwupuri, Tehsil-Ambikapur, Dist. Surguja (Chhattisgarh) |
| Zone VIII | Krishi Vigyan Kendra, Palakkad, Mele Pattambi (PO), Palakkad District (Kerala) 679 306 |

**Vasantrao Naik Award for Research Application in Agriculture 2014**

<table>
<thead>
<tr>
<th>Awardee</th>
<th>Affiliation</th>
</tr>
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<tbody>
<tr>
<td>Dr B.K. Ramachandrappa</td>
<td>Chief Scientist, AICRP for Dryland Agriculture University of Agricultural Sciences GKVK Campus Bengaluru (Karnataka) 560 065</td>
</tr>
<tr>
<td>Dr M.A. Shankar (Associate)</td>
<td>AICRP for Dryland Agriculture University of Agricultural Sciences GKVK Campus Bengaluru (Karnataka) 560 065</td>
</tr>
<tr>
<td>Dr M.N. Thimmegowda (Associate)</td>
<td>AICRP for Dryland Agriculture University of Agricultural Sciences GKVK Campus Bengaluru (Karnataka) 560 065</td>
</tr>
<tr>
<td>Dr A. Sathish (Associate)</td>
<td>AICRP for Dryland Agriculture University of Agricultural Sciences GKVK Campus Bengaluru (Karnataka) 560 065</td>
</tr>
<tr>
<td>Mr B.N. Jagadeesh (Associate)</td>
<td>AICRP for Dryland Agriculture University of Agricultural Sciences GKVK Campus Bengaluru (Karnataka) 560 065</td>
</tr>
<tr>
<td>Dr Ch. Srinivasa Rao (Associate)</td>
<td>Director Central Research Institute for Dryland Agriculture Santoshnagar, Saidabad P.O. Hyderabad (Andhra Pradesh) 500059</td>
</tr>
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</table>

**NASI-ICAR Award 2014**

<table>
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<tr>
<th>Awardee</th>
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<tbody>
<tr>
<td>Dr Ravindra Naik</td>
<td>Senior Scientist Central Institute of Agricultural Engineering Industrial Extension Project Centre Coimbatore (Tamil Nadu) 641 003</td>
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**Hari Om Ashram Trust Award 2012-13**

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<th>Awardee</th>
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<tbody>
<tr>
<td>Crop and Horticultural Sciences</td>
<td>Dr Amaresh Chandra Principal Scientist &amp; Head Indian Institute of Sugarcane Research Lucknow (Uttar Pradesh) 226 002</td>
</tr>
<tr>
<td>Dr Radha Jain (Associate)</td>
<td>Principal Scientist Indian Institute of Sugarcane Research Lucknow (Uttar Pradesh) 226 002</td>
</tr>
<tr>
<td>Dr S. Solomon (Associate)</td>
<td>Director, Division of Plant Physiology and Biochemistry, Indian Institute of Sugarcane Research Lucknow (Uttar Pradesh) 226 002</td>
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**AWARDS**

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<tr>
<td>Natural Resource Management and Agricultural Engineering</td>
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<tr>
<td>Dr Ch. Srinivasa Rao</td>
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<tr>
<td>Director</td>
</tr>
<tr>
<td>Central Research Institute for Dryland Agriculture</td>
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<tr>
<td>Santoshnagar, Saidabad</td>
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<tr>
<td>P.O. Hyderabad (Andhra Pradesh) 500059</td>
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<tr>
<td>Dr B. Venkateswarlu (Associate)</td>
</tr>
<tr>
<td>Vice Chancellor</td>
</tr>
<tr>
<td>Vasantrao Naik Marathwada Krishi Vidyapeeth</td>
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<tr>
<td>Parbhani (Maharashtra) 431 402</td>
</tr>
<tr>
<td>Animal and Fisheries Sciences</td>
</tr>
<tr>
<td>Dr Jashbhai Bhikhabhai Prajapati,</td>
</tr>
<tr>
<td>Professor &amp; Head, Department of Dairy Microbiology SMC College of Dairy Science</td>
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<tr>
<td>Anand Agricultural University</td>
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<td>Anand (Gujarat) 388110</td>
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**Chaudhary Charan Singh Award 2014**

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<tr>
<td>Sh. Arvind Kumar Singh</td>
</tr>
<tr>
<td>Assistant Editor, Rajya Sabha Television- Electronic</td>
</tr>
<tr>
<td>Shri Surendra Prasad Singh</td>
</tr>
<tr>
<td>Deputy Bureau Chief, National Bureau, Dainik Jagran, New Delhi - Print Media</td>
</tr>
<tr>
<td>Sh. Arvind Kumar Singh</td>
</tr>
<tr>
<td>Principal Correspondent, Hindustan, HT-Group, 18-0, K.G. Marg, New Delhi- For Hindi Journalism - Print Media</td>
</tr>
<tr>
<td>Smt. Gargi Parsai</td>
</tr>
<tr>
<td>Associate Editor, The Hindu, New Delhi, G-5 Press Apartments, 23 IP Extension, Delhi- For English Journalism - Print Media</td>
</tr>
<tr>
<td>Smt. Madhvi Sally</td>
</tr>
<tr>
<td>Special Correspondent, The Economic Times, New Delhi, K-6, Fine Home Apartments, Beside Supreme Enclave, Mayur Vihar Phase I, New Delhi- For English Journalism - Print Media</td>
</tr>
<tr>
<td>Shri Jai Prakash Singh</td>
</tr>
<tr>
<td>Senior Producer Annadata, ETV Network, 1st Floor, SP-3 Building, Romoji Film City, Hyderabad (Andhra Pradesh) 501512- Electronic Media</td>
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**Awards for best workers of the ICAR**

<table>
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<th>AWARDEES</th>
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<tbody>
<tr>
<td>Administrative category</td>
</tr>
<tr>
<td>Sh. Avinash Kalanke</td>
</tr>
<tr>
<td>Upper Division Clerk</td>
</tr>
<tr>
<td>Directorate of Soybean Research</td>
</tr>
<tr>
<td>Khandwa Road, Indore (Madhya Pradesh) 452 001</td>
</tr>
<tr>
<td>Smt. Lizette Noronha</td>
</tr>
<tr>
<td>Private Secretary,</td>
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<tr>
<td>Central Coastal Agricultural Research Institute,</td>
</tr>
<tr>
<td>Ela, Old Goa, Goa-403402</td>
</tr>
<tr>
<td>Sh. Brishketu Singh</td>
</tr>
<tr>
<td>Assistant, National Onstitute of High security Animal Disease, (OIE Reference Lab for avian Influenza),</td>
</tr>
<tr>
<td>Anand Nagar,</td>
</tr>
<tr>
<td>Kolkata Road, Bhopal</td>
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<tr>
<td>Madhya Pradesh 462 021</td>
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<tr>
<td>Smt. Suman Khanna</td>
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<tr>
<td>Srenographer (Hindi + English),</td>
</tr>
<tr>
<td>Indian Agricultkutal Statistical Research Institute,</td>
</tr>
<tr>
<td>Library Avenue, Pusa, New Delhi</td>
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Section 1
Vision, Mission, Functions and Objectives

Vision
Harnessing science and technology to ensure sustained accessibility to food, nutrition, livelihood security and natural resource management.

Mission
Interfacing agricultural research and technology, higher education and front-line extension initiatives with institutional, infrastructural and policy support for sustainable growth of agriculture.

Functions
1. To develop Public-Private-Partnerships in developing seeds, planting materials, vaccines, feed formulations, value added products, agricultural machinery etc.
2. To serve as a repository in agriculture sector and develop linkages with national and international organizations as per the needs and current trends.
3. To plan, coordinate and monitor research for enhancing production and productivity of agriculture sector.
4. To enhance quality of higher education in agriculture sector.
5. Technology generation, commercialization and transfer to end users.
6. Human resource development and capacity building.

Objectives
1. Utilizing frontier research in identified areas/programs for improved harnessing of genetic resources and biotechnology usage for agriculture and development of plant varieties.
2. Development and strengthening of higher agricultural education.
3. Improving natural resource management and input use efficiency.
4. Frontline agricultural extension through technology assessment and demonstration.
5. Farm mechanization, post-harvest management and value addition.
6. Assessment and monitoring of fishery resources.
8. Intellectual property management and commercialization of technologies.
9. To develop and sustain excellence in basic and strategic research for providing knowledge support in the NARS for technology solution.
   * Efficient Functioning of the RFD System.
   * Enhanced Transparency / Improved Service delivery of Ministry/Department.
   * Reforming Administration.
   * Improve compliance with the Financial Accountability Framework.
## Section 2

**Inter se Priorities among Key Objectives, Success indicators and Targets**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Weight</th>
<th>Actions</th>
<th>Success indicator</th>
<th>Unit</th>
<th>Weight</th>
<th>Excellent 100%</th>
<th>Very Good 90%</th>
<th>Good 80%</th>
<th>Fair 70%</th>
<th>Poor 60%</th>
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<tbody>
<tr>
<td>[1] Utilizing frontier research in identified areas/programs for improved harnessing of genetic resources and biotechnology usage for agriculture and development of plant varieties</td>
<td>17</td>
<td>[1.1] Collection, characterization, conservation and development of genetic resources</td>
<td>[1.1.1] Germlasm conserved under long term storage (other crops)</td>
<td>Number</td>
<td>1.36</td>
<td>5500</td>
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<td>[1.1.2] Germlasm collected (horticultural crops)</td>
<td>Number</td>
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<td>400</td>
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<td>280</td>
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<td>[1.2] Evaluation of genetic resources / improved varieties for suitable crop husbandry practices</td>
<td>[1.2.1] Germlasm / breeding lines evaluated</td>
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<td>37000</td>
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<td>[1.3] Development of improved varieties suited to diverse agro-ecologies</td>
<td>[1.3.1] Varieties identified by AICRP Varietal Identification Committees (food, fodder and cash crops)</td>
<td>Number</td>
<td>1.36</td>
<td>50</td>
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<td>[1.3.2] Varieties identified by AICRP Varietal Identification Committees (oilseeds &amp; pulses)</td>
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<td>[1.3.3] Varieties identified by AICRP Varietal Identification Committees (fruits, vegetables, flowers and spices)</td>
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<td>1.36</td>
<td>22</td>
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<td>[1.4] Production of breeder seed, other seeds and planting materials</td>
<td>[1.4.1] Quantity of breeder seed produced (other crops)</td>
<td>Quintals</td>
<td>1.7</td>
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<td>75000</td>
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<td>[1.4.2] Quantity of breeder seed produced (horticultural crops)</td>
<td>Quintals</td>
<td>1.19</td>
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<td>[1.4.3] Planting materials produced annually</td>
<td>Number (in lakhs)</td>
<td>1.19</td>
<td>41</td>
<td>39</td>
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<td>1.5 Cloning and characterization of genes</td>
<td>[1.5.1] Genes cloned and characterized</td>
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<td>1.6 Identification of genetic markers and production of diagnostic kits for livestock and poultry diseases diagnosis, adulterants and environmental pollutants</td>
<td>[1.6.1] Genetic markers identified and diagnostics kits developed</td>
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<td>1.7 Production of piglets (8-12 weeks of age)</td>
<td>[1.7.1] Provisioning of piglets to farmers and development agencies</td>
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<td>1.8 Production of day old as well as 6 weeks old chicks</td>
<td>[1.8.1] Provisioning of day old / 6 weeks old chicks to farmers and development agencies</td>
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<td>2 Development and strengthening of higher agricultural education</td>
<td>17</td>
<td>2.1 Accreditation / Extension of accreditation of agricultural universities</td>
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<td>2.2 Grant of ICAR International fellowships to Indian and foreign students</td>
<td>[2.2.1] Fellowships awarded (subject to availability of competent candidates)</td>
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<td>2.3 Grant of JRF and SRF to students</td>
<td>[2.3.1] Fellowships granted every year (subject to availability of competent candidates)</td>
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<td>[2.4.1] Establishment of experiential learning units</td>
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<td>[2.5.1] Amount released as per allocation</td>
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<td>Very Good 90%</td>
<td>Good 80%</td>
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<td>3 Improving natural resource management and input use efficiency</td>
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<td>of new centres of NAE</td>
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<td>3 Soil resource maps including thematic maps developed at different scales</td>
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<td>18</td>
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<td>3 Technologies for improving soil health and nutrient use efficiencies</td>
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<td></td>
<td>2.72</td>
<td>8</td>
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<td>[3.4.1] Development/identification of varieties/breeds for climate</td>
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<td></td>
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<td>30</td>
<td>25</td>
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<td>and technology dissemination</td>
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<td></td>
<td>1.12</td>
<td>90</td>
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<td>90</td>
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<td>livestock, fisheries etc., amongst stake holders through trainings /</td>
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<td>4 Frontline agricultural extension through technology assessment and</td>
<td>[4.1.1] On-farm trials and frontline demonstrations conducted by KVKs</td>
<td>Number</td>
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<td>70000</td>
<td>110000</td>
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<td>Excellent 100%</td>
<td>Very Good 90%</td>
<td>Good 80%</td>
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<td>[4.1.2] Farmers, farm women, rural youth and extension personnel trained by KVKs</td>
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<td>Process protocols developed for product development, storage, safety and improved quality</td>
<td>Number</td>
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<td>1.50</td>
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<td>[5.4.1] Value-added products</td>
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<td>Number</td>
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<td>17</td>
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<td>[7.1.1] Print and electronic publication / products brought out</td>
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<td>[8.2.1] Partners identified</td>
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<td>Partnership development including licensing of ICAR technologies</td>
<td>Number</td>
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<td>[9.1.1] Success rate of concept notes submitted</td>
<td>60%</td>
<td>To create awareness of the need and nature of basic / strategic research in agriculture</td>
<td>Percent</td>
<td>Percent</td>
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<td>[9.1.2] Success rate of full proposals finally selected</td>
<td>50%</td>
<td>Success rate of full proposals finally selected</td>
<td>Percent</td>
<td>Percent</td>
<td>1.25</td>
<td>80</td>
<td>70</td>
<td>60</td>
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<td>[9.2] Partnership development</td>
<td>Number of non-NARS partners participating in concept note submission</td>
<td>Number</td>
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<td>[9.2.1] Number of non-NARS partners participating in concept note submission</td>
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<td>* Efficient Functioning of the RFD System</td>
<td>Timely submission of Draft RFD for 2015-2016 for Approval</td>
<td>Date</td>
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<td>* Enhanced Transparency / Improved Service delivery of Ministry/Department</td>
<td>Rating from Independent Audit of implementation of Citizens’ / Clients’ Charter (CCC)</td>
<td>Degree of implementation of commitments in CCC</td>
<td>%</td>
<td>100</td>
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<td>Independent Audit of implementation of Grievance Redress Management (GRM) system</td>
<td>Degree of success in implementing GRM</td>
<td>%</td>
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<td>* Reforming Administration</td>
<td>Update departmental strategy to align with revised priorities</td>
<td>Date</td>
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<td>Efficient Functioning of the RFD System</td>
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<td>Implement agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC)</td>
<td>% of Implementation</td>
<td>1.00</td>
<td>Effective Functioning of the RFD System</td>
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<td>Implement agreed milestones for implementation of ISO 9001</td>
<td>% of implementation</td>
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<td>% of Responsibility Centres with RFD in RFMS</td>
<td>Responsibility Centres covered</td>
<td>%</td>
<td>100</td>
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<td>Implement agreed milestones of approved Innovation Action Plans (IAPs)</td>
<td>% of implementation</td>
<td>2.00</td>
<td>Timely submission of Draft RFD for 2015-2016 for Approval</td>
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<td>* Improve compliance with the Financial Accountability Framework</td>
<td>1</td>
<td>Timely submission of ATNs on Audit paras of C&amp;AG</td>
<td>Percentage of ATNs submitted within due date (4 months) from date of presentation of Report to Parliament by CAG during the year.</td>
<td>%</td>
<td>0.25</td>
<td>100 90 80 70 60</td>
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<td>Timely submission of ATRs to the PAC Sectt. on PAC Reports.</td>
<td>Percentage of ATRS submitted within due date (6 months) from date of presentation of Report to Parliament by PAC during the year.</td>
<td>%</td>
<td>0.25</td>
<td>100 90 80 70 60</td>
<td></td>
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<td></td>
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<td>Early disposal of pending ATNs on Audit Paras of C&amp;AG Reports presented to Parliament before 31.3.2014.</td>
<td>Percentage of outstanding ATNs disposed off during the year.</td>
<td>%</td>
<td>0.25</td>
<td>100 90 80 70 60</td>
<td></td>
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<td>Early disposal of pending ATRs on PAC Reports presented to Parliament before 31.3.2014</td>
<td>Percentage of outstanding ATRS disposed off during the year.</td>
<td>%</td>
<td>0.25</td>
<td>100 90 80 70 60</td>
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### Section 3

**Trend Values of the Success Indicators**

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<th>Objectives</th>
<th>Weight</th>
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<th>Success Indicators</th>
<th>Unit</th>
<th>Actual value for FY 12/13</th>
<th>Actual value for FY 13/14</th>
<th>Target value for FY 14/15</th>
<th>Projected value for FY 15/16</th>
<th>Projected value for FY 16/17</th>
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<tbody>
<tr>
<td>1 Utilizing frontier research in identified areas/programs for improved harnessing of genetic resources and biotechnology usage for agriculture and development of plant varieties</td>
<td>17 [1.1]</td>
<td>Collection, characterization, conservation and development of genetic resources</td>
<td>[1.1.1] Germplasm conserved under long term storage (other crops)</td>
<td>Number</td>
<td>3909</td>
<td>5000</td>
<td>5000</td>
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<td>[1.1.2]</td>
<td>Germplasm collected (horticultural crops)</td>
<td>Number</td>
<td>315</td>
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<td></td>
<td>[1.2] Evaluation of genetic resources / improved varieties for suitable crop husbandry practices</td>
<td>[1.2.1] Germplasm / breeding lines evaluated</td>
<td>Number</td>
<td>2500</td>
<td>35000</td>
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<td>[1.3] Development of improved varieties suited to diverse agro-ecologies</td>
<td>[1.3.1] Varieties identified by AICRP Varietal Identification Committees (food, fodder and cash crops)</td>
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<td>Varieties identified by AICRP Varietal Identification Committees (oilseeds &amp; pulses)</td>
<td>Number</td>
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<td></td>
<td>[1.3.3]</td>
<td>Varieties identified by AICRP Varietal Identification Committees (fruits, vegetables, flowers and spices)</td>
<td>Number</td>
<td>18</td>
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<td>20</td>
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<tr>
<td></td>
<td>[1.4] Production of breeder seed, other seeds and planting materials</td>
<td>[1.4.1] Quantity of breeder seed produced (other crops)</td>
<td>Quintals</td>
<td>99270</td>
<td>85000</td>
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<td></td>
<td>[1.4.2]</td>
<td>Quantity of breeder seed produced</td>
<td>Quintals</td>
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## APPENDICES

### DARE/ICAR ANNUAL REPORT 2015–16

#### [1.4.3] Planting materials

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#### [1.5] Cloning and characterization of genes

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#### [1.6] Identification of genetic markers and production of diagnostic kits for livestock and poultry diseases diagnosis, adulterants and environmental pollutants

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<th>Unit</th>
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#### [1.7] Production of piglets (8-12 weeks of age)

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<td>[1.7.1]</td>
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#### [1.8] Production of day old as well as 6 weeks old chicks

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### Development and strengthening of higher agricultural education

#### [2.1] Accreditation / Extension of accreditation of agricultural universities

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#### [2.2] Grant of ICAR International fellowships to Indian and foreign students

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#### [2.3] Grant of JRF and SRF to students

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#### [2.4] Supporting experiential learning units

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**Objective**: Improving agricultural productivity and efficiency

**Weight**: 17

**Action**: Further development and implementation of various initiatives

**Success indicator**: Key performance indicators for various projects and initiatives under ICAR

**Unit**: Various units of measurement including number, percentage, and currency values

**Actual value for FY 12/13**: Actual performance metrics for the financial year 2012-2013

**Actual value for FY 13/14**: Actual performance metrics for the financial year 2013-2014

**Actual value for FY 14/15**:Actual performance metrics for the financial year 2014-2015

**Actual value for FY 15/16**: Actual performance metrics for the financial year 2015-2016

**Actual value for FY 16/17**: Actual performance metrics for the financial year 2016-2017
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<td>[2.6] Capacity building and faculty up-gradation</td>
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<td>Faculty trained</td>
<td>Number</td>
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<td>1900</td>
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<td>[2.7] Creation/continuation of the centres under Niche Area of Excellence (NAE)</td>
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<td>Continued support for the existing centres and establishment of new centres of NAE</td>
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<td>3 Improving natural resource management and input use efficiency</td>
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<td>Soil resource characterization and mapping</td>
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<td>[3.1] Soil resource maps including thematic maps developed at different scales</td>
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<td>Soil resource characterization and mapping</td>
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<td>[3.2] Integrated nutrient management (INM)</td>
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<td>Developing INM packages for different agro-eco regions of the country</td>
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<td>Technologies for water harvesting, storage, and groundwater recharge</td>
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<td>[3.4] Climate resilient agriculture</td>
<td>[3.4.1]</td>
<td>Development/identification of varieties/breeds for climate resilience at different locations</td>
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<td>Programs organized for developing trained manpower in research and technology dissemination</td>
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<td>4  Frontline agricultural extension through technology assessment and demonstration</td>
<td>9</td>
<td>Capacity building for technology application</td>
<td>[4.1.1] On-farm trials and frontline demonstrations conducted by KVKs</td>
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<td>5  Farm mechanization, post-harvest management and value addition</td>
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<td>To develop / refine equipments for crop production and processing</td>
<td>[5.1.1] Equipment developed/refined</td>
<td>Number</td>
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<td>Fish resources assessment and eco-system monitoring</td>
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<td>7  Knowledge management in agriculture</td>
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<td>Dissemination of knowledge through print / electronic mode</td>
<td>[7.1.1] Print and electronic publication / products brought out</td>
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<td>9 To develop and sustain excellence in basic and strategic research for providing knowledge support in the NARS for technology solution</td>
<td>5</td>
<td>To create awareness of the need and nature of basic / strategic research in agriculture</td>
<td>[9.1.1] Success rate of concept notes submitted</td>
<td>Percent</td>
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<td>[9.3.1] Technologies/methodologies developed</td>
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<td>Timely submission of Results for 2013-2014</td>
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<td>2/5/2014</td>
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<td>* Enhanced Transparency/Improved Service delivery of Ministry/Department</td>
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<td>Rating from Independent Audit of implementation of Citizens’/Clients’ Charter (CCC)</td>
<td>Degree of implementation of commitments in CCC</td>
<td>%</td>
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<td>Independent Audit of implementation of Grievance Redress Management (GRM) system</td>
<td>Degree of success in implementing GRM</td>
<td>%</td>
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<td>* Reforming Administration</td>
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<td>Update departmental strategy to align with revised priorities</td>
<td>Date</td>
<td>Date</td>
<td>2/11/2014</td>
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<td>Implement agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC).</td>
<td>% of Implementation</td>
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<td>Implement agreed milestones for implementation of ISO 9001</td>
<td>% of implementation</td>
<td>%</td>
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<td>* Improve compliance with the Financial Accountability Framework</td>
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<td>% of Responsibility Centres with RFD in RFMS</td>
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<td></td>
<td></td>
<td>Implement agreed milestones of approved Innovation Action Plans (IAPs).</td>
<td>% of implementation</td>
<td>%</td>
<td>90</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>1</td>
<td>Timely submission of ATNs on Audit paras of C&amp;AG</td>
<td>Percentage of ATNs submitted within due date (4 months) from date of presentation of Report to Parliament by CAG during the year.</td>
<td>%</td>
<td>90</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Timely submission of ATRs to the PAC Sectt. on PAC Reports.</td>
<td>Percentage of ATRS submitted within due date (6 months) from date of presentation of Report to Parliament by PAC during the year.</td>
<td>%</td>
<td>90</td>
<td></td>
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<td></td>
<td>Early disposal of pending ATNs on Audit paras of C&amp;AG Reports presented to Parliament before 31.3.2014</td>
<td>Percentage of outstanding ATNs disposed off during the year.</td>
<td>%</td>
<td>90</td>
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<td></td>
<td>Early disposal of pending ATRs on PAC Reports presented to Parliament before 31.3.2014</td>
<td>Percentage of outstanding ATRS disposed off during the year.</td>
<td>%</td>
<td>90</td>
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</tbody>
</table>
## Section 4: Acronyms

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Success indicator</th>
<th>Description and Definition of Success Indicators and Proposed Measurement Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>[1.1.1] Germplasm conserved under long term storage (other crops)</td>
<td>Diverse germplasm is the basic requirement to breed new improved varieties.</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>[1.1.2] Germplasm collected (horticultural crops)</td>
<td>Germplasm are genetic resources of horticultural crops which are source for genetic variability.</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>[1.2.1] Germplasm / breeding lines evaluated</td>
<td>Source material for the improved varieties to be evaluated.</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>[1.3.1] Varieties identified by AICRP Varietal Identification Committees (food, fodder and cash crops)</td>
<td>Breeding lines are evaluated along with checks in multi-location trials through All India Coordinated Research Projects of crops (other than oil seeds &amp; pulses) and the best performing</td>
</tr>
<tr>
<td>S. No.</td>
<td>Success indicator</td>
<td>Description</td>
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</tr>
<tr>
<td>5 [1.3.2]</td>
<td>Varieties identified by AICRP Varietal Identification Committees (oilseeds &amp; pulses)</td>
<td>Breeding lines are evaluated along with checks in multilocation trials through All India Coordinated Research Projects related to oil seeds and pulses and the best performing entries compared to checks are identified as new improved varieties for release.</td>
</tr>
<tr>
<td>6 [1.3.3]</td>
<td>Varieties identified by AICRP Varietal Identification Committees (fruits, vegetables, flowers and spices)</td>
<td>Varieties/ cultivars produced by careful breeding and selection for desirable characteristics.</td>
</tr>
<tr>
<td>7 [1.4.1]</td>
<td>Quantity of breeder seed produced (other crops)</td>
<td>Produced from nucleus seed, breeder seed is the starting point in seed chain of producing quality seeds for farmers.</td>
</tr>
<tr>
<td>8 [1.4.2]</td>
<td>Quantity of breeder seed produced (horticultural crops)</td>
<td>Propagating material directly controlled by the originating or sponsoring plant breeder of the breeding program or institution.</td>
</tr>
</tbody>
</table>
### APPENDICES

#### 1.4.3 Planting materials produced annually

**Description:** Production of planting material of vegetatively propagated horticultural crops.

**Definition:** It is a process of vegetative means by which new individuals arise without production of seeds or spores.

**Measurement:** Number of saplings/plants (in lakhs)

**General Comments:** In a wide sense, planting material arise from vegetative propagation include cutting, vegetative part apomixis, layering, division, budding, grafting and tissue culture.

#### 1.5.1 Genes cloned and characterized

**Description:** This is an important step in unraveling the role of individual genes.

**Measurement:** Total No. of genes cloned and characterized.

**General Comments:** -

#### 1.6.1 Genetic markers identified and diagnostics kits developed

**Description:** A genetic marker may be a short DNA sequence, such as a sequence surrounding a single base-pair change (SNP) or a long one, like microsatellites. The development of diagnostic kits involves delineation of process(es) for detection of specific diseases of livestock and poultry as well as adulterants and environmental pollutants in milk, meat, water, soil and value added products, etc.

**Measurement:** Number

**General Comments:** Genetic markers may be described as a tool to identify as a variation which may arise due to mutation or alteration in the genomic loci. Development of new diagnostics will be need based dependent on occurrence / emergence / prevalence / severity of a disease whereas kits for detection for adulterants and environmental pollutants will be to ensure quality production, procurement and value addition of animal produce / products to minimize economic losses.

#### 1.7.1 Provisioning of piglets to farmers and development agencies

**Description:** The quality germplasm of piglets supplied will be raised and used by the farmers as means of nutritional security and economic returns and by the State Animal

**Measurement:** Number

**General Comments:** The provisioning of piglets of high reproductive efficiency (preferably with a pregnancy rate not less than 70%) of the sows (female pigs) and other inputs like...
The chicks/fertile eggs being provisioned will serve as the basic unit (seed) for production, reproduction, maintenance and preservation.

Accreditation is periodically undertaken to ensure education quality by Accreditation Board, ICAR.

The followers are awarded (subject to international fellowships to)}

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Success indicator</th>
<th>Description</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>13</td>
<td>[1.8.1] Provisioning of day old / 6 weeks old chicks to farmers and development agencies</td>
<td>The quality germplasm of chicks/fertile eggs supplied will be reared by the farmers for egg/meat production for better economic returns. The chicks of parent line provisioned to government farms will serve as the replacement stock for enhancing production/productivity and for multiplication and production of quality germplasm.</td>
<td>The chicks/fertile eggs being provisioned will serve as the basic unit (seed) for production, reproduction, maintenance and preservation.</td>
</tr>
<tr>
<td>14</td>
<td>[2.1.1] Universities granted accreditation / extension of accreditation</td>
<td>Educational quality and reforms to be measured from the number of universities accredited and need based reforms undertaken.</td>
<td>Accreditation is periodically undertaken to ensure education quality by Accreditation Board, ICAR.</td>
</tr>
<tr>
<td>15</td>
<td>[2.2.1] Fellowships awarded (subject to)</td>
<td>International fellowships to</td>
<td>The fellowships are awarded in</td>
</tr>
<tr>
<td>S. No.</td>
<td>Success indicator</td>
<td>Description</td>
<td>Definition</td>
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</tr>
<tr>
<td>16</td>
<td>[2.3.1] Fellowships granted every year (subject to availability of competent candidates)</td>
<td>JRF/SRF fellowships are awarded for attracting and retaining talented youths towards higher agricultural education through All India Examination.</td>
<td>JRF/SRF (PGs) fellowships are meant for Master and Doctoral programme respectively in Agriculture and Allied Sciences in competitive mode.</td>
</tr>
<tr>
<td>17</td>
<td>[2.4.1] Establishment of experiential learning units</td>
<td>Experiential learning units are being established across AUs for providing hands on training and developing entrepreneurship skills amongst youth at UG level.</td>
<td>Experiential learning units are in different areas of Agriculture and Allied Sciences at college level for Under Graduate students.</td>
</tr>
<tr>
<td>18</td>
<td>[2.5.1] Amount released as per allocation</td>
<td>ICAR provides grant for development and strengthening of higher agricultural education to Agricultural Universities for the infrastructure development including students’ amenities and facilities, modernization of laboratories and classrooms and to facilitate course-curriculum delivery and quality assurance with enabling environment and ICT support on yearly basis.</td>
<td>ICAR development grant to Agricultural Universities emphasizes quality education, its relevance and usefulness.</td>
</tr>
<tr>
<td>19</td>
<td>[2.6.1] Faculty trained</td>
<td>Capacity building and</td>
<td>The training programmes</td>
</tr>
<tr>
<td>S. No.</td>
<td>Success indicator</td>
<td>Description</td>
<td>Definition</td>
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<tr>
<td></td>
<td>faculty upgradation in need based areas of agriculture and allied sciences to be measured from the number of trained personnel through summer-winter schools/short courses, Centres of Advanced Faculty trainings and niche area centres.</td>
<td>are key to sustain quality of educational education through updating of knowledge and skill of faculty.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>[2.7.1] Continued support for the existing centres and establishment of new centres of NAE</td>
<td>Creation/continuation of Niche Area of Excellence for scaling up of research capabilities of the universities and promote human resource development.</td>
<td>Basic elements of Niche Areas of Excellence are quality of human resource, adequate infrastructure, access to latest information and well developed educational technology system.</td>
</tr>
<tr>
<td>21</td>
<td>[3.1.1] Soil resource maps including thematic maps developed at different scales</td>
<td>Soil resource inventory &amp; characterization is prerequisite for developing land use planning.</td>
<td>Soil resource maps are the record of soil units delineated on the basis of similar properties in a readable format.</td>
</tr>
<tr>
<td>22</td>
<td>[3.2.1] Technologies for improving soil health and nutrient use efficiencies</td>
<td>The nutrient use efficiency in the country is very low and fertilizer being a costly input, this has to be increased to reduce the use of fertilizer vis-a-vis cost of production.</td>
<td>Nutrient use efficiency can be defined in agronomic, economic, or environmental terms with an aim to get maximum yield benefit with reduce rate of application without harming the environment.</td>
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<tr>
<td>S. No.</td>
<td>Success indicator</td>
<td>Description</td>
<td>Definition</td>
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<tr>
<td>23</td>
<td>Developing INM packages for different agro-eco regions of the country</td>
<td>INM is practiced encompassing conjunctive use of both chemical and organic nutrient sources for improving soil health &amp; sustaining higher productivity.</td>
<td>Integrated Nutrient Management refers to the maintenance of soil fertility and plant nutrient supply at an optimum level for sustaining the desired productivity through optimization of the benefits from all possible sources of organic, inorganic and biological components in an integrated manner.</td>
</tr>
<tr>
<td>24</td>
<td>Technologies for enhancing water / irrigation use efficiencies</td>
<td>Improving irrigation/water use efficiency is aimed to save water for bringing more area under irrigation.</td>
<td>Irrigation efficiency is the index of irrigation performance while water use efficiency is defined as yield/unit of crop water use.</td>
</tr>
<tr>
<td>S. No.</td>
<td>Success indicator</td>
<td>Description</td>
<td>Definition</td>
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</tr>
<tr>
<td>25</td>
<td>[3.3.2] Technologies for water harvesting storage and groundwater recharge</td>
<td>Harvested rainwater is harvested through bio engineering measures and used for augmenting ground water level.</td>
<td>Groundwater recharge is a hydrologic process where water moves downward from surface water to groundwater.</td>
</tr>
<tr>
<td>26</td>
<td>[3.4.1] Development/identification of varieties/breeds for climate resilience at different locations</td>
<td>State of art facilities like phenomics, FACE and FATE and other advanced techniques will be employed in identifying the germplasm tolerant to biotic and abiotic stresses. Similar efforts will be made in case of livestock and fisheries for identifying breeds/species tolerant to various stresses.</td>
<td>Germplasm/varieties/livestock breeds/fisheries species that can tolerate biotic and abiotic stresses.</td>
</tr>
<tr>
<td>27</td>
<td>[3.4.2] Programs organized for developing trained manpower in research and technology dissemination</td>
<td>Staff of NARS and NGOs will be exposed to state-of-art facilities/techniques/tools developed within the country/abroad for pursuing</td>
<td>Enhancing the knowledge of scientists and officials in understanding climatic variability and coping strategies.</td>
</tr>
</tbody>
</table>
## APPENDICES

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Success indicator</th>
<th>Description</th>
<th>Definition</th>
<th>Measurement</th>
<th>General Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>[3.4.3] Awareness building on climate change in agriculture, horticulture, livestock, fisheries etc. amongst stakeholders through trainings / demonstrations</td>
<td>The knowledge and skills of primary and secondary stakeholders shall be enhanced by organizing exposure visits to on-farm trials/demonstrations conducted by SAUs and KVKs.</td>
<td>Exposure to advanced techniques in understanding and managing climatic risks.</td>
<td>Number of programmes</td>
<td>Skill enhancement of primary and secondary stakeholders.</td>
</tr>
<tr>
<td>29</td>
<td>[4.1.1] On-farm trials and frontline demonstrations conducted by KVKs</td>
<td>Trials and demonstrations conducted for technology testing and proving the technology potential production</td>
<td>On-farm trials aims at testing new technologies under farmers condition and management, by using farmers own practice as control. Frontline demonstration is the field demonstration conducted on farmers field under the close supervision of Scientists.</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>[4.1.2] Farmers, farm women, rural youth and extension personnel trained by KVKs</td>
<td>Capacity building activities related to knowledge and skill improvement/development programmes conducted for farmers, farm women, rural youth and extension personnel.</td>
<td>Training is a process of acquisition of new skills, attitude and knowledge in the context of preparing for entry into a vocation or improving once productivity in an organization or enterprise.</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>[5.1.1] Equipment developed / refined</td>
<td>Development of need based farm equipment.</td>
<td>R and D work on farm mechanization.</td>
<td>Number of equipment developed</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>[5.2.1] Commercial test reports</td>
<td>Type of Machinery</td>
<td>Equipment or products for testing</td>
<td>Number of reports as per BIS standards</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>[5.3.1] Process protocols developed</td>
<td>Methodology to carry out a process</td>
<td>Development of methods to complete a process</td>
<td>Acceptable standard of process</td>
<td></td>
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<tr>
<td>S. No.</td>
<td>Success indicator</td>
<td>Description</td>
<td>Definition</td>
<td>Measurement</td>
<td>General Comments</td>
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<tr>
<td>34</td>
<td>[5.4.1] Value-added products</td>
<td>Development of new products from the raw agro-produces</td>
<td>Development of different products from agro-produce</td>
<td>End-product</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>[6.1.1] Number of explorations / surveys carried out</td>
<td>Explorations/surveys are carried out to identify new fishery resources and locating potential fishing zones.</td>
<td>Newer fishery resources and potential fishing areas identified.</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>[7.1.1] Print and electronic publication / products brought out</td>
<td>Dissemination of knowledge products like knowledge books, periodicals, journals etc. published through print, electronic mode etc.</td>
<td>Print publications are carriers of knowledge to masses including students, scientists, researchers, policy makers, farmers etc. e-Resources are computer readable products for transfer of knowledge to the target user groups in agricultural and allied sciences.</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>[8.1.1] Applications filed</td>
<td>Filing of Patents and other IPR titles for protection of IP.</td>
<td>Protection of IPs in the form of Patents and other IPR titles.</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>[8.2.1] Partners identified</td>
<td>With respect to commercialization of technologies and services for promoting partnerships with both public and private sector agencies, it is envisaged to bring commercial ethos in agricultural research system. The increasing numbers of partnerships over the years points towards emphasis on transfer of knowledge, skills and technologies, thereby contributing to improved socioeconomic impact from contribution of ICAR.</td>
<td>Partnership development includes licensing of ICAR’s technologies and/or services.</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>[9.1.1] Success rate of concept notes submitted</td>
<td>By creating awareness through workshops, it is expected that the</td>
<td></td>
<td>Number of concept notes received</td>
<td></td>
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</tbody>
</table>
participants of workshop & through then their colleague will be encouraged to submit more meaningful research concepts which will lead to increase in % of submitted concept notes that are selected for full project development.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Success indicator</th>
<th>Description</th>
<th>Definition</th>
<th>Measurement</th>
<th>General Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>[9.1.2] Success rate of full proposals finally selected</td>
<td>Based on the selected concept notes full proposal are developed. The proponents are actually helped by NFBSFARA in full proposal developments. Thus, the % reflects the success of efforts of NFBSFARA &amp; the awareness of the proponents.</td>
<td></td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>[9.2.1] Number of non-NARS partners participating in concept note submission</td>
<td>One of the main aims of the NFBSFARA is to bring in all expertise in NARS &amp; non-NARS institutions in the country that can contribute to agricultural research. The number of non-NARS scientists getting interested in contributing to agricultural research will be a strong measure of fulfillment of that aim.</td>
<td></td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>[9.3.1] Technologies / methodologies developed</td>
<td>Certain ideas &amp; technologies may be directly developed from the project which is reflected in patents filed &amp; usable technology &amp; methodology developed.</td>
<td></td>
<td>Number</td>
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### Section 5

#### Specific Performance Requirements from other Departments

<table>
<thead>
<tr>
<th>Location Type</th>
<th>State Type</th>
<th>Organisation Name</th>
<th>Organisation Type</th>
<th>Relevant Success Indicator</th>
<th>What is your requirement from this organisation</th>
<th>Justification for this requirement</th>
<th>Please quantify your requirement from this Organisation</th>
<th>What happens if your requirement is not met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Government</td>
<td>Departments</td>
<td>Department of Agriculture and Cooperation</td>
<td>[1.4.1]</td>
<td>Quantity of breeder seed produced (other crops)</td>
<td>Indent for quantity of breeder seed</td>
<td>Variety wise indent for breeder seed comes from DoAC</td>
<td>Quantity of breeder seed is produced as per indent received from DoAC</td>
<td>Less or more quantity of breeder seed will be produced as per indent received from DoAC</td>
</tr>
<tr>
<td>State Government</td>
<td>All States</td>
<td>Others</td>
<td>[1.6.1]</td>
<td>Genetic markers identified and diagnostics kits developed</td>
<td>For up-scaling and monitoring, support for development of new diagnostics and their validation under field conditions and improvisation</td>
<td>Monitoring and surveillance of livestock and poultry disease and quality assurance of animal produce / products thereby reducing economic losses</td>
<td>Cannot be quantified</td>
<td>Development of genetic markers and diagnostics will be need based dependent on occurrence / emergence / prevalence / severity of a disease likely to result in high economic loss</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>[1.7.1]</td>
<td>Provisioning of piglets to farmers and development agencies</td>
<td>Requisition for pig seed</td>
<td>Variety-wise indent for pig seed</td>
<td>Quantity of pig seed is produced as per the indent</td>
<td></td>
<td>Does not affect as the activities of the Division are basically research oriented and production and supply is demand driven based on the management / production capacities of the indenters. However, in case of disease outbreak (e.g. Swine fever), the activity is likely to be affected</td>
</tr>
<tr>
<td>Location Type</td>
<td>State</td>
<td>Organisation Type</td>
<td>Organisation Name</td>
<td>Relevant Success Indicator</td>
<td>What is your requirement from this organisation</td>
<td>Justification for this requirement</td>
<td>Please quantify your requirement from this Organisation</td>
<td>What happens if your requirement is not met</td>
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<td></td>
<td>[1.8.1] Provisioning of day old / 6 weeks old chicks to farmers and development agencies</td>
<td>Requisition for poultry seed</td>
<td>Variety-wise indent for poultry seed</td>
<td>Quantity of poultry seed is produced as per the indent</td>
<td>Does not affect as the activities of the Division are basically research oriented and production and supply is demand driven based on the management / production capacities of the indenters. However, in case of disease outbreak (e.g. Bird flu), the activity is likely to be affected</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td>[5.1.1] Equipment developed / refined</td>
<td>Financial support to disseminate the technology through Front-line demonstrations and technology transfer</td>
<td>Technology transfer through demonstrations in the farmers' field</td>
<td>Cannot be quantified as it is dependent on demand</td>
<td>Technology transfer will suffer</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td>[5.2.1] Commercial test reports</td>
<td>Machinery/Samples for testing</td>
<td>Commercial testing of equipment/machinery/samples</td>
<td>Machinery/samples in a year</td>
<td>The activity will fall short of targets</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td>[4.1.1] On-farm trials and frontline demonstrations conducted by KVKs</td>
<td>Technology &amp; Methodology backstopping from SAUs &amp; ICAR Inst., collaboration for technology dissemination and making available Technology needs &amp; feedback.</td>
<td>Newly developed technologies and proven technologies needed for conducting OFT and FLD respectively are the research outcome from SAUs and ICAR Research Institutes. Continuous technology backstopping is very much essential for the KVKs to plan their on-farm trials and frontline</td>
<td>Continuous supply and updation of technologies. Providing information about the technology requirement and problems of the farmers. Carrying out refinement in the technologies based on the feedback and outcome of OFT &amp; FLD trials.</td>
<td>The OFT and FLD activities will suffer for the want of recent technologies and innovations. The support of State Department of Agriculture, Animal Husbandry etc. for wider dissemination of technologies in the field is very much required, lack of which will constraint the up scaling process.</td>
</tr>
<tr>
<td>Location Type</td>
<td>State</td>
<td>Organisation Type</td>
<td>Organisation Name</td>
<td>Relevant Indicator</td>
<td>What is your requirement from this organisation</td>
<td>Justification for this requirement</td>
<td>Please quantify your requirement from this organisation</td>
<td>What happens if your requirement is not met</td>
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</tr>
<tr>
<td>Others</td>
<td></td>
<td>[4.1.2] Farmers, farm women, rural youth and extension personnel trained by KVKs</td>
<td>Availability of training methodologies and new knowledge content for training. Sponsoring of trainees and nominations of Extension personnel. Communicating the training needs. Providing the information about problem magnitude and feedback about the usefulness of the programs.</td>
<td>The details of knowledge content and skills for the adoption of recommended technologies by the farmers in their fields. Active participations of farmers, extension personnel's and rural youths.</td>
<td>The participation of farmers, extension personnel from State Department and rural youth are very much essential for organizing the training programmes. Without adequate enrolment of the participation, training programmes can not be organized. Lack of adequate information about recent knowledge and skills required for the adoption of newly recommended technologies will constraints the designing of training programmes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>[7.1.1] Print and electronic publication / products brought out</td>
<td>Subscription and utilization of the various knowledge products like books, newsletter, journals by the host organizations like SAUs, KVKs, ICAR Institutes etc. Management of the subscribed knowledge products by the host organizations for their wider dissemination among their staff, students etc.</td>
<td>The ICAR institutes and State Agricultural Universities conduct research, teaching and capacity building activities for which updation of recent knowledge, innovations, research findings are must. These are the organization utilizes the knowledge products created by DKMA.</td>
<td>Subscription of the knowledge products published/brought out by the DKMA.</td>
<td>Unless, the SAUs and ICAR Institutes take adequate steps for subscribing and effective utilization of various knowledge products, it is not feasible to reach the users like students, researchers, academic staff, extension functionaries etc.</td>
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</table>
### Section 6

**Outcome/Impact of activities of department/ministry**

<table>
<thead>
<tr>
<th>Outcome/Impact of Department/Ministry</th>
<th>Jointly responsible for influencing this outcome / impact with the following department(s) / ministry(ies)</th>
<th>Success Indicator</th>
<th>Unit</th>
<th>2012-2013</th>
<th>2013-2014</th>
<th>2014-2015</th>
<th>2015-2016</th>
<th>2016-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Use of quality seed</td>
<td>DoAC</td>
<td>Quantity of breeder seed produced</td>
<td>Quintals</td>
<td>135270</td>
<td>121000</td>
<td>121250</td>
<td>121500</td>
<td>121750</td>
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<tr>
<td>2 Human resource development</td>
<td></td>
<td>Fellowships granted every year (subject to availability of competent candidates)</td>
<td>Number</td>
<td>658</td>
<td>640</td>
<td>645</td>
<td>650</td>
<td>655</td>
</tr>
<tr>
<td>3 Better utilization of natural resources</td>
<td></td>
<td>Faculty trained</td>
<td>Number</td>
<td>958</td>
<td>1850</td>
<td>1900</td>
<td>1950</td>
<td>2000</td>
</tr>
<tr>
<td>4 Farm mechanization</td>
<td>DoAC, Ministry of Agriculture, State Deptt. of Agriculture</td>
<td>Technologies developed/refined for improving soil health, nutrient use efficiencies and water productivity</td>
<td>Number</td>
<td>9</td>
<td>11</td>
<td>11</td>
<td>13</td>
<td>13</td>
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</table>

- **Unit**: Quintals, Number
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<th>Acronym</th>
<th>Description</th>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ABST</td>
<td>Antibiotic Sensitivity Test</td>
<td>ETL</td>
<td>Economic Threshold Level</td>
</tr>
<tr>
<td>AcMNPV</td>
<td>Autographa Californica Multiple Nucleopolyhedrovirus</td>
<td>EXPSS</td>
<td>Expert System on Seed Spices</td>
</tr>
<tr>
<td>ADF</td>
<td>Acid Detergent Fibre</td>
<td>FAD</td>
<td>Fatty Acid Desaturase</td>
</tr>
<tr>
<td>AFC</td>
<td>Age at First Calving</td>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
</tr>
<tr>
<td>AFLP</td>
<td>Amplified Fragment Length Polymorphism</td>
<td>FCR</td>
<td>Feed Conversion Rate</td>
</tr>
<tr>
<td>AGID</td>
<td>Agar Gel Immunodiffusion</td>
<td>FEC</td>
<td>Faecal Egg Count</td>
</tr>
<tr>
<td>AI</td>
<td>Artificial Insemination</td>
<td>FMD</td>
<td>Foot-and-Mouth Disease</td>
</tr>
<tr>
<td>AICRP</td>
<td>All India Coordinated Research Project</td>
<td>FSH</td>
<td>Follicle-stimulating Hormone</td>
</tr>
<tr>
<td>AINP</td>
<td>All India Network Project</td>
<td>FYM</td>
<td>Farmyard Manure</td>
</tr>
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<td>ALV</td>
<td>Avian Leukosis Virus</td>
<td>GADVASU</td>
<td>Guru Angad Dev Veterinary and Animal Sciences University</td>
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<tr>
<td>ASAM</td>
<td>Alkaline Sulfite Anthraquinone Methanol</td>
<td>GBNV</td>
<td>Groundnut Bud Necrosis Virus</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of South-East Asian Nations</td>
<td>GBPUA</td>
<td>Govind Ballabh Pant University of Agriculture and Technology</td>
</tr>
<tr>
<td>ASF</td>
<td>African Swine Fever</td>
<td>GDP</td>
<td>Global Environmental Facility</td>
</tr>
<tr>
<td>ASRB</td>
<td>Agricultural Scientists’ Recruitment Board</td>
<td>GEF</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>ATIC</td>
<td>Agricultural Technology Information Centre</td>
<td>GHG</td>
<td>Greenhouse Gases</td>
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<tr>
<td>AUTM</td>
<td>Association of Universities for Technology Management</td>
<td>GIS</td>
<td>Geographical Information System</td>
</tr>
<tr>
<td>BAIF</td>
<td>Bhartiya Agro-Industrial Foundation</td>
<td>GML</td>
<td>Gramapriya Male Line</td>
</tr>
<tr>
<td>BCM</td>
<td>Billion Cubic Metres</td>
<td>GPA</td>
<td>Global Plan of Action</td>
</tr>
<tr>
<td>BHU</td>
<td>Banaras Hindu University</td>
<td>GPS</td>
<td>Global Positioning System Components Partitioning Approach</td>
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<tr>
<td>BOD</td>
<td>Biochemical Oxygen Demand</td>
<td>HAPA</td>
<td>Hybridization-supplemented Apomixis</td>
</tr>
<tr>
<td>BTV</td>
<td>Blue Tongue Virus</td>
<td>HAP</td>
<td>International Centre for Agricultural Research in Dry Areas</td>
</tr>
<tr>
<td>BVDV</td>
<td>Bovine Viral Diarrhoea Virus</td>
<td>HAP</td>
<td>Hybridization-supplemented Apomixis</td>
</tr>
<tr>
<td>CAFT</td>
<td>Centres of Advanced Faculty Training</td>
<td>HFA</td>
<td>Holstein Friesian</td>
</tr>
<tr>
<td>CAU</td>
<td>Central Agricultural University</td>
<td>HPAB</td>
<td>Highly Pathogenic Notifiable Avian Influenza</td>
</tr>
<tr>
<td>CAZRI</td>
<td>Central Arid Zone Research Institute</td>
<td>ICU</td>
<td>Indian Cassava Mosaic Virus</td>
</tr>
<tr>
<td>CCHF</td>
<td>Crimean Congo Hemorrhagic Fever</td>
<td>HPTLC</td>
<td>High Performance Thin Layer Chromatography</td>
</tr>
<tr>
<td>CeRA</td>
<td>Consortium for e-Resources in Agriculture</td>
<td>HRR</td>
<td>Head Rice Recovery</td>
</tr>
<tr>
<td>CFT</td>
<td>Complement Fixation Text</td>
<td>HSP</td>
<td>Heat Shock Protein</td>
</tr>
<tr>
<td>CGIAR</td>
<td>Consultative Group on International Agricultural Research</td>
<td>IAA</td>
<td>Integrated Agri-aquaculture</td>
</tr>
<tr>
<td>CIAE</td>
<td>Central Institute of Agricultural Engineering</td>
<td>IBR</td>
<td>Infectious Bovine Rhinotracheitis</td>
</tr>
<tr>
<td>CIARI</td>
<td>Central Island Agricultural Research Institute</td>
<td>ICARDA</td>
<td>International Centre for Agricultural Research in Dry Areas</td>
</tr>
<tr>
<td>CIBA</td>
<td>Central Institute of Brackish Water Aquaculture</td>
<td>ICMV</td>
<td>Indian Cassava Mosaic Virus</td>
</tr>
<tr>
<td>CIFE</td>
<td>Central Institute of Fisheries Education</td>
<td>ICRISAT</td>
<td>International Crops Research Institute for Semi-Arid Tropics</td>
</tr>
<tr>
<td>CIMMYT</td>
<td>Centro Internacional de Mejoramiento de Maize Trigo</td>
<td>ICT</td>
<td>Information and Communication Technologies</td>
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<tr>
<td>CMS</td>
<td>Cytoplasmic Male Sterility</td>
<td>IFS</td>
<td>Integrated Farming System</td>
</tr>
<tr>
<td>CP</td>
<td>Crude Protein</td>
<td>IHC</td>
<td>Immuno-histochemistry</td>
</tr>
<tr>
<td>CPE</td>
<td>Cumulative Pan Evaporation</td>
<td>IPM</td>
<td>Integrated Pest Management</td>
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<td>CRRI</td>
<td>Central Rice Research Institute</td>
<td>IPNS</td>
<td>Integrated Plant Nutrient System</td>
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<td>CSEV</td>
<td>Classical Swine Fever Virus</td>
<td>IPR</td>
<td>Intellectual Property Rights</td>
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<td>CSFL</td>
<td>Coloured Synthetic Female Line</td>
<td>ITK</td>
<td>Indigenous Technical Knowledge</td>
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<td>CSML</td>
<td>Coloured Synthetic Male Line</td>
<td>JE</td>
<td>Japanese Encephalitis</td>
</tr>
<tr>
<td>CPC</td>
<td>Corn Protein Concentrate</td>
<td>JNKVV</td>
<td>Jawaharlal Nehru Krishi Vishwa Vidyalaya</td>
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<td>CSFL</td>
<td>Synthetic Coloured Female Line</td>
<td>KVAFSU</td>
<td>Kerala Veterinary, Animal Sciences and Fisheries University</td>
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<td>CWM</td>
<td>Chicken Waste Meal</td>
<td>KVK</td>
<td>Krishi Vigyan Kendra</td>
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<tr>
<td>DAS</td>
<td>Days After Sowing</td>
<td>LDPE</td>
<td>Low Density Polyethylene</td>
</tr>
<tr>
<td>DAT</td>
<td>Days After Transplanting</td>
<td>LLO</td>
<td>Listeriolysin-O</td>
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<tr>
<td>DRWA</td>
<td>Directorate of Research of Women in Agriculture</td>
<td>LPNA</td>
<td>Low Pathogenic Notifiable Avian</td>
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<td>EEE</td>
<td>Eastern Equine Encephalitis</td>
<td>LRI</td>
<td>Land Resource Inventory</td>
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<td>EVH</td>
<td>Equine Herpes Virus</td>
<td>MAb</td>
<td>Monoclonal Antibody</td>
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<td>EIA</td>
<td>Enzyme Immuno Assay</td>
<td>MAS</td>
<td>Molecular Marker-assisted Selection</td>
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<td>ELISA</td>
<td>Enzyme-linked Immunosorbent Assay</td>
<td>MAT</td>
<td>Macroscopic Agglutination Test</td>
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<td>EPN</td>
<td>Entomopathogenic Nematode</td>
<td>MoU</td>
<td>Memorandum of Understanding</td>
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<td>ACRONYMS</td>
<td>INSTITUTIONS</td>
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<tr>
<td><strong>MPP</strong> : Methane Production Potential</td>
<td>RDF : Recommended Dose of Fertilizers</td>
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<tr>
<td><strong>MPUAT</strong> : Maharana Pratap University of Agriculture and Technology</td>
<td>RE : Revised Estimate</td>
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<tr>
<td><strong>MRSA</strong> : Methicillin Resistant \textit{Staphylococcus aureus}</td>
<td>RFD : Results-Framework Document</td>
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<td><strong>MSCs</strong> : Mesenchymal Stem Cells</td>
<td>RFLP : Restricted Fragment Length Polymorphism</td>
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<tr>
<td><strong>MW</strong> : Molecular Weight</td>
<td>RH : Relative Humidity</td>
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<tr>
<td><strong>NABG</strong> : National Agricultural Bioinformatics Grid</td>
<td>RMP : Research Management Positions</td>
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<tr>
<td><strong>NADRES</strong> : National Animal Disease Referral Expert System</td>
<td>RNFE : Rural non-farm Employment</td>
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<tr>
<td><strong>NAB</strong> : National Agricultural Bioinformatics Grid</td>
<td>RVF : Rift Valley Fever</td>
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<tr>
<td><strong>NAE</strong> : Niche Area of Excellence</td>
<td>SAARC : South Asian Association for Regional Co-operation</td>
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<tr>
<td><strong>NARD</strong> : National Agricultural Research Database</td>
<td>SAUs : State Agricultural Universities</td>
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<tr>
<td><strong>NARS</strong> : National Agricultural Research Systems</td>
<td>SCSMV : Sugarcane Streak Mosaic Virus</td>
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<tr>
<td><strong>NASF</strong> : National Agricultural Science Fund</td>
<td>ShRNA : Small hairpin RNA</td>
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<tr>
<td><strong>NBSS&amp;LUP</strong> : National Bureau of Soil Survey and Land Use Planning</td>
<td>SiRNA : Small interfering RNA</td>
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<td><strong>NDF</strong> : Non-detergent Fibre</td>
<td>SNP : Single Nucleotide Polymorphism</td>
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<tr>
<td><strong>NDRI</strong> : National Dairy Research Institute</td>
<td>SOD : Super Oxide Dismutase</td>
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<tr>
<td><strong>NDVSU</strong> : Nanaji Deshmukh Veterinary Science University</td>
<td>SPR : Surface Plasmon Resonance</td>
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<tr>
<td><strong>NEH</strong> : North-Eastern Hills</td>
<td>SRF : Senior Research Fellowship</td>
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<tr>
<td><strong>NET</strong> : National Eligibility Test</td>
<td>SSS : Surface and Subsurface Drainage</td>
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<tr>
<td><strong>NGOs</strong> : Non-Government Organizations</td>
<td>SRI : System of Rice Intensification</td>
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<tr>
<td><strong>NIABI</strong> : Network of Indian Agri-business Incubators</td>
<td>SSD : Surface and Subsurface Drainage</td>
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<tr>
<td><strong>NICRA</strong> : National Initiative on Climate Resilient Agriculture</td>
<td>TANUVAS : Tamil Nadu University of Veterinary and Animal Sciences</td>
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<tr>
<td><strong>NISAGENET</strong> : National Information System on Agricultural Education Network</td>
<td>TDP : Total Digestible Nutrient</td>
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<tr>
<td><strong>NRC</strong> : National Research Centre</td>
<td>TFP : Total Factor Productivity</td>
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<tr>
<td><strong>NRCC</strong> : National Research Centre on Citrus</td>
<td>TLCV : Tomato Leaf Curl Virus</td>
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<tr>
<td><strong>NSP-Ab</strong> : Non Structural Protein Antibody</td>
<td>TLR-1 : Toll Like Receptor-1</td>
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<tr>
<td><strong>NTS</strong> : National Talent Scholarship</td>
<td>TMU : Total Milk Yield</td>
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</tr>
<tr>
<td><strong>NUE</strong> : Nitrogen Uptake</td>
<td>TOT : Transfer of Technology</td>
<td></td>
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</tr>
<tr>
<td><strong>NUPL</strong> : National University of Plant of Agriculture</td>
<td>TSP : Tribal Sub-Plan</td>
<td></td>
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</tr>
<tr>
<td><strong>NWPSI</strong> : Network Project on Sheep Improvement</td>
<td>TSS : Total Soluble Solids/Sugars</td>
<td></td>
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<tr>
<td><strong>OB</strong> : Other Backward Classes</td>
<td>TTV : Transfusion Transmitted Virus</td>
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<tr>
<td><strong>PCR</strong> : Polymerase Chain Reaction</td>
<td>UG : Under-graduate</td>
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<tr>
<td><strong>PIADC</strong> : Plum Island Animal Disease Center</td>
<td>UGC : University Grants Commission</td>
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<tr>
<td><strong>PG</strong> : Post-graduate</td>
<td>UV : Ultra Violet</td>
<td></td>
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<tr>
<td><strong>PMES</strong> : Priority Setting, Monitoring and Evaluation</td>
<td>VACV : Vaccinia Virus</td>
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<td><strong>PPGSE</strong> : Plausible Potato Growing Seasons Estimator</td>
<td>VS : Vesicular Stomatitis</td>
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<td><strong>PRR</strong> : \textit{Peste des Petits Ruminants}</td>
<td>VNTR : Variable Number Tandem Repeats</td>
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<tr>
<td><strong>PGRS</strong> : Porcine Reproductive and Respiratory Syndrome Virus</td>
<td>VPKAS : Vivekananda Parvatiya Krishi Anusandhan Sansthan</td>
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<tr>
<td><strong>QTL</strong> : Quantitative Trait Loci</td>
<td>VRFA : Variable Rate Granular Fertilizer Applicator</td>
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<tr>
<td><strong>RAWE</strong> : Rural Agricultural Work Experience</td>
<td>WB : Western blot test</td>
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<tr>
<td><strong>RCCARI</strong> : Research Centre of Central Avian Research</td>
<td>WNF : West Nile Fever</td>
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</tbody>
</table>
Index

abiotic stress tolerant rice 30
Accreditation of Agricultural Universities 94
Administration 121
Afghan National Agricultural Sciences and Technology University 130
Agricultural education 5
Human Resource Development 86
Technology Information Centres 108
Agriculturally important arthropods 19
AgriInnovate India Limited 7, 130
Agri-Tech Foresight Centre 1
AICRP on Home Science 100
aleuritic acid, Biosynthesis of 80
All India Network Program on Blue Tongue 61
Allele-mining 36
Alternate energy equipment 74
Animal nutrition 58
Animal physiology and reproduction 59
antibiotic sensitivity test 61
Antioxidant genes 35
rich pasta 83
Aquaculture ponds, Carbon sequestration in 16
Aqua and poultry feed from fish and shellfish waste 100
Areca nut dehusker 76
Arka Udaya 39
ARY A 123
aspiration biopsy 135
Attracting Retaining Youth in Agriculture 1
Automatic mango grader 77
Awards 7,126

Bacillus thuringiensis 122
bakane disease in basmati paddy 108
Beauveria bassiana 122
bed former-cum-onion seeder 69
biasi plough 68
Bio-acoustics 55
Bioresilable electrospun fibre mat 137
bio-engineering interventions 11
Biofertilizers 13
Biofortified CR Dhan 310 for high protein 27
biogas storage system 74
Bioinformatics 102
Biological control 53
biomass composting 75
gasifier cook-stove 76
Bio-products 107
Bioreactor 75
biotic stresses 51
Black rust of wheat 52
bovine leukocyte adhesion deficiency 2
Breed signature 23
breeding of carps, Impact of climate on 16
BRICS 128
Briquetting of jute-sticks 75
Brown rust 52
Brucella melitensis, Quick detection of 60
Bullock-drawn ridge-type drum-seeder 69
Camel 59
canine-origin probiotic 58
Capacity building 90
development 106
Captive breeding of
Rita chrysea 46
skunk clownfish 117
hilsa 136
Carbon sequestration aquaculture ponds, in 16
FYM application, with 112
Carbon-management index 16
Carboxymethyl derivative of guar gum 81
Cereals 27, 106
check-basin former 68
chicken sperm transfection 24
Clarias serratorbrachium 26
Climate change 1
Resilient Agriculture, and 15
climate resilient technologies 108
Clone 43
cloned embryos 60
Commercial crops 33, 37, 106
Communication 103
Conservation agriculture 50
genetic improvement, and 42
Consultancies 131
Consultative Group on International Agricultural Research 130
Contingency plan to tackle aberrant weather 101
Cool Farm Tool model 15
Copyrights 121
coring device for oblong fruits 77
Crop genetic improvement 27
health management 51
health monitoring 52
improvement 2, 27
programmes 27
planning for resource use efficiency 98
yield monitoring 71

DARE 120
Defense genes of tiger shrimp 136
Deficiency biomarker 58
deficit irrigation 12
desirable alleles 27
Diagnostic vigilance 62
diagnostics 62
DNA fingerprinting 38
Dominant nuclear 134
double herbicide tolerant transgenic rice 134
Drudgery, Characterization of 100
INDEX

Duck 46

Eastern Himalayas 113
e-Atlas of water bodies 14
eggless cake 83
e-governance in ICAR 121
Electronic colour meter 80
Emeritus Scientist Scheme 94
Empowering
  women in agriculture 99
  youth for quality living 100
Energy
  auditing of biomass gasification 75
  management tools 68
Enhancing
  climate resilience 15
  livelihood of rural women 99
Epidemiology and disease informatics 60
Equine
  influenza 65
  piroplasmosis 66
Ex-situ conservation 23
Extension
  personnel 106
  programmes 106
Extruded product from broken walnut 84

Farmers and farm women 106
Farmers FIRST 1
fatty acid synthesis by RNAi in pig 135
Fermented soymilk 79
fertility restoration 35
Finance 8, 126
Financial management system 101
Fish
  age determination 67
  biodiversity in rivers 24
  seed production and distribution 115
Flame-retardant finishing of jute textile 82
Fodder crops 106
Foliar sprays 11
Foot-and-Mouth Disease 64
Forage crops 33
Foreign collaborative projects with ICAR 129
Frontline demonstrations 105
Fungal phytase 59
furrower-type sugarcane cutter-planter 69
garlic planter 70
Gender
  agriculture partnership (GAP), in 101
  issues in IPM 100
  related indices in agriculture 100
Genetic
  improvement of crossbred cattle 42
  Resources 2, 9, 18, 120
  transformation 36
Genetically engineered vaccines 135
Germlasm
  augmentation, conservation, utilization 18
  crop improvement, and 116
Giant snakehead, Induced breeding of 47
Glycerol refinement 75
Gnat predator 54
Goat 44
Gossypium hirsutum 122

Governing Body 120
Green fishing systems 136
Green house gas 15
Guar gum 81
Guinea fowl 46
Hailstorm damage, Assessment of 16
Harvest and post-harvest losses 98
Harvesting implements 71
heat shock protein genes 59
High oleic safflower 30
High-yielding strains of indigenous mungbean 117
hill mechanization 73
Horizontal spread of HYVs of rice at North Andaman 118
Horticultural crops 106
human lactoferrin 135
Hybrid 106
  dryer for pigeonpea 79
  seed production 38
Hydrogel from guar gum 81
Hygienic meat processing unit 115
Hyperspectral reflectance based models 133

ICAR 120
ICT-based pest surveillance 52
immunoglobulins 136
Improving goat 45
Increasing prolificacy in sheep 43
Incubation fund 123
India-Africa Forum Summit 129
Indo-ASEAN Cooperation 129
Information System on Agricultural Education 89
Information, communication and publicity services 6, 103
Innovation fund 123
Integrated
  farming system 49
  multi-trophic aquaculture 47
  plant nutrition packages 13
  watershed development 119
Intellectual Property 121
  portfolio management 7
invasive pest 54
IPM in rice 49
IPR in Agriculture 123
Island and coastal region 116
ITK-based botanicals for IPM 49
Jute fibre reinforced polypropylene composite 82
jute-based decorative fabrics 82
Kharif and Rabi Kisan Sammelan 107
Kisan mobile advisory 108
Kisspeptin-1 (kiss1) gene 25
KVK conference 107
Labour, Trend in 98
Lac mud utilization 80
Land
  resource inventory 9
  use planning 9
leaf assay screening for castor against grey mould 54
Lepidiotia mansuetu 54
Lignin biosynthesis pathway 34
ligno-cellulosic biomass 58
Lignocellulosic fibres for pulp and paper 81
Linseed oil feeding 59
Livestock
INDEX

improvement 3, 42
management 4
poultry and fish fingerlings 107
protection 60
Low-tunnel solar-dryer 74

Maize and French bean under organic farming 113
Maize production in jhum cultivation
Male sterility in mesta 34
Management
Information System 101
depredatory birds, of 55
mites, of 55
mapping of fertility restorer gene 36
Marine fish harvests 67
Measurement of GHG fluxes 15
Meat species identification 24
Mechanization and Energy Management 4, 68
Mechanization Index 73
Medicinal and aromatic plants 41
Mega Sheep Seed Project 44
Memoranda
Agreement, of 128
Understandings of 128
Metarhizum anisopliae 122
Methane production potential 58
methicillin-resistant 61
Microalgal triacylglycerols 136
milk replacer 58
milkfish, Induced breeding of 47
Millets 106
mineral mixture 58
mithicillin-resistant Staphylococcus aureus 66
Mitogenome of fishes 25
Modular farming system for mud crab 47
Molecular
approaches 35
characterization 23
characterization of pathogens 63
modeling of New Delhi metallo-à-lactamase 115
Moringa olifera biomass based feed 58
Multigrain tortilla chips 83
multiple pathogen diagnostic 62
mutations in sorghum 53

Nail polish formulations 81
nano-materials for microencapsulation 137
National Agriculture Innovation Fund 123
National Agricultural Research and Education System 1
National Agricultural Research System 86
National Agricultural Science Fund 7, 133
National Animal Disease Referral Expert System 60
National Gene Bank 2
National Herbarium of Cultivated Plants 2
Native chicken populations 24
Netaji Subhas-ICAR International Fellowships 95
Network Project on Sheep Improvement 43
New microbial inoculants 13
Newly registered breeds 21
Niche Area of Excellence 86
non-host resistance against rust and blast 134
North-West Himalayas 112
nutraceutical food products 83
Nutrient and antioxidant diversity 114
Nutrient management 13
Nutrition and livelihood enhancement of tribals 99
nutritional diversity, Characterization of 100
Oilseeds 106
onion
detopper-cum-grader 76
prices, Fluctuations in 98
Organic matter degrading microbes 14
Organization and management 120
Ornamental crops 40
orthologue 35
parasitism genes in root-knot nematode 37
Partnership and linkages 7, 128
Pathotype distribution of wheat rusts 52
Pea-fowl management 56
Pekin duck under backyard in North Andaman 118
Pelleted complete diet 59
percutaneous needle 135
pestiviruses 62
Phenacoccus madeirensis 54
Phenotypic characterization 22
Phytoremediation system 12
Pig for fattening purpose 45
Pineapple
harvester 71
leaf fibre 82
pink
bollworm 52
resistance to cry toxins 37
Plant
quarantine 52
biosecurity alert, and 52
varieties 122
Plantation crops 39
Planting
implements 68
materials 107
system for small seeds 69
Pollinators 39
post-harvest 79
Post-harvest management and value-addition 4, 79
Potato 40
peeler-cum-washer 77
digger 73
Poultry
breeding 45
eggs, for 46
meat, for 46
Seed Project 45
pox outbreak 61
Precise nutrient supply 59
Predators 54
probiotic soy-cheese spread 79
Processed protein meals 59
Processing equipments 76
Production
nano-cellulose, of 80
seeds and planting material, of 118
technological products, of 107
Progressive use of Hindi 124
Promotion of Excellence and HRD 90
Protected vegetable cultivation for profitability 110
protocol for trapping melon-fly 55
Publicity Services 103
Pulses 32, 106
INDEX

Quality seed production 38
rabies 61
Rainwater harvesting 107
Ramie cultivation in Garo Hills 113
Rapid soil assessment 11
Refinement of bio climatic maps of India 9
region-specific mechanization 68
Registration of new breeds 21
Released varieties
jute and allied fibres 34
pulses, of 32
Released varieties/hybrids
cereals, of 27
forage crops, of 33
oilsseeds, of 30
Removal of heavy metals 14
Research for Tribal and Hill Regions 6, 112
Resilience of Indian agriculture to droughts 97
Resource efficient horticultural model 99
Rice–fish–pig–tuber crop based farming system 115
Rice land race Aath Number Dhan released 116
Ridge fertilizer-cum-seed planter 69
ripening chamber for banana 79
Risk path analysis of notifiable avian influenza 61
RLBCAU, Jhansi 130
root endophyte 49
root-knot nematode 54
rotary-knife roller gin 83
Rumen microbes 59
Rural
Agricultural Work Experience 89
employment 97
poultry 45
farming for empowerment of women 117
youth 106
Science Resource Management 138
Seed 107
production 112
  green mussel, of 48
technology 38
seed-drill for intercrops 69
semi-reclaimed sodic soil 11
sheep-pox vaccine 63
shelf-life of the feed blocks 59
SNP genotyping array 36
Social science 5
Soil and water productivity 1, 9, 11
Soil resource inventory 9
Soil, water and plant analysis 107
soil-processing trolley of soil-bin 71
solar PV
  power plant 74
  pumping systems 74
South American pin-worm 52
soy-milk powder 79
specific genes of yak 24
Spices 41
Spider diversity 19
Statistics 101
Stock characterization 25
stress alleviation in groundnut 49
stress-tolerant transgenic groundnut 35
Student READY 1, 96
Suction trap 55
sugarcane
detrashing tool 71
sett-cutter 70
Swarna Shreya 27
Taro Divya 39
Thar Ruturaj 39
thermophilic microbes 13
tillage
equipment 68
implements 68
tractor-cab 71
Tractot-cab and soil-bin 71
Trademarks 122
transcriptome analysis of Colletotrichum falcatus 37
Transferable stage cloned embryos 60
transgenic pigeonpea and chickpea 134
Trends in farm income, and agrarian distress 97
Tribal Sub-Plan (TSP) Programme 119
Trypanosomiasis 65
Trypansoma evansi 122
Tuta absoluta 53, 54
Two row zero-till seed-drill 73
vaccine bank under TSP 119
Vaccine development 63
Value-addition 113
value-addition of banana central core stem 72
variable rate granular fertilizer applicator 70
Vegetable
crops 39
cultivation 115
farming in barren land 110
Walnut bleacher-cum-washer 78
waste water treatment 12
Water
  harvesting 12
  transfer through gravity fed HDPE pipe line 119
  web generation of polycross designs 101
  wedge-plough 73
  wheat variety, Commercialization of 27
  white grub 52, 54
White ragi-malt-based designer food 83
Whitefly infestation in cotton 55
Whitefly management 55
Whole genome sequencing 38, 61
Wind erosivity assessment 10
work efficiency in yak 59
Work Plan 128
Yellow rust of wheat 52

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