

## Output from Group Work - TANZANIA

*TT\_1 (Listing of machineries to be manufactured domestically (short, medium, long terms)*

### **Machines to be manufactured within 3 years (Short Term)**

1. Tractor – 22 Hp (Prototype by the Center for Agricultural Mechanization and rural Technology – CAMARTEC).
2. Processing machines for maize, rice, sorghum, cashew nuts, cassava, oil seeds and spare parts.
3. Power tillers
4. Irrigation pumps – Foot pumps are locally made by private companies.
5. Power tiller accessories like plows, planters, puddlers, iron/cage wheels, reapers
6. Tricycle, Power tiller and tractor trailers.

### **Machines to be manufactured within 10 years (Medium Term)**

1. Tractor implements - plows, harrows, chisel plows, sub-soilers, Inter row weeders
2. Seed drills
3. Rice transplanters
4. Sprayers
5. Power tiller attached cutter bars.

### **Machines to be manufactured beyond 10 years (Long Term)**

1. Small rice combines
2. Rice processing plants

### **Views on the list:**

- With the exception of the 22 Hp tractor and some power tiller accessories, all the machines listed under short term are under commercial production.
- CAMARTEC is looking for a joint venture to manufacture the 22 Hp Tractor.

*TT-2: Testing & Certification: Identify machineries, implements and technical capacity needs (Legal Framework/ Infra/ Human Resources)*

**Objective:** To raise the standard of performance of machinery and implements

### **Technical capacity needs**

- Equipping and Retooling of quality control Institutions (Tanzania Bureau of Standards – TBS and the Centre for Agricultural Mechanization and Rural Technology - CAMARTEC)

### **Legal limitations**

- Enforcement of CAMARTEC Act, where all machines imported into Tanzania must be tested before entering the market.

### **Networking**

- Establish regional network on Mechanization

*TT-3: Human Resources: List human resources and training needs of the stakeholders focusing on Ag machinery supply chain (incl. Maintenance support in rural areas based on existing capacities)*

Human Resources required (for the Supply Chain Only)

Research & Development → Raw material → manufacturing/Outsourcing → assembling → testing → certification → marketing → delivery systems → maintenance & support

<b>Supply chain</b>	<b>R&amp;D</b>	<b>Raw Materials</b>	<b>Manufacturing/ Outsourcing</b>	<b>Assembling</b>	<b>Testing</b>	<b>Certification</b>	<b>Marketing</b>	<b>Delivery System</b>	<b>Maintenance &amp; Support</b>
<b>Personnel</b>	Engineers	Metallurgists	Mechanical Engineers, Electrical Engineers, Artisans	Mechanics, Technicians	Engineers, Machine operators	Legal Advisors	Economist, Marketing Officer, Sales Engineers	Rural networking of dealers	Service Engineers, Mechanics, Technicians, Blacksmiths
<b>Training (existing staff)</b>	Long and short	Long and short	Long and short	Short	Long and short	Short	Long and short	Short	Long and short

*TT-4: Matching of equipments and Selection of machineries and implements, Cost analyses of critical field operations (tillage, harvest, milling & others)*

Equipment and Selection Based on farm size

Farm Size (Ha)	Draft	Primary Tillage implement	Width (mm)	Secondary tillage equipment	Width (mm)
Small (>0.4)	Power tiller	Mouldboard	0.25 – 0.4	Rotovator, Puddler	0.5 – 0.6
Large ( $\geq 10$ Ha)	4 Wheels tractor	Disc plow	1.5 – 2.5	Rotorvator	1.5 – 2.0

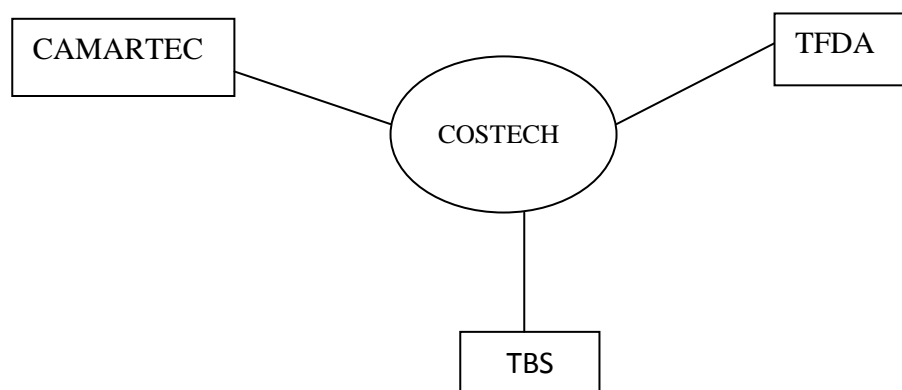
*PT\_1: Policy tools enabling environments for private sector incl. local manufacturing sector, dealers and service providers*

Policy tools enabling environment for private sector:

1. The government to provide 50% subsidy on tractors, power tillers and their implements to small scale farmers
2. Tax exemption on imported raw materials for locally manufactured agricultural machineries, implements and spare parts and introduction of taxation (tariff, VAT) to similar imported machineries to protect local production
3. Mechanization Act – to define the roles and obligations of all actors in the agricultural machinery sector

*PT\_2: Institutional/ Organizational requirements in implementing technical tracks (e.g. testing)*

- Strengthen the capacity of the Tanzania Commission for Science and Technology (COSTECH) to effectively carry out their mandated roles.
- COSTECH to link and harmonize all the activities carried out by TBS, CAMARTEC and the Tanzania Food and Drug Authority (TFDA).



## ROLES:

- a) COSTECH (Under the Ministry of Science and technology)
  - Co-coordinating and promoting research and technology development activities.
- b) TBS (Under the ministry of Industry and Trade)
  - Set material standards and carry out laboratory testing
  - Issue certificate of compliance
- c) TFDA (under the Ministry of Health and Social Welfare)
  - Regulating the quality and safety of food, drugs, cosmetics and medical device
  - Issue certificate of compliance
- d) CAMARETEC (Under the ministry of Industry and Trade)
  - Carry out field testing/performance
  - Issue certificate of compliance
- e) Ministry of Agriculture Food Security and Cooperatives - MAFC
  - Enforcement

### *PT\_3: Policy Tools for issues identified from TT\_4*

#### Issues

- Farm size
- Tractor size
- Type and size of implement
- Soil type
- Quality of work
- Costs

#### Policy Tool

- Select the size of the tractor and implement according to the farm size and type of soil for minimal operating costs.

COUNTRY ROAD MAP FOR TANZANIA

ACTION	DATES	REMARKS
Nairobi 2 <sup>nd</sup> Mech Workshop	22-24 Oct 2012	
Hold NRDS core task force meeting	31 Oct 2012	
Meeting of Core Working Group – TECHNICAL	12 Nov 2012	
Meeting of Core Working Group – POLICY	13 Nov 2012	
Administer questionnaires to Stakeholders and analyze	14 – 23 Nov 2012	
Hold stakeholder’s meeting	30 Nov 2012	
Prepare Report	01 – 05 Dec 2012	
Submit Report	15 Dec 2012	
CARD GM5 in Dakar	5-6 Feb. 2013	
Submission of the report to the CARD Secretariat	30 Apr. 2013	
Clarifications and Modifications		
(Presentation at the side event of TICAD V)	June 2013	(Consolidated by the CARD Secretariat)

### Technical Track \_ Progress Chart

Country Name	TT-1: Listing of machineries to be manufactured domestically (short, medium, long terms)	TT-2: Testing & Certification: Identify machineries, implements and technical capacity needs (Legal Framework/ Infra/ Human Resources)	TT-3: Human Resources: List human resources and training needs of the stakeholders focusing on Ag machinery supply chain (incl. Maintenance support in rural areas based on existing capacities)	TT-4: Matching of equipments and Selection of machineries and implements, Cost analyses of critical field operations (tillage, harvest, milling & others)
Cameroon				
Madagascar				
Senegal				
Rwanda				
Tanzania				
Uganda				

### Policy Track \_ Progress Chart

Country Name	PT_1: Policy tools enabling environments for private sector incl. local manufacturing sector, dealers and service providers	PT_2: Institutional/ Organizational requirements in implementing technical tracks (e.g. testing)	PT_3: Policy Tools for issues identified from TT_4
Cameroon			
Madagascar			
Senegal			
Rwanda			
Tanzania			
Uganda			