

UNIVERSITY OF MAINE AT ORONO  
AGROFORESTRY OUTREACH RESEARCH PROJECT

REPORT FOR THE QUARTER ENDING MARCH 31, 1985

BY

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Team Leader  
and  
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1

UNIVERSITY OF MAINE AT ORONO

QUARTERLY REPORT FOR THE QUARTER ENDING MARCH 31, 1985

OVERVIEW

This report summarizes project activities through the end of its first month of life. The various administrative and planning work which has been done in recent months will be discussed first and then followed by a discussion of the technical, scientific activities which have been accomplished. Proposed work for the next quarter will then be discussed and followed by the reports of our individual contractors. Also accompanying this report is a financial summary giving projected and actual expenditures over the quarter.

Some preliminary, but significant findings have come from the research to date. An analysis of container trial data indicates that the widely used rootrainer 5's is among the poorest in performance and plantbands and Hillson rootrainers among the best.

PRE-IN-COUNTRY ACTIVITY

Following award of the contract several different administrative activities were initiated. Using UMO financial backing, quotas were sought and purchases made of equipment necessary at the start of the project. Vehicles, field equipment and

a computer system were among these. Contracts for each contractor with UMO were written for those scientists and others to be involved with the research. Negotiations and contract signing were completed before March 1 for our contractors residing in the United States.

### INCOUNTRY ACTIVITIES

#### General

Team Leader Ashley departed Orono during the last week of February to arrange the shipping of several pieces of equipment from Florida. He and his family arrived in Port-au-Prince on February 26 and immediately started setting up initial incountry activity. This included housing and office space location, initiation of customs release of vehicles and other equipment, licensing of vehicles, and several other AID related administrative details. Team members, Gerald Grosenick and Roland Dupuis, arrived in late February to prepare for the start of their work on March 1.

As described in Gerald Grosenick's and Roland Dupuis' reports (Appendices A1 and A2), there have been several group and individual meetings with various AID, AFOP grantees and other groups and individuals concerning UMO's research work plan. Team Leader Ashley has also participated in several of

these meetings and in others outside these, to discuss UMO's proposed program and that of others doing research which might complement ours. The cooperation and working relationship with CARE, ODH and PADF personnel has been excellent and has been most appreciated. Also greatly appreciated has been the help of the AFOP coordinator, Wendy King.

#### Research Results

Roland Dupuis has remeasured and analyzed data from several previously established trials. This analysis has given significant results indicating which container types should be used to grow project seedlings. As described in his report, the present rootrainer 5's is among the poorest in performance and plantbands or Hillson rootrainers among the best for seedling survival.

#### CONCERNS AND COMPLIMENTS

In my view, the project has started well. Planned work has all been accomplished and our office secretary and other support staff hired. However, some things should have progressed with less trouble. My lack of understanding of some AID bureaucratic procedure has resulted in some delays, frayed nerves and other minor malcontentions. However, I am learning and these problems should be minimal in the future.

I want to express special thanks to the GSO/ Contractor's office and the Executive Officer's personnel for their help and guidance through all of our needs related to their responsibilities.

#### THE FUTURE

Our research program is underway and its activity will accelerate in the next few months. Several more of our team, medium and short term consultants will be arriving. Dr. Fred Conway, Lisa McGown and Tony Balzano will be arriving for long term work on the socioeconomic components. Dr. Patrice Harou will be here on a short term consultancy on the economic phases of the project. Dr. Katherine Carter will be briefly working with Roland Dupuis on the design of the nursery, outplanting and species trials components. Also, CATIE personnel are scheduled in for the design of our agroforestry and silvicultural studies.

As a result of our initial meetings, a review of recent AFOP progress reports and a meeting with Mr. Henry Tschinkel (ROCAF/USAID-Costa Rica) there has been some modification in the nursery outplanting and species trial components to better meet AFOP needs. The outplanting tools trial is being dropped and some needed additional work on Neem pregermination is planned in its place.

The work for the traditional and silvicultural agroforestry components will also begin in the next quarter. Meetings are scheduled in the near future to see if some cooperative arrangement can be made between AFORP and ADS II in several facets of the work to be done for these components. This may realign some of our projected staffing needs, but should result in a more comprehensive effort than either project would achieve by itself.

FINAL COMMENT

The UMO AFORP has just completed its first month incountry and the projected work schedule and work plan are being met. Most of the activity to this time has been organizational and administrative. A summary of the work accomplished by our contractors is described in Appendices A1 and A2 of this report.

Some significant, preliminary research results have been obtained already. These are discussed in Appendix 2. The next quarterly report will be prepared in early July.

APPENDIX A1  
A QUARTERLY REPORT  
FOR THE PERIOD ENDING MARCH 31, 1985  
BY  
GERALD GROSENICK, PROJECT FOREST ECONOMIST

This first quarterly report is divided into two parts. Part 1 describes briefly my activities during the first month of the Agroforestry Research Project. Part 2 would normally present a discussion of these activities and the activities which should have been accomplished according to the most recent Plan of Work schedule. Part 3 of the report would normally outline any necessary changes to my personal Plan of Work to adjust for any unforeseen advances or delays in the accomplishment of project research objectives.

Since several members of the research team with whom I will be working closely will not arrive until April 15 and since our individual work schedules must be coordinated, it would be premature for me to draft a detailed personal Plan of Work without first consulting with them. Therefore, as we meet and coordinate our work schedules, I will be able to draft my personal Plan of Work. Future quarterly reports will, then, contain a Part 3, whereas this first one does not.

## PART I - ACTIVITIES

### a) Technical Activities

During the month I met all of the staff of the AOP Coordinating Office, CARE, PADF and ODH. We met once as a group to discuss the UMO Plan of Work. During the discussion the grantees raised several questions as to how certain of their needs could be met by our research effort. Given the variety of concerns expressed by the different staff members, and given everyone's desire to coordinate all AOP efforts as much as possible, it was decided that the four existing AOP research committees would be reformulated into three committees (Nursery and Outplanting Techniques, Species trials and Silvicultural Techniques, and Socio-Economics). Each of these research committees will meet during the first week in April to discuss the different aspects of the UMO and the grantees' research efforts.

I also met individually with Glenn Smucker of PADF to learn more about the grantees' past and current efforts in socio-economic research. I met with ODH personnel several times to become acquainted with their activities. Dr. Ashley and I met with Mr. Carmel Beliard of DARNDR, who is coordinating the World Bank Forestry Research effort.

I have reviewed most of the documents available in the AOP coordinating office and studied those which are particularly relevant to my work assignments. I began visiting the

various libraries which may have information useful to us: (FAO, UNDP, AID, Institut Francais d'Haiti, etc.). There are hundreds of documents available. Not all will be useful but it will be a continuous effort to sort through them and find those which will help us.

I visited several nurseries and plantations during the month: The Baptist Mission in Laboule, a fruit tree nursery in Laboule, ODH, and Violet. I also had several occasions to take short trips during which I could see and begin to understand the problems faced by the Haitian farmers.

Lastly, I enrolled in a Creole class at the Haitian American Institute. I have learned that knowing Creole will be necessary when I begin to conduct surveys.

b) Administrative Activities

On March 28, we began moving into our permanent offices. We had set up a temporary office in space loaned to us by the AOP Coordinating Office. During the month, Dr. Ashley and I were shown several offices. After selecting one, I assisted Dr. Ashley in negotiating the lease; checking on the progress of repairs; selecting, purchasing and transporting furnitures; purchasing and installing equipment, etc. We are making every effort to insure that all our offices are completely functional before

8

the arrival of our other staff members on April 15.

We have been fortunate enough to receive all freight which has arrived in Port-au-Prince. By monitoring the customs clearing process (which was handled very efficiently by GSO and the Administrative section of AID) we were able to have all four of our trucks on the road, insured, registered and inspected by mid-March.

c) Personal Activities

I add this section only as a reminder that a good deal of time must be spent establishing a household. I realized that I could not spend between three and six months before settling into my own home. Many people do take that long, I am told. I made every effort to select a house, supervise repairs, purchase and arrange for delivery or pick-up of furniture and appliances, and in general, doing all those things necessary to establishing a household. Now that 95% of this work is done, I can concentrate on my official duties.

## PART II

### DISCUSSION OF PLANNED VERSUS ACTUAL ACCOMPLISHMENTS

I feel that I have accomplished those objectives which I had set for myself for the first month.

1) I have arranged my personal affairs so that I can now concentrate entirely on project research efforts.

2) I have helped establish an office which will allow all team members to function efficiently as soon as they arrive.

3) I have met those people closely related to our project with whom we will be working.

4) I have reviewed documents currently available and located additional sources of documentation.

5) I have begun to know Haiti personally from several short trips.

6) I have begun to learn the Creole which will be necessary in later activities.

APPENDIX A2  
A QUARTERLY REPORT  
FOR THE PERIOD ENDING MARCH 31, 1985  
BY  
ROLAND DUPUIS, RESEARCH ASSISTANT

I arrived on February 26, 1985 to prepare for my contract start on March 1. As I see my work, it is divided into five sections: Container/Mix subcomponent, Growth schedule, Top pruning, Direct seeding, and Species trials. My quarterly reports hereafter will address the work which has and will be performed on each of these sections specifically. Each section will discuss the accomplishments and any problems and mitigating circumstances encountered while performing that section.

CONTAINER/MIX SUBCOMPONENT

At the time of this report, my main emphasis has been gathering information on previous work with containers and mixes in Haiti. Materials have been gathered from grantee quarterly reports, interviews with grantee personnel and other non-project related individuals. The most complete information source has been the UMO container/mix trial which was planted by Roland Dupuis and

11

Joel Timyan on October 1-3, 1983 in Ganthier (Gardere).  
The trial is divided into three replications (sites), each covering 0.7 ha. and located within one kilometer of each other.

The trial included five container types: Win-strip, Styroblock 128D, Plantband (1.5" x 1.5" x 5"), "Five" Roottrainer (1" x 1 x 4.25") and the "Hillson" roottrainer (1.5" x 1.5" x 5"); two mixes: 100% Pro-mix and ODH Haitian mix (70% bagasse, 15% soil, 15% rice hulls); seven tree species: Casuarina equisetifolia, Cassia siamea, Eucalyptus camaldulensis, Leucaena leucocephala, Prosopis juliflora, Azadirachta indica and Parkinsonia auculeata; and three replications of each treatment using 20 trees per replication. Survival and height measurements were recorded at outplanting, one, six, ten, seventeen and outplanting, six, ten and seventeen months respectively. The seventeen month survival and height measurements were performed under this contract.

After seventeen months, only four species remained in any analyzeable numbers. They are Leucaena, Prosopis, Parkinsonia and Azadirachta, which represent 2245 observations. At present, only the survival figures are

available by container and mix. For Leucaena in containers, the seventeen month survival percentages are as follows: Plantbands 94.0, Win-strip 93.2, "Hillson" rootrainer 93.0, Styroblock 92.2 and "Fives" rootrainer 91.3. For Prosopis in containers, "Hillson" rootrainers 87.1, Win-Strip 78.3, Plantbands 76.5, "Five" rootrainer 58.6 and Styroblock 44.6. For Parkinsonia in containers, Plantbands 84.9, "Hillson" rootrainer 76.5, Win-strips 70.6, "Five" rootrainer 69.5 and Styroblocks 57.6. For Azadirachta in containers, Plantbands 75.0, "Hillson" rootrainer 68.9, Styroblocks 67.6, Win-strips 65.0 and "Five" rootrainer 46.5. With the exception of Prosopis, Plantband is the best container for survival among these tree species. Styroblock and the "Fives" rootrainer are the worst containers for tree survival.

In looking at seventeen month survival by mix, Leucaena, Prosopis and Parkinsonia all had better survival in Pro-mix with 95.5/89.7, 70.3/69.2 and 78.3/65.8 respectively. Azadirachta had better survival in the Haitian mix 62.5/70.7.

If we look at this container/mix trial as a species trial by combining all containers and mixes together under each species, we get seventeen month survival percentages as follows: Leucaena 92.8, Parkinsonia 72.3,

Prosopis 69.8 and Azadirachta 66.7. Leucaena is clearly the best overall survivor for the environmental conditions of this site.

During the next quarter I hope to finish gathering information on all previous work with containers and mixes and compile the data into a sensible base from which to write recommendations for their further use in the Agroforestry project. This report will also serve as a guide to the establishment of another container/mix trial.

There were several minor problems associated with this subcomponent. The growth of the Prosopis has been quite prolific in the last seven months, so much so that the two meter spacing is a mass of thorny growth. Measuring these trees is now extremely difficult and requires much time for accurate measurements. The Azadirachta, on the other hand, poses a completely different problem. The trees which are now quite full and bushy, afford the hornet an ideal nest building site.

#### GROWTH SCHEDULE SUBCOMPONENT

Through several meetings with ODH personnel, Ron Smith and Gerald Larson, nursery space has been made available in bay #1 and storage space secured. Arrangements have been made with several of the ODH workers to do the work in our

14

research nursery under the supervision of myself or/and Dieubon Devilas, our Haitian nursery manager. Materials are readily available from ODH. Ron and I are presently discussing possibilities of potential outplanting sites.

In the upcoming quarter, most of this trial will be planted in the nursery. It is my hope that Devilas will be able to keep accurate records of the work requirements needed to perform this trial. With that, I hope to look at the economics of extending the growing period in the nursery.

No problems have been encountered in this subcomponent to date.

#### TOP PRUNING SUBCOMPONENT

The experimental design has been worked out on paper and by the end of April, the trees will have been purchased from ODH and pruned.

During the next quarter, this trial will be outplanted and initial survival measurements will have been taken. At present, the site is still undecided, though several potential sites are now being looked at.

15

No problems have been encountered in this subcomponent to the present.

DIRECT SEEDING SUBCOMPONENT

The experimental design for this subcomponent has been worked out on paper.

During the upcoming quarter, this trial will be outplanted and initial survival measurements will have been taken. Through discussions with Dr. Ashley it is our hope that this trial can be outplanted at three environmentally different sites: dry flatland, dry hillside and moist hillside.

No problems have been encountered in this subcomponent to date.

SPECIES TRIAL SUBCOMPONENT

Species trial information is presently being collected from the three grantees and the various reports that have been published.

During the next quarter, species trial information will continue to be collected, with the possible remeasurement of several trials.

As yet, no problems have been encountered in this subcomponent.