

## AGRICULTURAL MECHANISATION FOR SAT BRAZIL

### GENERAL OBJECTIVE:

To study the present status of mechanisation in the SAT of Brazil and to define and design possible alternatives (approches) for improvement.

### JUSTIFICATIONS:

It is well established and that mechanisation in agriculture reduces durgery of the farmer, results in less energy requiriment and improves timiliness of the operations. This ultimately results in higher yield with low inputs. The mechanisation aspect of SAT (Semi Arid Tropics), Brazilian agriculture need to be studied in detail. This project is designed to study the present status of mechanisation and design and develop improved equipment for efficient utilisation of avaiable power sources.

### SPECIFIC OBJECTIVES:

1. To analyse the problem and needs of mechanisation and to define research priorities to produce farm machinery and equipment effeciently adopted to different cropping systems.
2. To test and/or adapt agricultural machinery or equipment avaiable locally to improve its effeciency and to suggest modifications or improvement to the manufactures.

### Project Scientists:

1. Péricles Ferreira Nunes
2. Harbans Lal

### Collaborating Scientists:

1. Manuel Abílio de Queiroz
2. Geraldo Magela Calegar
3. Octávio Pessoa Aragão
4. Luis Corsino Freire

### SUPPORT STAFF AND FACILITIES:

1. Field staff - 2 or 3
2. Work shop facilities

### PROCEDURE:

To identify and select 2 to 3 locations of on farm situation and to moniter the operations in the detail. Operations to be monitored in a standard format as shown in appendix I.



2. To visit certain implement manufactures and yo identify and purchase equipment look promising for animal power.
3. To adpt and develop a loccally avaiable horse-cart to work as a multitool carrier.
4. To adapt the selected/pruchased equipment for broad-bed and furrow (ridge and furrow) systems of cultivation.
5. To test and evaluate the develop and/or adapted equipment in the field.

OBSERVATION:

1. Refer appendix I
2. Cost of equipment/implement purchased
3. Operation cost
4. Field Capacity (ha/hr)
5. Cost of multitool carries planned to be develop
  1. Material cost
  2. Labour cost
  3. Development cost.



