



ACTION PLAN
RICE SEED PRODUCTION
IN LIBERIA



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ACTION PLAN RICE SEED PRODUCTION IN LIBERIA
SUMMARY

Liberia has no “Seed Board’ or ‘Seed Council”

The National Seed Policy awaiting enactment of the ‘National Legislature’.

Donor-funded, project-based initiatives are virtually the only vehicles for extension services, input supply (mainly seed) and distribution of small mills.

Rice seed and other inputs have been distributed for free as an emergency or recovery activity during civil war and the post-conflict period.

Private sector operators are very few and their impact on domestic rice production is negligible.

ACTION PLAN RICE SEED PRODUCTION IN LIBERIA
SUMMARY Contd

- The country is endowed with about 600,000 hectares of irrigable land in which less than 10% has been used. Very good annual rainfall that could facilitate year round production of rice.
- The national annual demand for rice in Liberia is approximately 400,000 metric tons while production is estimated at 170,000 metric tons.
- A wide range of environments such as irrigated lowland, rain-fed lowland and upland suitable for rice production exist across the country.
- With improved water schemes, storage, resource utilization and innovative management technologies the current irrigation potential can be increased by a further from 60,000 ha to 120,000 ha.

Seed Production and Distribution
Varieties Cultivated

- There are already high yielding varieties (NERICA series, LAC 23, Suakoko 8, FKR 19, and WITA 4)
- MOA *supply* high quality rice seed by strengthening the two phases of seed multiplication: 1) breeder seed to foundation seed; and 2) foundation seed to certified seed.
- The Ministry's Central Agricultural Research Institute (CARI) would undertake the first phase, and a network of Seed Banks (SB) would undertake the second phase.
- In addition to the seed multiplication efforts described above, MOA proposes to undertake activities to increase *demand* for high quality rice seed.

Seed Production System

- **Phase 1: Multiplying breeder seed into foundation seed**
- Each year, the Central Agricultural Research Institute (CARI) will purchase breeder seed from the West Africa Rice Development Agency (WARDA) and other International Research Agencies such as IRRI.
- CARI will multiply this breeder seed into foundation seed and enters stocks into the seed production network.

Phase 2: Multiplying foundation seed into certified seed
The IPs (Implementing Partners) will undertake the second phase of seed multiplication (foundation seed into certified seed).

Implementing Partner (IPs) – private sector producers or NGOs – will produce seeds under contracts with the MOA. Each IP will then subcontract to Farmer Based Organizations (FBOs) for the multiplication of foundation seed into pre-certified seed. (By definition, “pre-certified” seed is that which results from foundation seed.)

The MOA will train Seed Banks to certify the FBOs’ output. The certification process involves inspecting, testing, weighing, bagging, and labeling seeds. Each IP will carry out the certification process under the oversight of the MOA or its representative.

Seed Multiplication Procedure

Seed type	Research centers	Quantity	Responsible/Comments
Breeder	WARDA/IRRI		Import from WARDA
Foundation seed	CARI		Supplemented by importation and other seed producers
Certified seed	By IPs	As per market requirement	MOA contracted to IPs through seed growers

Production Area under Cultivation and Projection

To attain national rice self-sufficiency, beginning 2014, on annual bases, additional 500 ha per county, will be put under cultivation both in the lowland rain-fed and lowland irrigated ecosystems, without increasing the area currently under upland cultivation.

By increasing the area under lowland rain-fed and lowland irrigated, Liberia will be self-sufficient in rice by 2018 cultivating a single crop per annum.

intensifying production to 1.5 crops per annum, Liberia will be self-sufficient by 2016, and by 2018 Liberia will be producing a surplus of 172,000 metric tons.

Production and Area under cultivation in 2009 and Projection for 2018

Ecosystem	Area cultivated 2009 (Ha)	2018 projection (Ha)	Production output (MT)		
			2009	2018 1-crop/yr	2018 1.5 crop/yr
Upland	190,000	190,000	171,000	380,000	380,000
Lowland Rain-fed	20,000	64,500	24,000	225,750	338,625
Lowland Irrigated	2,000	45,500	4,000	273,000	409,500
Total	212,000	300,000	199,000	878,750	1,128,125

ACTION PLAN RICE SEED PRODUCTION IN LIBERIA CONSTRAINTS

- The lack of feeder roads inhibits flows of rice and other commercial goods.
- The lack of information transmitted down the chain prevents input suppliers from being able to deliver seeds and other inputs at the right volumes and price, and farmers from getting the knowledge needed to make informed investment decisions.
- **Lack of credit and micro-finance institutions:** To overcome these constraints, the Central Bank of Liberia launched a micro-finance system aiming at the rural sector.
- **Inadequate trained manpower:** There is a high deficit in trained agriculturists, water management and irrigation specialists as well as researchers and extension officers.

ACTION PLAN RICE SEED PRODUCTION IN LIBERIA SOLUTIONS

To increase rice production, a number of constraints need to be resolved:

- **Invest Adaptive research capacities**
- Improve access to input supply
- **Improve Outdated information on economics of rice:**
- **Strengthen Extension, advisory and support services**
- Introduce improved soil and water management techniques in lowland and irrigated rice.
- Facilitate and promote private sector participation in the rice value chain
- Develop and disseminate and promote appropriate technologies
- **Train of more manpower** (high deficit in trained agriculturists, water management and irrigation specialists as well as researchers and extension officers)

- Restart credit facilities for farmers

NUMBER OF RESEARCHERS, TECHNICIANS AND EXTENSION WORKERS IN 2009 AND TARGETS IN FUTURE

Year	Agricultural Researchers with MA or PhD.			Agriculture Technicians			Extension Workers		
	Total	Rice specialists PhD	Rice/Water specialists MA	Total	Water agriculture engineering specialists	Rice specialists	Total	Agriculture engineering specialists	
2008	2	0	2	0	0	0	0	0	
2009	5	1	4	6	0	5	10	5	
2010	6	2	4	6	1	5	10	5	
2011	8	2	6	6	2	5	10	5	
2012	8	2	6	6	7	5	10	5	
2013	10	2	8	6	2	5	15	5	
2014	10	2	8	6	2	5	15	5	
2015	10	2	8	6	2	5	15	5	
2016	10	2	8	6	1	5	15	5	
2017	12	2	10	6	1	5	15	5	
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