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Report on CTA/RADA National Farmer Experimentation and Innovation Workshop for Extension Officers

Prepared for: CTA

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INTRODUCTION

A training workshop on Farmer Experimenation and Innovation was held on the 28th of September to 1st of October at the University of the West Indies Mona Visitors Lodge.

On the 5th August 2010 the Rural Agricultural Development Authority entered into an agreement with the Technical Centre for Agricultural and Rural Cooperation to conduct a four day workshop on Farmer Experimentation and Innovation for twenty-six Extension Officers. This workshop was a result of communication between both organizations in an effort to develop the capacity of individuals in RADA to facilitate the continued strengthening of the ASTI system in Jamaica. The four day workshop was executed within three weeks of the signing of a contract under the project number 3-1-33-304 and commitment number CM 10-0402 at a total value of Euro 25,938.

The workshop, which began with a brief opening ceremony, saw the, Hon Minister Dr Christopher Tufton delivering the keynote address.

This report highlights activities of both organizations in the execution of the workshop and planned follow up activities.

BACKGROUND

Innovators and their innovations are now being viewed as the vehicle in driving an industry forward. Innovations can take many forms and may be as straightforward as a simple technique or as complicated as an invention. Within the farming industry innovators are classified as individuals who are developing or modifying techniques, tools and or engaging in their own informal research. These are farmers whose creative abilities can result in generating solutions which may have economic significance especially if supported and formally researched. However, due to the lack of a strong linkage with the scientific community farmer's findings are often overlooked as they lack scientific validation - thus contributing to the loss of valuable information.

In 2004 The Technical Centre for Agriculture and Rural Cooperation (CTA); a Netherlands based organization with a mandate to foster the strengthening of the agriculture sector through information sharing in the African Caribbean and Pacific (ACP) Region, highlighted this disconnect after analyzing the Agriculture Science Technology and Innovation (ASTI) System in these Regions.

The CTA therefore implemented a number of programmes and projects in the ACP region geared towards addressing communication challenges and strengthening linkages in the agriculture sector through an innovation system approach.

CTA Activities	YEAR
ASTI Case study	2004
Farmer Experimentation and Innovation workshop	2005
CTA/SRC/NCST Training of Trainers workshop	2008

The innovation system approach offers a holistic and multidisciplinary approach to innovation, incorporating emerging reforms and approaches for agricultural development. It facilitates participatory research and technology development dissemination and uptake. Farmer innovation and the recognition, promotion and integration of their knowledge are critical to sustaining ASTI systems

The Rural Agricultural Development Authority with its role of fostering linkages among key stakeholders (farmers and researchers) has therefore partnered with CTA for the training of Extension Officers as a part of the continued effort to develop a competitive and innovative agriculture sub-sector.

The training of Extension Officers in being able to recognize innovative farmers and their potentially viable innovations will contribute to the further strengthening of their relationship with farmers and researchers as new and improved solutions are being sought towards industry development.

GOAL

Development of a competitive agriculture subsector providing improved food and nutrition security and reducing poverty in Jamaica

MAIN OBJECTIVE

The workshop was designed to develop the capacity of extension organizations to mainstream innovations framework and support Science Technology and Innovation integration into advance training, research and outreach for improving the performance of Agricultural Science Technology and Innovation (ASTI) systems

The specific objectives were as follows:

To increase understanding of the concept and application of the Innovation System framework and its relevance to the agriculture sector

To identify and promote farmer innovation as a strategy for developing locally appropriate innovations and closing the gap between farmers, research and extension organizations

To design strategies for mainstreaming ASTI integration in the training, research and outreach programmes within universities, research and extension organizations

EXPECTED OUTPUTS

After the training, participants would be able to;

- design and lead training workshops on farmer experimentation and innovation
- influence the processes for mainstreaming farmer experimentation and innovation in agricultural science, technology and innovations systems

WORKSHOP ORGANIZATION/LOGISTICS

The signing of the contract between CTA and RADA propelled forward the activities required for the successful implementation of the workshop. These activities were undertaken within the guidelines as indicated in the contract. There were however, some agreed changes with regards to the venue and date which were needed to facilitate the attendance by the Minister of Agriculture.

WORKSHOP EXPENDITURES

On 23 September 2010 80% of the Euro 25,938 was sent to RADA to facilitate payments necessary for the workshop proceedings. From this total the consultant contracted at Euro 2000 was paid 60% of his fees with the additional to be paid on completion of his contractual obligations.

Workshop Participants

A list of participants was required as part of the agreement to complete the drafting of the CTA/RADA workshop contract. Extension officers in various fields of study and who work closely with farmers were selected from each parish. Each parish was represented by two participants. . The list of participants was sent to CTA on 18 June 2010. This was later revised by the Chief Executive Officer of RADA and a final list submitted to CTA on 14 September. The list included twenty six Officers which was a combination of Agricultural Extension Officers (14), Agricultural Assistants (4) Livestock Extension Officers (7) and one Social Services/Home Economic Officer (1).

Consultant

Dr William Critchley from the VU University, Amsterdam was contracted by RADA on the approval of CTA to assist in the implementation of the workshop. His contractual duties were as follows:

- Assist RADA/CTA with the finalization of training workshop programme
- Review and update training material
- Prepare and deliver technical presentation
- Oversee the workshop, including the field trip
- Review and approve the technical workshop report prepared by RADA

A contract letter was drafted outlining duties and arrangements for payment. A copy was sent to the consultant to confirm agreement and the document was signed upon his arrival in Jamaica.

Accommodation/Conference package

The Golf View Hotel in Mandeville was initially the venue of choice providing accommodation and conference facility inclusive of meals. However, the Mona Visitors Lodge in Kingston was subsequently contracted to provide the said amenities. This change was necessary to facilitate participation of the Minister of Agriculture; the keynote speaker who would not have been able to attend the previous venue. The Minister had a keen interest in this new approach to sector development and would be instrumental in policy development to foster the concept of farmer innovations for agricultural

advancement. Through prudent negotiations an agreement was made with the Mona Visitors Lodge which allowed for activity within the budgetary allocations.

The participants, as well as the consultant, were accommodated at the Lodge where meals inclusive of breakfast and dinner were provided. Lunches were provided during conference days. The Gold Room was made available for conference days, providing adequate space to facilitate workshop group activities.

Field Trip

A total of six farms were identified for visit to view innovations by farmers. Two buses were arranged which would allow for two groups; one to farmers in the East and the other to farmers in the Western half of the Island.

Innovators Fair

A total of four farmers were agreed on for participation in the "Mini Innovators Fair." Farmers would display and discuss their innovations which were as follows:

- Mr Alvin Murray Solar knapsack sprayer
- Mr Miguel Mullings Chicken plucking machine
- Mrs Leese Bouffard Goat Cheese
- Dr Lyndon Johnson Pimento scented charcoal

Secretarial services

Secretarial services provided by RADA were inclusive of the four workshop days as follows:

Pre workshop	During workshop	Post workshop
Duplication of workshop materials and the compilation of workshop portfolios	Communication among participants and other stakeholders	Communication among additional service providers
Development of documentation for consultant	Word processing services	Compilation of workshop materials
Communication among contractual parties, participants, presenters, the media and other relevant stakeholders		

WORKSHOP ACTIVITY

The workshop commenced on 28 September 2010 at 10:10 am with a brief opening ceremony. This was followed by workshop activities coordinated by Dr William Critchley and chaired by Jeanette Williams. The following three days allowed participants to be exposed to the concept of the ASTI system and farmer innovation and their role in integrating the Science Technology and Innovation System in Extension Services. This was achieved through a series of presentations, group work and a field trip.

The second day of the workshop saw Jamaica faced with heavy rainfall which resulted in flooding and road blockage in several areas. Although all the presenters were able to attend as scheduled only one innovator (Mrs Bouffard) was successful in reaching the venue. This however provided participants enough time to fully understand the innovation and the bottlenecks faced by innovators in implementing their ideas. The field trip which was cancelled due to weather conditions was reinstated and only one bus was possible to transport Officers to visit two farmers in the West. The workshop concluded on 1 October 2010. Details of the activities are seen in ANNEX---

LESSONS LEARNT (Workshop planning)

1. A team is required to coordinate different aspects of the workshop planning
2. Flexibility is required in dealing with unexpected happenings
3. Procurement procedures can provide hindrances where quick responses are required
4. The linear communication procedures allows for a failure of efficient communication of information to relevant parties
5. To allow for the full participation of individuals accommodation should be provided within workshop venue

WORKSHOP PROCEEDINGS

On September 28, 2010 a four day workshop was convened under the theme "National Farmer Experimentation and Innovation Workshop for Extension Officers." A short opening ceremony chaired by Dr Marc Panton saw greetings presented on behalf of CTA, RADA and the VU University. The Hon Minster of Agriculture was the keynote speaker. A total of 24 Extension Officers participated in the workshop conducted by Dr William Critchley which included innovators fair and a field trip. The workshop concluded on Friday 1 October 2010.

Opening Ceremony

The opening ceremony began with the welcome and opening remarks delivered by Dr Marc Panton. Dr Panton highlighted the importance of the workshop and its positive impact on the image of farmers'.

Dr Audia Barnett conveyed greetings from CTA on behalf of Michael Hailu the Director. She provided a brief background on CTA and informed that CTA was currently developing its new strategic plan 2011-2015.According to Dr Barnett, CTA hoped that through partnership with RADA and by extension, the government of Jamaica and other actors, the awareness of farmer innovators who have a critical role to play in strengthening the agricultural innovation system would be promoted. She further commented that these farmers' role in finding science, technology and innovation solutions to support the sustainable intensification of agriculture must be duly recognized and harnessed.

According to Dr Barnett, CTA has been making significant contribution to the Caribbean region which she attributed to the untiring efforts of Ms Judith Francis (the CTA representative for the African, Caribbean and Pacific Region) in building the capacity of the Caribbean region in strengthening the agriculture sector through knowledge sharing, networking and policy development.

Greetings from RADA were presented by the Chief Executive Officer Mr. Al Powell, who expressed his pleasure in partnering with CTA in the implementation of the workshop. According to Mr Powell, RADA is moving towards a more technological aspect and this workshop will play a critical role in equipping extension officers with both theoretical knowledge and practical experience; that will influence the process for mainstreaming farmer experimentation, innovation in agricultural science and technology.
Dr. William Critchley gave a brief introduction on his involvement with innovative farmers and his previous workshop experiences. He also highlighted the importance of partnerships commending the Hon Dr. Christopher Tufton the Minister of Agriculture, for his passion in relation to the agricultural sector.

Dr. Christopher Tufton delivered the keynote address highlighting challenges facing the agricultural sector. He stated that farmers and individual activities must be driven by consumer market intelligence; which will account for the requirements of the market, the products to produce, the way in which it should be produce and the quantity to produce. According to him, consumer buying power plays a

crucial role in any market making it critical to know the consumers profile; whether it be retailers, agro processors, export market, tourism industry etc. He noted that a key understanding of the market will give farmers an idea of what to produce which will eliminate or reduce waste.

Dr Tufton noted that Jamaica was exploring strategies to engage Jamaican farmers in the market place allowing them to produce the right product at the right time. This he stated was necessary, as consumers today are rather sophisticated even if they possess little academic knowledge. He also felt that hosting workshops at regular intervals is very important as it would keep extension officers up to date with market trends, which will help the entire sector to flourish. According to Dr Tufton also stated the importance of the 4 P's of marketing (Product, Price, Place and Promotion); and the difficulty for Jamaican farmers to compete on the basis of price because they have limited land space or resources. He further stated however, that farmers should focus on quality not mass production and that Jamaica should use innovations that are at our disposal or use our own invention. This was followed up naming several examples; Log wood honey from St. Elizabeth, Walkers wood jerk sauce, blue mountain coffee etc. Dr Tufton concluded his presentation emphasizing the need for the agriculture sector to be more creative and innovative while focusing on best practices and quality.

The ceremony concluded with the chairman Dr. Marc Panton emphasizing the relevance of the workshop in widening the horizons of the officers. The vote of thanks he delivered brought the ceremony to a close.

Workshop activities

September 28, 2010 – DAY 1

The workshop chaired by Jeanette Williams began with the necessary introductions, which was followed by Dr Critchley presenting an overview of the workshop. The presentation highlighted the background of the workshop, the objectives to be met and the expected output. Participants were also briefed on the activities of the workshop days. Subsequent to the presentation, participants were asked to list their fears and expectations of the workshop tabled below.

Presentation 1 - Workshop overview

Background

- To follow up pilot FI training and case studies in 2005
- To build on ASTI training in 2008
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Objectives

- To facilitate an understanding of forms of R&E/ ASTI
- To help officers understand importance of FIs
- To develop capacity of officers to interact with farmers

Expected output

- A program integrating the FI approach into our work

FEARS	EXPECTATIONS
• No follow up training • Lack of recognition of farmers innovation • Talk shop / waste of time • Lack of collaboration/ linkages between stakeholders • Lack of acceptance by farming community • Policies not in line with innovations • Lack of resources re-innovations • Irrelevant information	• Learning about new innovations • Better interaction with farmers using experimental and innovative technology • Improve effectiveness and efficiency in extension methodologies • Using available resources as innovative tools its cost effectiveness • Impartation of information to farmers and stakeholders • Learn how to gather information from innovative farmers • Workshop information will aid in research and development • Informative and stimulating workshop • Using the information for social and economic improvement of community • Change of mindset/change of concept • To be able to identify innovations • To identify linkages which affect innovations

Presentation 2 - Agriculture Science Technology and Innovation System (ASTI)

Mr Albert Fearon presented the ASTI system. His presentation explained the concept of the ASTI system as well as the identification of actors within the system. Reference was also made to the ASTI policy and main elements involved. His presentation concluded with emphasis on the need for Experts need to improve understanding of innovation systems concept to contribute to STIP processes and implementation as well strengthen and expanding national, regional and international collaboration – information and knowledge sharing. He also charged that experts were need to assist countries in identifying and implementing priority actions for strengthening innovation systems in support of socio-economic transformation and that the scientific community needed to show leadership.

Group work activity

Participants were placed in three thematic groups; Livestock, Crops and Value-added products. Within their groups, they were then asked to discuss and present on the weaknesses and opportunities within the ASTI system. These three groups were maintained throughout the workshop.

Workshop working groups

Livestock	Crop	Value-added products
Stafford Bailey	Norman Haughton	Recorgo Holt
Marilyn Lindo	Bertland Bates	Sherlock Pinnock
Charles Whittaker	Allison Wedderburn	Raymond Vassel
Dean Dawkins	Alen Webster	Winston Miller
Gary Fletcher	Eistein McLean	Valene Daley
Dailion White	Robert Tulloch	Brenda Green
Headley Cammock	Clifton Clarke	Reneny Walker
	Dale Smith	Ludloy Currie
	Kavil Howard	

Each group selected a presenter who presented on the group findings. At the end of the presentations the livestock group was voted the group completing the most comprehensive presentation. They were also asked to prepare a review of the day's activities to be presented on the following day.

Group work presentation - Weakness and Opportunities within the ASTI system

GROUP	STRENGTH	WEAKNESS	OPPORTUNITIES	TECHNOLOGY
LIVESTOCK	• Economically viable • Adaptable to local demand • Creates bonding and networking • Accelerate the knowledge and ideas	• Communication and dissemination of information & technology • Resources Financial Branding Scientific technology to provide efficiency efficacy Policy support • Intellectuality property rights Protection for the innovator • Lack of networking (JLA, JAS, PMO – specialized groups) • Interactive linkages University/CASE • No training to address needs/ lack of interaction	• Job creation • Broaden capacity to utilize local product • Market opportunities • Branding • Increase efficiency and savings • Influence direction of the research	• Research and development • Formation of indigenous market • Mobilization of resources • Improving innovation and creativity • Development of a positive externalities Self value Self Worth Self Being

GROUP	STRENGTH	WEAKNESS	OPPORTUNITIES	TECHNOLOGY
CROPS		• Lack of financing • Lack of knowledge • Poor communication • Lack of training • Insufficient attention of economic use of crops (cassava) • Land tenure • Cultural practices (poor) • Poor policies (prevent farmers for competing in global market place) • Lack of research and development.	• Policies • Protective farming (e.g. green house) • Relevant training • Personal innovativeness • Research and development • Income generation	

GROUP	STRENGTH	WEAKNESS	OPPORTUNITIES	TECHNOLOGY
VALUE ADDED PRODUCTS		• Weather condition • Pest/Diseases • Geographic location • Poor infrastructure • Poor management • Inadequate promotion (education) • Unavailable skills • Lack of proper storage • Lack of capital/funding (cant want a bottle a wine when u can only afford bag juice) • Inadequate transportation (road & cost of gas etc.)	• Availability of raw material • Income generation • Increase production • Sustainable supply of primary product out of season (tomato or sorrel) • Community development/ involvement/ infrastructure Social Economical/ employment • Improve shelf life • Waste reduction • Promotion (Brand Jamaica/ Niche Market • Enhance Research and Training	

September 29, 2010 – DAY 2

The Island was faced with heavy rainfall which resulted in flooding including the workshop venue. Damage to the venue was minimal and did not prematurely terminate the workshop proceedings. However, road blockages and land slippage resulting from the rains hindered the presence of innovators who were scheduled to participate. Only one innovator Mrs Leese Bouffard was able to attend. Participants were therefore given the opportunity to conduct an in-depth investigation Mrs Bouffard's innovation.

The day began with a review of the previous day's activities by the Livestock group. Each group was then asked to discuss their experiences with farmer innovations and present on one such innovation. This innovation should be evaluated utilizing the TEES test (Technically Effective, Economically Valid, Environmentally Friendly, and Socially Acceptable) highlighting the importance of the innovation.

Groups Presentation on Farmer Innovation

Group 1 (Livestock) presentation was based on a de-feathering machine offered in three designs. This innovation was invented in 2000 by Mr. Miguel Mullings a farmer from St. James. Mr. Mullings started this innovation by reusing old washing machine modified for the plucking of chickens. His machine was design as follows:

- Design 1- plucks 3 chickens in 15 seconds
- Design 2 plucks 5 chickens in 15 seconds
- Design 3 plucks 10-12 chickens in 10 seconds.

This innovation also successfully passed the TEES test.

A Comparison of price and efficiency of the innovation with a similar mode was also conducted by the group: Mr Mullings' machine took a shorter processing time and was less expensive.

Group 2 (Crops) introduced a cassava press, which is an innovation of a farmer group; The Flower Hill Corporative located in Flower Hill in the parish of St James. It is said to be technically effective (time: less time spent pressing, quality: better juice extraction & better quality), economically viable (low implementation, collective effort, cheaper operation), environmentally friendly (reduction of solid waste, no pollutants), socially acceptable *(*community effort).

Group 3 (Value Added) were the first presenters who presented an innovation by a farmer; Mr Alvin Murray. Mr Murray hails from Devon in the parish of Manchester. He currently reuses discarded tires for the growing of plants in his green house. His innovation was shown as to be successful when evaluated utilizing the TEES test. His innovation was found to be portable, easily accessible, reduces waste/pollution, and reduces incidents of malaria, dengue and leptospirosis caused by the improper disposal of tires thus fulfilling the criteria of being socially acceptable.

Group work presentation – TEES test on Farmer

GROUP	FARMER	IINOVATION	Technically effective	Environmentally friendly	Economically valid	Socially acceptable
Livestock	Miguel Mullings	De-feathering Machine	Design 1: Pluck 3 chickens in 15 seconds Design 2: Plucks 5 Chickens in 15 seconds Design 3: Pluck 10-12 Chickens in 10 seconds	Sound and noise control Less fossil fuel emission Effective waste management by collecting the feathers through collection bags or burn them Feathers are blowing out of the machine through the centrifugal force and heap to one side. Stainless steel design which is easily cleaned and sanitized.	C*omparable costing* *Design1: $100,000* *Design 2: $135,000* *Design 3: $280, 000* *Competition: $125,000 + tax* ***Operational Cost*** 1. Pluck 750 birds in 8 hour day 2. Pluck 1500 birds in 8 hour day 3. Plucks 4,500 birds in 8 hour day Manual labour: 6 women pluck 250 chickens in 8 hour day plus bio-security Reduce the use of water which reduces cost of harvesting of	Machine is in great demand Competitors are now purchasing the machine for resale Can be place in strategic areas with no stench or unpleasant odour Can be operated by solar panels or wind turbines

					the birds.	
Crops	Flower Hill Corp	Cassava Press	Time: less time spent pressing Quality: better juice extraction & better quality Quantity: ability to process larger quality	Reduction of solid waste No pollutants	Low implementation cost Collective effort Cheaper operation	Community effort
Value added	Mr Alvin Murray	The use of old tires to grow plants in green house	Durability Portable Easily washed and sanitized Allow for more root room More plants in green house than grow bags	Reduction in pollution Weed management Allow for year round planting Reduction in mosquito breeding sites Add to aesthetic of the environment Reduction in damage of road surface due to less burning	Free – inexpensive Easily accessible Lasting	Prevention in blocking drains Collection of used tyre widely accepted by comm. Reduce incidences of dengue, malaria and leptospirosis

Presentations – Invited Speakers

Presentations were made on local innovations which generated lively discussions. Mrs. Francine Webb-Lawrence (Assistant Plant Health Food Safety Officer – RADA) presented on local innovations in the control of insect pests. Her presentation was complemented with displays of handmade insect pheromone traps as well as commercial traps influencing the local innovations. Hand-made traps were made from recycled 2 litre plastic bottles and were found by farmers to be as effective as commercial traps in the reduction of the incidence of pests in the field. Traps were geared towards the control of the sweet potato weevil.

Dr Tanika Dennie (Animal Nutritionist Research Officer – Bodles Research Station) presented on an Innovation by a researcher; feed mixer. Her presentation included a video of the feed mixer in operation. According to Dr Dennie, the innovation resulted from a need for a feed mixer for research purposes. Due to a lack of funds for the purchasing of a commercial mixer, a local welder was contracted. Through a number of trial and errors a locally made version of the mixer was completed.

Innovators Fair

Subsequent to lunch, Mrs Bouffard presented her innovation; Goat Milk Cheese. Mrs. Bouffard, originally from Canada, has been living in Jamaica for the past 10 years. Her inspiration of using goat milk to make cheese came from the fact that there were none available in supermarkets. She also highlighted the benefits of goat milk cheese when compared to that of cow's milk cheese. According to Mrs Bouffard, goat's milk has a better quality to make cheese when compared to cow milk. Goat milk has smaller fat globule size that enhances digestibility, fat does not clump together, keeping it more homogenized and also aiding digestibility. It also contains more protein per serving and higher essential amino acids. Goat milk is used to help prevent, asthma, heart disease and diabetes; it was also used to cure tuberculosis. Mrs. Bouffard also noted that she has on a number of occasions conducted presentations on her product. On completion of her presentation a volunteer from the group explained the TEES test to Mrs Bouffard. Her innovation was evaluated as follows:

Technically effective – unpasteurized milk utilized as taste is altered by the pasteurization process

Economically valid - need for niche market, use of local material, not time consuming, use of leaves from harvested trees

Environmentally friendly - no pollution

Socially acceptable - Jamaican product, used for convalescence, easily digested

Following discussions, participants had the pleasure of tasting the goat milk cheese.

September 30, 2010- Day 3

Field Trip

A field trip was schedule for day 3 in which four farmers were selected for visit. Mr. Alvin Murray in Devon, Manchester, Mr. Raymond Suckarloo in Nightening Gayle, St Catherine, Ms. Joanne Slimforte and Mr. Leroy Delahuey. However, due to inclement weather conditions island-wide, the field trip was postponed. Last minute arrangements were made to visit two farmers, who despite the weather conditions were more than happy to accommodate the group; Mr. Raymond Suckarloo and Mr. Alvin Murray.

The first farmer visited was Mr. Suckarloo. His innovation was a pepper seed planter which he was willing to demonstrate. Participants were invited into his green house where numerous pepper seedlings were planted with the use of his machine. Mr Sukarloo explained that he was willing to share his idea with other farmers and that he had a patent for his innovation. Extension officers were engaged in a series of discussion with Mr. Suckarloo who provided answers to the many questions asked.

Mr Murray was also accommodating to the participants and displayed a number of his innovations some of which were in the initial stages of development. Participants were exposed to the use of plastic bottles being added to coir as a growth medium for ginger. Tyres were also being recycled for the growing of potatoes in his green house. Mr Murray also displayed a spraying device for crops which he explained were done to facilitate females working in the field. He noted that the commercial spray pans were normally heavy but his design allowed it to be pulled on wheels in the field. Other innovations in planning included tyres being tied together and soil added for the plating of yams as well as bamboo cut at various heights for the planting of thyme.

Participants utilized a questionnaire presented by Dr William Critchley to gather pertinent information on the farmers and their innovations. This tool is expected to be utilized by participants in conducting similar visits to innovators identified.

October 1, 2010 – Day 4

Day four concluded the workshop. The field trip report on local innovation was presented by Dr. Critchley; followed by a discussion on local innovations then a group work presentation. The groups were asked to identify opportunities for setting up a FI (Farmers Innovation) programme with existing activities. Groups were allotted 10 minutes each to complete assignment. Following the presentations was a plenary session followed highlighting “Farmers innovation: The Way Forward for Jamaica”; extension officers were very involved in the discussion and all ideas presented were discussed. A closing evaluation followed where extension officer highlighted their comments and recommendations.

Group Work Presenation – TEES Test (Innovations viewed on field trip)

GROUP	FARMER	INNOVATION	Technically effective	Environmentally friendly	Economically valid	Socially acceptable
Livestock	Mr. Alvin Murrary	Grow tyres	Water conservation/storage Assist in recycling Conservation	Reduce contamination Reduce environmental degradation	Tyres are free/cheap comparable to grow bags Reduce water consumption Increase plant density Reduce cost of production	Includes the entire community Tyres are always available
Crops	Mr. Suckarloo	Seed Planter	Time saving (50,000 seeds planted in 4hrs with the machine compared to 3600 in 4 hrs by labourers) Increase production and lower labour cost	Reuse of scrap metal Improve disease management	Cut production cost 1 man day (md)= 2000 equipment (equi) -100 trays = $20/tray 1 md. Sp =$13.90 equi = 690 trays = $ 20/tray Improve efficiency	Share with other farmers Farmers willing to share ideas Enhancing workers knowledge and innovation
Value added	Mr Alvin Murrary	Coir & Plastic	Improve drainage system Facilitate aeration Long time span of medium	Reduction of waste Recycling/reuse of materials	Cheap Materials readily available Cost effective	Sustainable – material is always around Adaptable

				Reduction in pollution/blocking of gullies and drains/waterway	Use less of other costly media Increase yield of crops Income generation	Widely accepted by community groups Odourless Improve livelihood of local citizens

THE WAY FORWARD

1. Involvement of top level policy makers (eg Meetings)
2. Use innovations identified re demonstration (RADA offices) to farmer etc.
    - Innovators fair – Parish level (begin here), Zonal level, Caribbean
3. Development of an Innovation fund
4. Identification of innovations that is an inventory/case studies, questionnaires
5. Formation of an Innovators club
6. Dissemination of information re: FI workshop by participants
7. Publications on innovations
8. Follow up training
9. Dissemination of info: re FI workshop
    - Portland October 6, 2010 (Wednesday)
    - Other parishes to arrange dates
10. List of farmer innovations compiled and reviewed
11. Presentation of innovations by farmers to policy makers

12 Farmer innovations highlighted at major agricultural shows

Coordinators were selected for the East and West Zone of the island with responsibility for collating information on farmer innovations submitted by participants. This would be further compiled by Ms Maxine Brown to arrange meetings to discuss further evaluation of innovations. The initial list of farmers was to be submitted by October 2010.

<u>Coordinators</u>

- Zonal level (2) – West: Charles Whittaker , East: Kavil Howard
- Main Coordinator (1) Maxine Brown

Members of the head table at the Opening ceremony

L-R Dr Marc Panton (Chairman), Dr Audia Barnett, Hon Dr Christopher Tufton, Dr William Critchley, Mr Al Powell

Workshop participants

Farmer Innovator – Mr Sukarloo explains the operations of his innovation (seed planting machine)

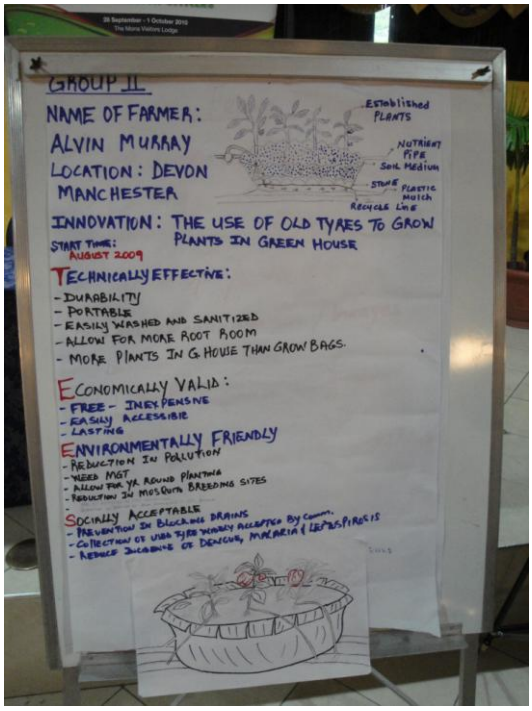
Farmer Innovator – Ms Bouffard explains the process of making goat milk cheese

Pesticide sprayer on wheels

Old tyres used for growing crops

Farmer Innovator – Mr Alvin Murray and his pesticide sprayer designed for ladies. Sprayer is pulled on wheels and not carried on the back such as the knapsack sprayers. Discarded tyres are also used for growing ginger under irrigation

Participant discussing TEES test on innovation by farmer (chicken plucking machine)



Presentation on Farmer innovation (use of old tyres)