

PD-AAW-699
53033

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

DATE: 9/11/87

MEMORANDUM

TO: AID/PPC/CDIE/DI, room 209 SA-18
FROM: AID/SCI, Victoria Ose
SUBJECT: Transmittal of AID/SCI Progress Report(s)

Attached for permanent retention/proper disposition is the following:

AID/SCI Progress Report No. 4. 555
Rec'd 7/28/87 - Interim.
2d half of 1986 - rec'd 3/9/87
1st half of 1986 - rec'd 10/20/86
2d half of 1985 - rec'd 3/14/86
1st half of 1985 - rec'd 8/13/85
2d half of 1984 - rec'd 3/25/85

att:
3 cys each

PROGRESS REPORT

1. Report for the 2nd half of 1984.
2. GRANTEES : Dr. S. G. Ilangantileke,
Mr. S. Seniviratne,
Mr. J. B. Rajeswaran,
3. GRANT NO : RG/AID/5.
4. TITLE : Promoting Jatropha Curas (Rata Endaru) oil as a
fuel substitute for diesel engine fuel in Sri Lanka.
5. DATE OF AWARD OF
GRANT : 2nd October, 1984.
6. Description of work :

Progress was recorded for the first three months (since Oct, 1984) was slow, because;

- 1) There was difficulty in obtaining the expertise of Dr. Y. Takeda who is a JICA expert working in the Department of Agriculture, Bangkok.
- 2) The season for mature Jatropha seed is late January.
- 3) There was difficulty in obtaining the services of a suitable Research Assistant.

6.1 In order to initiate work on the project it was decided that the expertise of Dr. Y. Takeda would be essentially required. Dr. Y. Takeda had already conducted Research activities on the use of Jatropha Curcas oil. However, since he is busy setting up new facilities including laboratories and a workshop to process Jatropha oil, it was confirmed on the 26th December, 1984, that Dr. Takeda's services cannot be accomodated.

Rec'd in SCI: MAR 25 1985

6.2 Preliminary studies in the growth pattern of *Jatropha* have revealed that the season in Sri Lanka for mature seed is late January. Raw material was therefore, not available for initial sample analyses.

6.3 The appointment of a Research Assistant was made possible only in early January. Mr. K. Sumanaratna Banda was duly appointed with effect from 7th January, 1985. However, since there was an issue about allowances he wished to claim from R.V.D.B., (ref. letter of 5th November, 1984), Mr. Sumanaratna Banda resigned from the post of Research Assistant.

7. Progress to date.

(i) A new Research Assistant was appointed.

(ii) A survey was made to establish a network for the collection of *Jatropha*.

(iii) Efforts have been made to obtain more information on Bio - mass conversion, from sources in the United States and Japan.

7.1 Mr. Harendra, D. Fernando, Mechanical Engineer, was appointed as Research Assistant with effect from the 11th February, 1984.

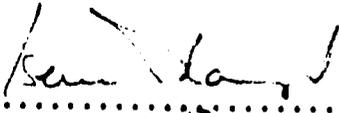
7.2 A survey was made in the Maho - Nikewaratiya area on the 22nd, 23rd, and 24th February, and a firm network was established for the collection of *Jatropha* seeds.

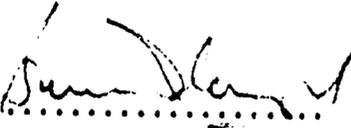
7.3 Letters have been sent to specific sources in the United States and Japan in order to obtain more information on Bio - mass conversion.

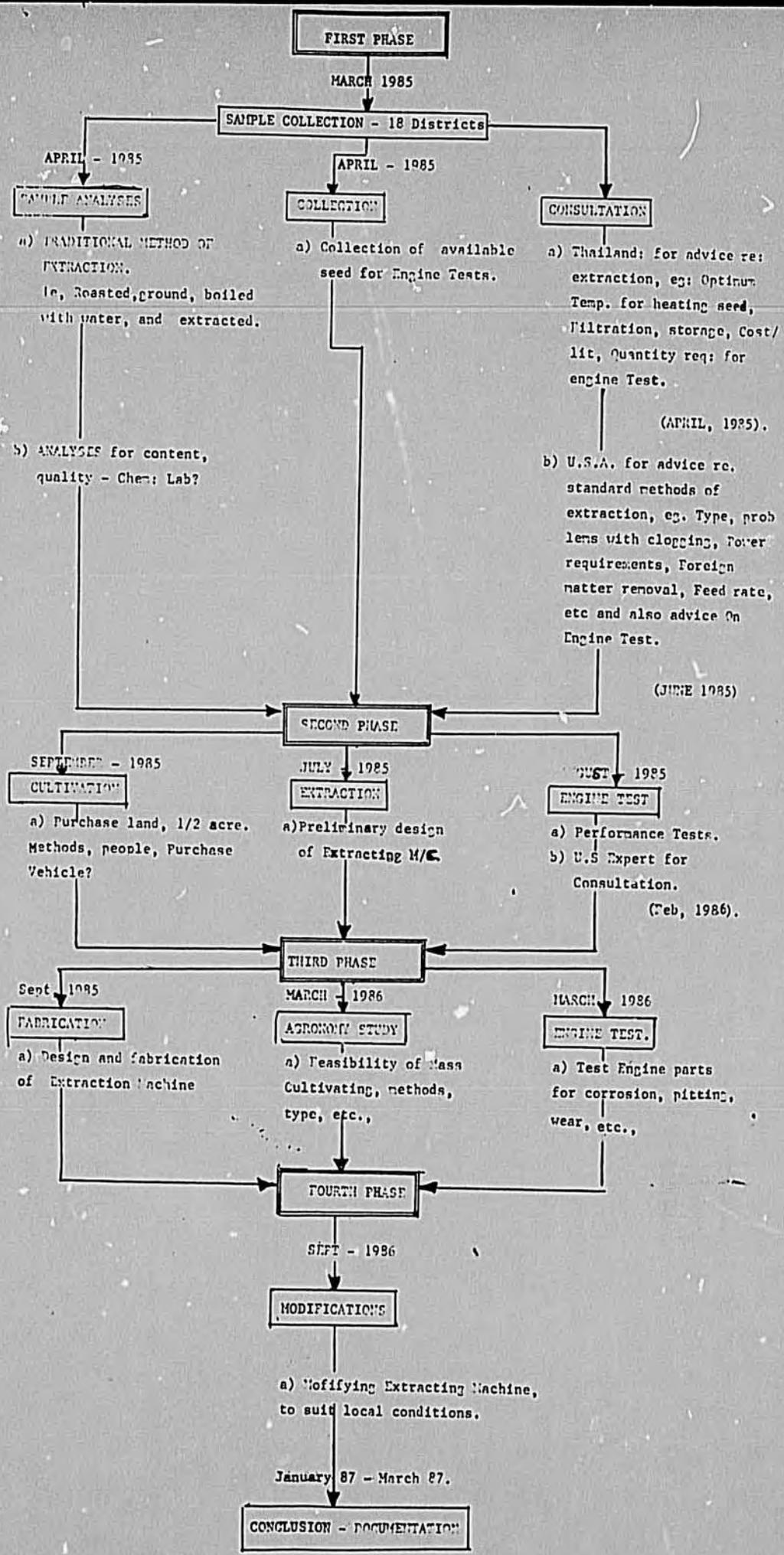
8. Plan of work for next half year.

Owing to the difficulties experienced in making any progress during the first phase, a changed work - plan, which is self explanatory, was prepared. (see attached Flow chart, copy letter of agreement for purchase of *Jatropha* seed).

It is envisaged that this plan would ensure a through investigation into the Feasability of promoting Jatropha as a fuel substitute.

9. Signature of Grantee: 

10. Signature of Head of the Institution: 



FIRST PHASE

MARCH 1985

SAIPLI COLLECTION - 18 Districts

APRIL - 1985

SAMPLE ANALYSES

a) TRADITIONAL METHOD OF EXTRACTION.
ie, Roasted, ground, boiled with water, and extracted.

b) ANALYSES for content, quality - Chem: Lab?

APRIL - 1985

COLLECTION

a) Collection of available seed for Engine Tests.

CONSULTATION

a) Thailand: for advice re: extraction, eg: Optimum Temp. for heating seed, Filtration, storage, Cost/ lit, Quantity req: for engine Test.

(APRIL, 1985).

b) U.S.A. for advice re. standard methods of extraction, eg. Type, problems with clogging, Power requirements, Foreign matter removal, Feed rate, etc and also advice on Engine Test.

(JUNE 1985)

SECOND PHASE

SEPTEMBER - 1985

CULTIVATION

a) Purchase land, 1/2 acre. Methods, people, Purchase Vehicle?

JULY - 1985

EXTRACTION

a) Preliminary design of Extracting M/C.

FEBRUARY - 1985

ENGINE TEST

a) Performance Tests.
b) U.S Expert for Consultation.

(Feb, 1986).

THIRD PHASE

Sept 1985

FABRICATION

a) Design and fabrication of Extraction Machine

MARCH - 1986

AGRONOMY STUDY

a) Feasibility of Mass Cultivating, methods, type, etc.,

MARCH - 1986

ENGINE TEST

a) Test Engine parts for corrosion, pitting, wear, etc.,

FOURTH PHASE

SEPT - 1986

MODIFICATIONS

a) Modifying Extracting Machine, to suit local conditions.

January 87 - March 87.

CONCLUSION - DOCUMENTATION