

Letter No/ 17(viii) /2009-10/BAMETI/218

Dated: 24.06.09

From:

Dr. R.K. Sohane
Director
BAMETI Patna

To

All Enrolled Candidates

Sub: Contact Class & Examination of 1st Semester of P.G. Diploma in Agricultural Extension Management for 2008-09:-

Sir/Madam,

This is to inform you that the PGDAEM 2008-09 sessions is in progress. The contact class and Examination Schedule are given for your kind reference. The Candidates are directed to follow the schedule and submit the assignments during contact class period. Any further information regarding PGDAEM 2008-09 Session can be downloaded from www.manage.gov.in / www.bameti.org.

Course No.	Course Title	Date of Contact Class		Date of Exam for all the Candidates
		Roll No. 2-68	Roll No. 69-135	
101	Introduction to Agricultural Extension Management (4 credits)	27.07.09	3.08.09	25.08.09
102	Communication and Diffusion of Agricultural Innovations (3 Credits)	28.07.09	4.08.09	26.08.09
103	Principles and practices of extension management (3 credits)	29.07.09	5.08.09	27.08.09
104	Participatory Approaches in Agricultural Extension (2 Credits)	30.07.09	6.08.09	28.08.09
105	Research Methods in Agricultural Extension (2 Credits)	31.07.09	7.08.09	29.08.09

The centre for Contact Classes and Examination shall be:

**Deep Narain Singh Regional Institute of Cooperative Management,
Shastri Nagar,
Patna 800023**

The letter is issued post approval of the names of the Candidate for PGDAEM 2008-09 from Inter Departmental Working Group.

Yours Sincerely
Sd/-
Director
BAMETI Patna

LIST OF CANDIDATES ENROLLED FOR PG DIPLOMA IN AGRICULTURAL EXTENSION MANAGEMENT 2008-09

EXAM CENTRE: DNS RICM, Shastri Nagar, Patna 800 023

.No	ID	NAME	DESIGNATION	DISTRICT	REMARKS
1	AEM-08/Bih/2	Mr Vimlesh Kumar Pandey	Subject Matter Specilaist	Jehanabad	
2	AEM-08/Bih/3	Dr Shailabala Dei	Programme Coordinator	Jehanabad	
3	AEM-08/Bih/4	Mr Arvind Kumar Sinha	Subject Matter Specialist Hort.	Jehanabad	
4	AEM-08/Bih/5	Mr Mohammed Ismail	Project Director ATMA	Jehanabad	
5	AEM-08/Bih/6	Mr Nikhat Yasmin Azmi	Jr. Scientist-cum-Asst. Professor	Jehanabad	
6	AEM-08/Bih/7	Dr Pramod Kumar	Asst. Director Agril	Jehanabad	
7	AEM-08/Bih/8	Mr Suman Kumar	Dy. Collector	Patna	
8	AEM-08/Bih/9	Mr Sanjay Kumar	Jr. Plant Protection Inspector	Nawada	
9	AEM-08/Bih/10	Mr Shreebhagwan Roy	Project Director, ATMA	Kishanganj	
10	AEM-08/Bih/11	Mr Santlal Prasad Shah	Sub-Divisional Agril. Officer	Kishanganj	
11	AEM-08/Bih/12	Mr Ravindra Kumar Verma	Dist. Soil Conservation Office	Rohtas	
12	AEM-08/Bih/13	Ms Sharda Nand Mishra	Block Agril. Officer	Madhubani	
13	AEM-08/Bih/14	Mr Shahshi Shekhar Mandal	Project Director ATMA	Darbhanga	
14	AEM-08/Bih/15	Mr Ram Naresh Mandal	Block Agril. Officer	Darbhanga	
15	AEM-08/Bih/16	Mr Narendra Mohan	Horticulture Inspector	Patna	
16	AEM-08/Bih/17	Mr Kundan Kumar	Dist. Planning & Evalution Officer	East Champaran	
17	AEM-08/Bih/18	Mr Shankar Kumar Jha	Sub Divisional Agril. Officer	East Champaran	
18	AEM-08/Bih/19	Mr Yadunandan Prasad Yadav	Project Director	East Champaran	
19	AEM-08/Bih/20	Mr Ajay Kumar Thakur	Asst. Agril. officer	East Champaran	
20	AEM-08/Bih/21	Mr Sarbjeet Kumar	Dy. Director Hort.Nursery	Patna	
21	AEM-08/Bih/22	Mr Om Prakash	Dy. Director Agril,.	Patna	
22	AEM-08/Bih/23	Mr Anil Kumar Yadav	Dist. Hort. Officer	Purnea	

23	AEM-08/Bih/24	Dr Sanjay Kumar Kaushik	Touring Vety. Officer	Madhubani	
24	AEM-08/Bih/25	Dr Surendra Narain Mishra	Block Animal Husbandry Officer	Vaishali	
25	AEM-08/Bih/26	Mr Manish Kumar Singh	Dy. Project Directo	Rohtas	
26	AEM-08/Bih/27	Mr Rajesh Pratap Singh	Soil Conservation Officer,	Rohtas	
27	AEM-08/Bih/28	Mr Randhir Singh	Agril. Inspector	Rohtas	
28	AEM-08/Bih/29	Mr Akhilesh Kumar Singh	Asst. Agril. Officer	Rohtas	
29	AEM-08/Bih/30	Mr Sanat Kumar Jaipuiar	Mission Director National Hort.	Patna	
30	AEM-08/Bih/31	Mr Somesh Kumar	Research Associate (HRD)	Patna	
31	AEM-08/Bih/32	Dr Ram Narayan Sahu	Project Director	Madhubani	
32	AEM-08/Bih/33	Mr Upendra Kumar	Block Agril. Officer	Madhubani	
33	AEM-08/Bih/34	Mr Shambhu Prasad	Village Level Worker	Madhubani	
34	AEM-08/Bih/35	Mr Prafulla Kumar Jha	Village Level Worker	Madhubani	
35	AEM-08/Bih/36	Mr Vinay Kumar Pathak	Village Level Worker	Madhubani	
36	AEM-08/Bih/37	Mr Ramesh Prasad Sah	Block Agril. Officer	Madhubani	
37	AEM-08/Bih/38	Dr Manoj Kumar Kashyap	Touring Vety. Officer	Madhubani	
38	AEM-08/Bih/39	Dr Manoj Kumar	Touring Vety. Officer	Madhubani	
39	AEM-08/Bih/40	Dr Rajesh Kumar Mahata	Touring Vety. Officer	Madhubani	
40	AEM-08/Bih/41	Dr Jitendra Kumar Deepak	Touring Vety. Officer	Madhubani	
41	AEM-08/Bih/42	Dr Sneh	Touring Vety. Officer	Madhubani	
42	AEM-08/Bih/43	Mr Bharat Prasad Singh	Asst. Director Survey	Patna	
43	AEM-08/Bih/44	Mr Aditya Narayan Roy	Dy. Director Agril. Extn	Patna	
44	AEM-08/Bih/45	Mr Prabhat Kumar Singh	Dy. Project Director	Bhagalpur	

45	AEM-08/Bih/46	Mr Rajnish Kumar Girapu	Agril. Extn. Officer	Bhagalpur	
46	AEM-08/Bih/47	Mr Sanjay Kumar	Block Agril. Officer	Bhagalpur	
47	AEM-08/Bih/48	Mr Makeswar Paswan	Block Agril. Officer	Bhagalpur	
48	AEM-08/Bih/49	Mr Binod Kumar Singh	Dy. Project Director	Muzaffarpur	
49	AEM-08/Bih/50	Mr Mukesh Kumar	Junior Plant Protection Officer	Muzaffarpur	
50	AEM-08/Bih/51	Mr Ashok Kumar	Project Director	Saran	
51	AEM-08/Bih/52	Dr Santosh Kumar	Block Animal Husbandry	Nalanda	
52	AEM-08/Bih/53	Dr Sanjay Kumar	Touring Vety. Officer	Katihar	
53	AEM-08/Bih/54	Dr Baleshwar Mandal	Touring Vety. Officer	Katihar	
54	AEM-08/Bih/55	Dr Intekhab Akthar	Touring Vety. Officer	Katihar	
55	AEM-08/Bih/56	Mr Sanat Kumar Singh	Fisheries Extn. Officer	Katihar	
56	AEM-08/Bih/57	Mr Shiv Narayan Singh	Input Supervisor	Katihar	
57	AEM-08/Bih/58	Mr Indrajit Prasad Singh	Dist. Hort. Officer	Katihar	
58	AEM-08/Bih/59	Dr Divesh Kumar Singh	Project Director	Katihar	
59	AEM-08/Bih/60	Mr Jainath Prasad	Block Agril. Officer	Samastipur	
60	AEM-08/Bih/61	Mr Mohammad Haszam	Block Agril. Officer	Samastipur	
61	AEM-08/Bih/62	Dr Satya Prakash	Asst. Professor	Samastipur	
62	AEM-08/Bih/63	Mr Alok Kumar	Asst. Agril. Officer	Samastipur	
63	AEM-08/Bih/64	Mr Rajesh Kumar	Block Agril. Officer	Samastipur	
64	AEM-08/Bih/65	Mr Mukesh Kumar	Block Agril. Officer	Samastipur	
65	AEM-08/Bih/66	Mr Baidya Nath Paswan	Block Agril. Officer	Samastipur	
66	AEM-08/Bih/67	Mr Sudhir Chandra Choudhary	Subject Matter Specialist, Plant	Samastipur	

67	AEM-08/Bih/68	Mr Sanjai Kumar Ray	Farm Manager	Samastipur	
68	AEM-08/Bih/69	Ms Sunita Kumari	Subject Matter Specialist (Home Science)	Samastipur	
69	AEM-08/Bih/70	Mr Ram sevak Mahto	Block Agril. Officer	Samastipur	
70	AEM-08/Bih/71	Mr Raj Kishor Sinha	Investigator	Patna	
71	AEM-08/Bih/72	Dr Saroj Kumar Rajak	Asst. Prof-Cum- Jr. Scientist	Patna	
72	AEM-08/Bih/73	Dr Mukesh Kumar	Touring Vety. Officer	Patna	
73	AEM-08/Bih/74	Dr Kaushal Kumar	Asst. Prof. - Cum- Jr. Scientist	Patna	
74	AEM-08/Bih/75	Mr Awadh Kumar	SMS agronomy	Khagaria	
75	AEM-08/Bih/76	Mr Anant Kumar	Subject Matter Specialist	Khagaria	
76	AEM-08/Bih/77	Ms Indu	Subject Matter Specialist	Khagaria	
77	AEM-08/Bih/78	Mr Anil Kumar Singh	Village Extn Worker	Munger	
78	AEM-08/Bih/79	Mr Sujay Kumar	Dy. Project Director	Munger	
79	AEM-08/Bih/80	Dr Ram Prakash Sharma	SMS, Entomology	Gaya	
80	AEM-08/Bih/81	Mr Jeetendra Kumar	SMS, Agril. Engineering	Gaya	
81	AEM-08/Bih/82	Mr Anand Prakash	Touring Vety. Officer	Gaya	
82	AEM-08/Bih/83	Mr Baidya Nath Rajak	Dist. Agril. Officer	Muzaffarpur	
83	AEM-08/Bih/84	Dr Rakesh Kumar Kumud	Asst. Poultry Officer	Muzaffarpur	
84	AEM-08/Bih/85	Dr Anil Kumar	Touring Vety. Officer	Muzaffarpur	
85	AEM-08/Bih/86	Mr Sunjay Kumar Sharma	Block Agril. Officer	Begusarai	
86	AEM-08/Bih/87	Mr Sumant Kumar	Village Extn. Worker	Nawada	
87	AEM-08/Bih/88	Mr Rajesh Kumar	Village Extn. Worker	Nawada	
88	AEM-08/Bih/89	Mr Saket Bhushan Singh	Agril. Extn. Officer	Nawada	

89	AEM-08/Bih/90	Mr Ravikant Kumar	Agril. Inspector	Nawada	
90	AEM-08/Bih/91	Mr Uma Kant	Village Extn. Worker - Cum - BAO Narhat	Nawada	
91	AEM-08/Bih/92	Dr Manju Sinha	Animal Husbandry	Nawada	
92	AEM-08/Bih/93	Mr Sanjay Kumar	Dy. Project Director	Buxar	
93	AEM-08/Bih/94	Mr Chandra Bhushan Pandey	Fisheries Extn. Supervisor	Buxar	
94	AEM-08/Bih/95	Dr Surendra Bahadur Singh	Project Director	Saharsa	
95	AEM-08/Bih/96	Mr Arvind Kumar Thakur	Associate Professor	Patna	
96	AEM-08/Bih/97	Mr Arun Kumar	SMS	Vaishali	
97	AEM-08/Bih/98	Ms Veena Shahi	SMS (Home Science)	Vaishali	
98	AEM-08/Bih/99	Mr Sudhir Kumar Mishra	Dist. Engineering Officer	Patna	
99	AEM-08/Bih/100	Mr Rameshwar Prasad	Block Agril. officer	Bhagalpur	
100	AEM-08/Bih/101	Dr Sudhir Das	SMS Horticulture	Sheohar	
101	AEM-08/Bih/102	Mr Sanjay Kumar	Jr. Plant Protection Inspector	Nalanda	
102	AEM-08/Bih/103	Mr Vijay Anand	Asst. Director of Agril. Plan	Patna	
103	AEM-08/Bih/104	Mr Sunil Kumar	Sub Divisional Agril. Officer	Patna	
104	AEM-08/Bih/105	Mr Anil Kumar	Plant Protection Inspector	Patna	
105	AEM-08/Bih/106	Dr Bishnu Deo Singh	SMS (Agril. Extn)	Aurangabad	
106	AEM-08/Bih/107	Mr Ravindra Kumar	Project Director	Bhojpur	
107	AEM-08/Bih/108	Mr Gopal Sharan Prasad	Junior Plant Protection Officer	Bhojpur	
108	AEM-08/Bih/109	Mr Rana Rajive Ranjan Kumar	Dy. Project Director	Bhojpur	
109	AEM-08/Bih/110	Dr Md. Jawed Alam	Touring Vety. Officer	Bhojpur	
110	AEM-08/Bih/111	Mr Sachidanand Singh	Consultant	Bhojpur	

111	AEM-08/Bih/112	Dr Himanshu Bhushan	Animal Husbandry Officer	Bhojpur	
112	AEM-08/Bih/113	Mr Ajit Kumar	Dy. Project Director	Begusarai	
113	AEM-08/Bih/114	Mr Punit Kumar	Block Agril. Officer	Begusarai	
114	AEM-08/Bih/115	Mr Kaushal Kumar Singh	Block Agril. Officer	Saharsa	
115	AEM-08/Bih/116	Mr Rajesh Kumar Singh	Block Agril. Officer	Saharsa	
116	AEM-08/Bih/117	Mr Shyam Sunder Roy	Asst. Agril. Officer	Saharsa	
117	AEM-08/Bih/118	Mr Manoranjan Prasad	Agril. Officer	Saharsa	
118	AEM-08/Bih/119	Mr Arvind Kumar Jha	Agril. Inspector Oilseed	Saharsa	
119	AEM-08/Bih/120	Dr Narendra Kumar	SMS	Araria	
120	AEM-08/Bih/121	Dr Ashok Kumar	SMS	Araria	
121	AEM-08/Bih/122	Mr Arvind Kumar Singh	Block Agril. Officer	Nalanda	
122	AEM-08/Bih/123	Dr Shiv Shankar Kumar	Touring Vety. Officer	Chapra	
123	AEM-08/Bih/124	Mr Ram Prakash Sahani	Private Sec. to the Minister	Patna	
124	AEM-08/Bih/125	Dr Bharati Singh	Asst. Manager	Patna	
125	AEM-08/Bih/126	Mr Abhanshu. C. Jain	Dy. Director Agril.	Patna	
126	AEM-08/Bih/127	Dr Sidh Nath Singh	SMS Plant Protection	Nalanda	
127	AEM-08/Bih/128	Mr Shankar Kumar Chaudary	Joint Director Agril.	Darbhanga	
128	AEM-08/Bih/129	Mr Singh Kumar Arvind	Dist. Farm Manger	Chapra	
129	AEM-08/Bih/130	Dr Pankaj Kumar Singh	Asst. Professor	Patna	
130	AEM-08/Bih/131	Dr Sunita Kushwah	SMS Hort.	Nalanda	
131	AEM-08/Bih/132	Dr Santosh Kumar	Touring Vety. Officer	Katihar	
132	AEM-08/Bih/133	Mr Santosh Kumar Uttam	Asst. Director Agril.	Patna	

133	AEM-08/Bih/134	Mr Deepak Kumar	Block Agril. Officer	Jehanabad	
134	AEM-08/Bih/135	Mr Sudama Singh	Research Associate Agronomy	Jehanabad	

GUIDELINES FOR ASSIGNMENTS AND TERM-END EXAMINATIONS

- Assignments constitute an important component of each course evaluation. Hence, submission of assignments is compulsory. The Grade that you get in your assignments will be counted in your final result.
- Assignments of a course carry 30% weightage while 70% weightage is given to the term-end examinations. Therefore, you are advised to take your assignments seriously.
- You need to complete one assignment for each course in every semester. You will not be allowed to appear for the term-end examination for any course if you do not submit the assignments in time for that course.
- The main Objectives of the assignment are
 - To have further understanding of the theories and concepts covered in the course
 - To have an in-depth analysis and synthesis on the subject
 - To help you to relate the theoretical inputs to field and job situation

Selection and content of Assignments

- A list of topics/themes is enclosed for your reference. You have to select any one of these for the assignment for each course based on your interest and its utility to your work situation.
- Read the selected assignments carefully and follow the guidelines given.
- The content of the assignment should cover the importance of topic and relevance in extension
- It should also examine the various facets and components with specific details and illustrations.
- The content of the assignment should reflect your experiences in the application of given theme in the developmental programmes
- You should analyze and synthesize various facets on the topic and come out with conclusions and suggestions to utilize the given concept/theme.
- It should also reflect how an extension functionary can make use of the selected theme in various contexts of the job situations.
- It will be useful to highlight the various issues involved in the operationalisation of the concept, wherever necessary.
- Ultimately, writing the assignments should help you to end up with an in-depth understanding of the subject and also enhance your competencies to utilize the concept/theme in effective management of developmental programmes.

Specifications for writing the assignment

- The assignment should approximately of around 5000 words.
- You should refer to various field study reports, annual reports, program evaluation reports, observations of experts and other sources relevant to the assignment.
- The list of references should be clearly quoted at the end of the assignment.

Format

- Introduction
- Objectives of the assignment
- Details with subtopics
- Review of literature
- Analysis supplemented with case illustrations
- Summary and Conclusions
- References

Other guidelines for writing the assignment

- The study material given to you in the printed form will be helpful for writing the assignments. However, your field experience and observations would add value to it. Thus, combining conceptual aspects of the course with practical and field reflection will ensure good outcome.
- Make sure that it is presented in logical and has clear connection between paragraphs. For Research Methodology course, use tables and appropriate statistical tools wherever applicable.
- Use only A 4 size paper for writing your assignments. Avoid using very thin paper. Allow a 4 cm margin on the left. This may facilitate the evaluator to write useful comments in the margins at appropriate places.
- Write the assignments in your own handwriting or submit in type-written copies.
- Do not copy from the assignments of other candidates. If copying is noticed, the assignments of such candidates will be rejected.
- Write each assignment separately for each course.
- The completed assignment should submit to the Coordinator of the Study Centre allotted to you.
- After submitting the assignments at the Study Centre get the acknowledgment from the Coordinator.
- For your own record retain a copy of acknowledgement for assignments which you submit. This will help you to represent your case to the MANAGE in case any problem arises.
- If you do not get pass grade (20 marks) in any assignment, you have to submit it again. However, once you get the pass grade in an assignment, you cannot re-submit it for improvement of grade

- The assignments should be completed in all respects. MANAGE has the right not to entertain or even reject the assignments submitted after the due date.

Dates to be remembered

**The last date for submission of assignments for the first semester is 25th August 2009 ,
you are, therefore, advised to submit the assignments before the due date.**

Instructions for submitting the assignments

- Write your Admission Number, Name, Full Address, Programme Title, Course Code, Course Title, Name of your Study Centre, Signature and Date
- The top of the first page of your assignment sheet should look like as below:

Admission no.

Name

Address

Programme title

Semester I/II.....

Course code

Course title

Name of your Study centre

Signature

Date

Topics for Assignment

Course 101: Introduction to Agricultural Extension Management (4 credits)

- Extension – Concept, functions, philosophy, principle and process of extension and its application in the development
- Extension Teaching – Concepts, classifications, factors to be conducted in the selection and communication of extension methods
- ATMA – Meaning, organizational structure, roles and responsibilities, composition and key functions of various institutions in ATMA
- SREP – Meaning, scope, development and operationalization of SREP
- Decentralized decision making
- Convergence of line department
- Bottom-up planning
- Multi-agency extension delivery
- Research – Extension – Farmer – Market Linkages : Need and approaches for strengthening
- Farmers Organization and Federation
- Farming system, concept, need and methodology
- Public – Private Partnership: Concept and operationalization in extension reforms
- Gender issues in agriculture and gender mainstreaming
- Farm school : Concept and its operationalization
- Monitoring and Evaluation of various agricultural extension programs

Course102: Communication and Diffusion of Agricultural Innovations (3 Credits)

- Verbal Communication
- Non - Verbal Communication
- Interpersonal Communication skills
- Personality development
- Communication distortion
- Feedback – Concept, types, importance and implications
- Organizational communication – Concept, importance, types and problems
- Preparation of print media
 - Leaflet or folder
 - Circular letter
 - News story
 - News article
 - Radio script
 - T.V. Script
- Leadership - concept, roles and functions
- Community radio : concept, importance, strength and weaknesses
- Diffusion and adoption process
- Audio Visual aids, types, role of audio visual aids in communication
- Traditional media in extension.

Course 103: Principles and practices of extension management (3 credits)

- Management approaches and their strengths and limitations in the department you work
- Line and staff functions and relationships
- Planning of developmental programmes: methodology and application
- Functions of management
- Delegation and decentralization
- Problem solving
- Human resource planning
- Performance management
- Human resource development: concept, components and applications
- Training need assessment of extension functionaries and farmers
- Designing training programme for extension functionaries and farmers
- Methods and aids for training effectiveness of extension for farmers
- Human resource management and its practice in your organization/ department
- Strategic management
- Principles and practices of teamwork
- Identification and use of skills
- Observation and feedback
- Motivational techniques
- Leadership styles and pattern in village level organization

- Personality traits of extension officers for effective extension work

Course 104: Participatory Approaches in Agricultural Extension (2 Credits)

- Develop a micro-plan of selected village by using various PRA methods
- Use appropriate PRA methods for project / program management and implementation
- Identify technological needs of two different situations using one or combination of participatory approach
- Apply space related PRA methods and indicate demographic features and resources in different selected villages at you work place
- Find out institutional linkages and relationships of cluster villages in your jurisdiction
- Identify seasonal variations of different agro-ecological situations (at least four) in your jurisdiction by using suitable PRA tools and describe the process
- Use three different prioritizing techniques to find out farmers preferences and priorities of two villages
- Dynamics that operate in groups in a village and role that extension officers need to play to maintain group harmony
- Measures to maintain sustainability of groups in two different villages
- Extension offices need to be leader by example – substantiate the above statement
- In the present context which styles of leadership are appropriate? Support with your experience by explaining the process.
- How do you conduct participatory planning and monitoring of project implemented in your block
- Describe participatory watershed management process which are followed in your jurisdiction – substantiate with at least three success cases.
- How do you assess and give feedback to the scientists as a part of the Participatory Technology Development (PTD)
- Discuss at least four cases of PTD you come across in your experience at your work place.

Course 105: Research Methods in Agricultural Extension (2 Credits)

- Make a visit to a village and identify an important research problem. Mention the importance, objectives, hypothesis and variables of the study. Based on this, prepare a suitable data collection device.
- Make a visit to a village to identify the important agricultural problems as perceived by the farmers, community leaders and village level extension functionaries using interview schedule
- Review the sampling methods used in behavioural sciences research with specific reference to Agricultural Extension Research
- Analyze the research designs adopted in agricultural extension research and bring out the advantages and limitations of reviewed research designs
- Select a village, identify a research problem, organize a research study by using case study design and report the findings of the study
- Collect and arrange the review of literature on importance of Extension Research in the context of globalization of agriculture
- Review and identify the latest areas of research in agricultural extension
- Identify and prioritize agricultural problems in a selected village, based on which formulate a research proposal considering the important steps in social sciences research
- Make a visit to village, identify the problems and organize a scientific research study adopting social survey method
- Critically review the problems in behavioural sciences research with specific reference to agricultural extension research and suggest suitable measures to overcome it
- Identify any five research problems in your area, mention objectives, variables and different forms of hypotheses of the selected study
- Review and identify the latest research methodologies in agricultural extension