NATIONAL CATALOGUE OF CROP VARIETIES RELEASED & REGISTERED IN LIBERIA

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Many thanks to the Ministry of Agriculture (MOA) and the Central Agricultural Research Institute (CARI) leadership for constituting a Technical Team to develop and update the Liberia National Catalogue of Plant Species and Varieties. The Technical Committee appreciates everyone who immensely contributed to the development and updating of the National Catalogue. This document is made available as a result of the contributions of the wide range of resource persons/stakeholders including professionals from the CARI, MOA(especially the Department of Technical Services and Department of Regional Development, Research and Extension), the academic institutions Bong County Technical College (BCTC) and University of Liberia (UL), Farmers Union Network of Liberia (FUN), and international and local non-governmental organizations (INGOs & LNGOs) as well as a few young graduates from higher institutions of learning who participated in the process. We want to recognize the financial contribution of the Ministry of Finance and Development Planning (MFDP), without which this catalogue wouldn't have been updated. We are also indebted to Honorable Minister Samuel D. Tweah, Jr. (MFDP) and his motivated lieutenants, especially the Honorable Deputy Minister Augustus J. Flomo (Department of Economic Management, MFDP) along with his special team, for their commitment and moral support at all stages to facilitate the process of updating the catalogue.

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The Technical Committee was tasked to develop and update the National Catalogue of Plant and Varieties. Therefore, at the time of its meeting to execute its task, several sources were consulted for the appropriate technical guidance. We particularly recognize the technical contributions and guidance of Dr. J. Quelibo Subah (former Director General of CARI), Mr. Robert Bimba (Director General of CHAP/Liberia), Dr. Roland C. Y. Massaquoi (President of Bong County Technical College), Mr. Thomas Gbokie, Jr. (former Deputy Minister for Regional Development, Research and Extension, MOA), and Mr. David D. Wounuah, Sr. (former Project Agronomist/MOA) whose additional inputs helped to get this catalogue finalized and submitted.

We acknowledge the commitment and contributions of the following Technical Committee members in persons of Dr. James S. Dolo (Head of Crops Programme at CARI and Technical Lead on updating the National Catalogue of Plant Species and Varieties), Mr. Jobson A. Momo (Seed Agronomist/CARI), Mr. Edward B. Perry (former Director of Extension/MOA), and MOA Regional Agricultural Coordinators: Mr. Menson Kwanwah, Moses R. Gbanyan, Amos G. Zeon, Abednego Harris and Z. Edmond Greave. We also recognize the contribution of the following MOA Technicians Ms. Aurelia Jones, Mr. Eddie Torgboh, Mr. Fakpana Sonjor, Mr. Emmanuel Cooper, and Ms. Morleeta M. Chea.

FOREWORD

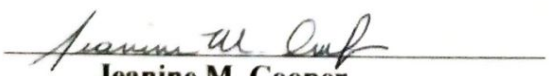
This national catalogue of agricultural plant varieties is required to be published annually. This current publication provides information on the varieties registered in the catalogue in March 2022. It is published in compliance with the provisions of the Economic Community of West African States (ECOWAS), the West African Economic and Monetary Union (UEMOA) and the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) regulation on the implementation of harmonized rules governing internal control, certification, and marketing of plant seeds and seedlings within the ECOWAS-UEMOA-CILSS region to expand seed trade across borders. Moreover, the catalogue publication is in conformity with the Liberia Seed Development and Certification Agency (SDCA) Act (article 5, section 2) on the national catalogue of plant species and varieties. This catalogue includes varieties of agricultural plant varieties/species, which are listed with their names, identification number, breeder name/institution, origin, as well as the year of registration among others.

The regional seed regulation is an integral part of the ECOWAS Agricultural Policy (ECOWAP), which aim is to form the necessary conditions favourable for the emergence of a robust seed industry, thereby facilitating a regular and timely supply of quality seeds in sufficient quantities and at affordable prices, in members' countries of the ECOWAS sub-region.

The regional seed regulation avails a detailed direction on the actions to be taken by the ECOWAS Member Countries, hence the ECOWAS Commission, to facilitate its implementation. Consequently, a Technical Committee was organized by the MOA and tasked to develop the national seed catalogue for the seed market to encourage the commercialization of certified seeds produced in ECOWAS region and harmonized with the West African catalogue of plant species and varieties (COAFEV). With the financial support of the MFDP and technical contributions of CARI, the catalogue was developed and updated consistent with the ECOWAS directives that provide a limited list of crop varieties or varietal types to be produced and commercialized in the country.

The updated catalogue offers a simple clearinghouse to facilitate easy access and use of those elite and high-yielding genetic resources across the country and within the sub-region to improve crop yields and productivity. Overall, the expectation is that the effective and efficient use of the catalogue will ensure the robust improvement of agricultural productivity within Liberia and also the sub-region to achieve the set policy and strategic objectives of ECOWAP. As in other member countries of ECOWAS, the National Catalogue of Crop Varieties Released and Registered is the prerequisite for seed certification programs within the country, ensuring the acceptability and credibility of the variety of claims and establishing the early basis for release, registration, and seed inspection.

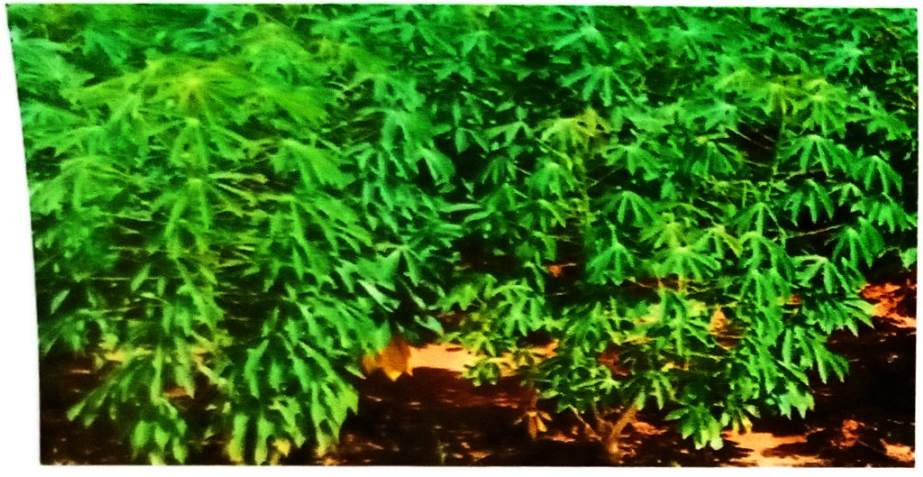
Our profound appreciation goes to everyone who contributed one way or the other to this national cause (updating of the catalogue). Without your participation or contribution, the catalogue would not have been completed.



Jeanine M. Cooper
Ministry of Agriculture

ACRONYMS

ACMV	African Cassava Mosaic Virus
BCTC	Bong County Technical College
CARI	Central Agricultural Research Institute
CHAP	Community of Hope Agriculture Project
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
CIMMYT	International Maize and Wheat Improvement Center
CSIR	Council for Scientific and Industrial Research of Ghana
DUS	Distinctness, Uniform and Stable
ECOWAP	ECOWAS Regional Agricultural Policy
ECOWAS	Economic Community of West African States
FUN	Farmer Union Network of Liberia
ICBA	International Center for Biosaline Agriculture
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
INGOs	International Non-Governmental Organizations
LNGOs	Local Non-Governmental Organizations
IITA	International Institute for Tropical Agriculture
LIFAAS	Liberia Forum for Agricultural Advisory Services
MFDP	Ministry of Finance and Development Planning
MOA	Ministry of Agriculture
RYMV	Rice Yellow Mottle Virus
SDCA	Seed Development and Certification Agency
UEMOA	West African Monetary and Economic Union
UL	University of Liberia
VCU	Value for Cultivation and Use



CASSAVA [*Manihot esculenta Crantz.*]

Name of Variety	National Code	Origin/ Source	Breeder (s)/ Institution	Applicant	Distinctness Uniformity and Stability (DUS)	Value for Cultivation and Use (VCU)	Preferred Ecology	Pedigree/ Line	Year of Release	Year of Registry
Bassa Girl	LBR-2016-623	LIBERIA	CARI LIBERIA	MOA/CARI	Cultivated on upland; growth habit: straight; Stem color: white; leaf color: light green; cyanogenic compound: low; Resistant to ACMV & green spider mite;	Tuber used as food (fufu, gari,dipar, quality flour; Leaf: used in dietary preparation and health treatment; Residue from processing: used as animal feed ingredients. Yield Potential: 5-6 t/ha.	dryland/upl and ecology	OPV	1981	2016

Bentelay	LBRME-2016-623	LIBERIA	CARI LIBERIA	MOA/CARI	Leaf shape: open; color of expandable leaf: light green; branching habit: compact; tuber color (inner/outer): white/cream; root shape: cylindrical; consistency after cooking: Mealy/poundable; tuber texture: rough; incidence of mosaic: low; hydrocyanin content: Low; growth habit: straight;	Potential yield: 7-8 t/ha; Resistant to ACMV; Dry matter content is about 57%; Use for: Gari, fufu, quality flour, chips; dumboy, dippa;	dryland/upland ecology	Land race	1981	2016
CARICASS-1	LBRME_2016-626	LIBERIA	CARI LIBERIA	MOA/CARI	Ecology: All dryland; Resistant to ACMV & Mealy bug; cyanogenic compound: low; Maturity: 9-12months; Cyanogenic compound: Low;	Tuber favored for cooking to prepare dumboy, fufu, dippa, quality flour and gari; Leaf: leaves are quite popular in dietary preparations; Residues from processing are used as animal feed ingredients. Yield Potential: 9-10 t/ha.	upland/dryland	local	1981	2016

CARICASS-2	LBRME-2016-627	LIBERIA	CARI LIBERIA	MOA/CARI	Ecology: All dryland; Resistant to ACMV & Mealy bug; cyanogenic compound: low; Maturity: 9-12months	Tuber Favored for cooking to prepare dumboy, fufu, dippa, quality flour, chips, and gari; Leaf: leaves are quite popular in dietary preparations; Residue from processing are used as animal feed ingredients. Yield Potential: 9-10 t;ha.	upland/dryland	local	1981	2016
CARICASS-3	LBRME_2016-629	LIBERIA	CARI LIBERIA	MOA/CARI	Ecology: All dryland; Resistant to ACMV & Mealy bug; cyanogenic compound: low; Maturity: 10-14months	Tuber Favored for cooking to prepare dumboy, fufu, dippa, quality flour and gari; Leaf: leaves are quite popular in dietary preparations; Residues from processing are used as animal feed ingredients. Yield Potential: 9-10 t/ha.	upland/dryland	local	1981	2016
Managborlu	LBRME-2016-631	LIBERIA	CARI LIBERIA	MOA/CARI	Ecology: All dryland; Leaf shape: Obovate; cynogenic compound: low; dry matter: 53%; cyanogenic compound: low; Resistant to ACMV & mealy bug;	Potential yield: 6-10 t/ha; Tuber uses: gari, fufu, flour, deeper; residue from processing: used as animal feed ingredient and medicine.	upland/dryland	land race	1981	2022

Yalagbor	LBRME-2016-633	LIBERIA	CARI LIBERIA	MOA/CARI	Dry matter content: 57%; unexoandable leaf: light green; texture of skin: rough; cyanigenic compound: low;	Potential yield: 6-10 t/ha; Tuber uses: gari, fufu, flour, deeper; residue from processing: used as animal feed ingredient and medicine.	upland/dryland	land race	1981	2022
Worldbank	LBRME-2022-634	LIBERIA	CARI LIBERIA	MOA/CARI	Resistant to ACMV and mealy bug; cultivated on upland; Growth habit: straight	Potential yield: -12 t/ha; Tuber uses: gari, fufu, flour, deeper; residue from processing: used as animal feed ingredient and medicine.	upland/dryland	land race		2022
Bovani	LBRME-2022-635	LIBERIA	CARI LIBERIA	MOA/CARI	Cultivated on upland; growth habit: straight; reaction when cooked: bitter; cyanogenic compound: high; Resistant: Mealy bug & ACVM	Potential yield: 6-10 t/ha; Tuber uses: gari, fufu, flour, dippa, chips; residue from processing: used as animal feed ingredient and medicine.	upland/dryland	land race		2022

MAIZE [*Zea mays L.*]

Name of Variety	National Code	Origin/ Source	Breeder (s)/ Institution	Applicant	Distinctness Uniformity and Stability (DUS)	Value for Cultivation and Use (VCU)	Preferred Ecology	Pedigree/ Line	Year of Release	Year of Registry
Abontem (yellow)	LBRZM-2022-693	IITA	CSIR	CARI	Super early maize: Plant height: 147-157cm; OPV; growth habit: erect stem; Grain texture: dent; Grain color: yellow; Leaf color: light green; Cob size: large; drought tolerant; tolerant to biotic stress condition (fungus, bacteria and viruses);	yield potential: 5 t/ha; maturity: 75-80 days; Nutrients: 70% starch, 12% protein, 4.8% oil, 8.5% fiber, 3.0% sugar and 1.7% ash	rain fed/irrigated upland	OPV	2010	2022

Obatanpa (white)	LBRZM-2022-704	IITA/CIMMYT	CSIR	CARI	Plant height: 157-160 cm; OPV; growth habit: erect stem; kernel color: yellow; Leaf color: pale green; Number of cobs size: large; drought tolerant; tolerant to biotic stress condition: Streak resistance	72% starch, 10% protein, 4.8% oil, 8.5% fiber, 3.0% sugar and 1.7 % ash; yield potential: 4.8 t/ha; maturity: 100-105 days;	Rainfed and irrigated upland	OPV	1992	2022

RICE [*Oryza sativa (L.) and Oryza sativa (L.) x Oryza glaberrima Steud.*]

Name of Variety	National Code	Origin/ Source	Breeder (s)/ Institution	Applicant	Distinctness Uniformity and Stability (DUS)	Value for Cultivation and Use (VCU)	Preferred Ecology	Pedigree/ Line	Year of Release	Year of Registry
Suakoko 8	LBROS-2016-648	Liberia	CARI Liberia	MOA/CARI	Adaptability: strongly adaptable to lowland environments; Competition with weeds: strong ability to compete with weeds; Resistance to stress: Resistant to bacteria blast, and withstands drought, and iron toxicity; Susceptible to lodging;	late maturing: 135-150 days; yield potential: 3 to 4 t/ha; Good cooking quality; palatable in taste; plant height: 90 -120 cm; Amylose content: intermediate;	Irrigated lowland	land race	1981	2022

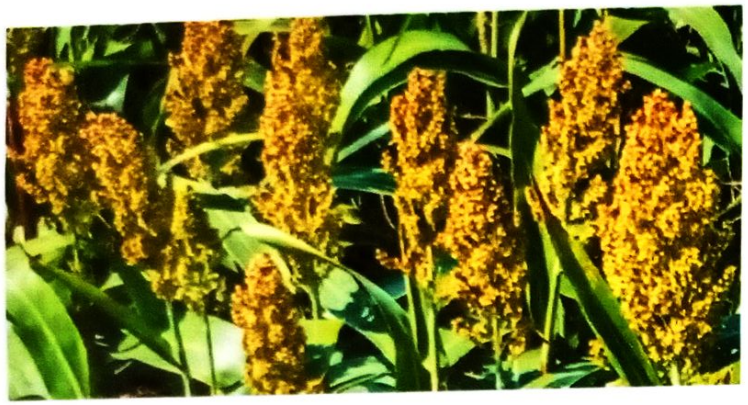
NERICA-L-19	LBROS-2016-674	AfricaRice	AfricaRice	MOA/CARI	Adaptability: strongly adaptable to lowland environments; Competition with weeds: strong ability to compete with weeds; Resistance to stress: Resistant to bacteria blast, and withstands drought, flood, infertile soils, and iron toxicity;	Early maturing: 90-110 days; yield potential: 5 to 7 t/ha; palatable in taste; Amylose content when parboiled: intermediate;	Irrigated lowland	WAS 122-IDSA-1-WAS-6-1	2008	2016
NERICA-14	LBROS-2016-681	AfricaRice	AfricaRice	MOA/CARI	Adaptability: strongly adaptable to harsh environments; Competition with weeds: strong ability to compete with weeds; Resistance to stress: Resistant to RYMV; and withstand drought, flood, infertile soils	Early maturing:75-85 days; yield potential: 3 to 4 t/ha; Good cooking quality; Amylose content when parboiled: intermediate;	Irrigated lowland	WAB 880-1-32-1-2-P1-HB	2008	2022

LAC 23	LBROS-2022-828	Liberia	IRRI/CARI	MOA/CARI	Adaptability: strongly adaptable to harsh environments; Competition with weeds: strong ability to compete with weeds; Resistance to stress: Resistant to RYMV; and withstand drought, infertile soils, plant height: 85-93 cm;	The best upland local rice variety in Liberia; adapted to multiple local agro-ecologies; yield potential 1.8-2 t/ha; palatable in taste; Amylose content: High	Rainfed upland/irrigated upland	land race	1974	2022
ORYLUX 6	LBROS-2022-1818	Yaoundé	AfricaRice	MOA/CARI	ORYLUX 6 is early maturing 90-100 days (offers the possibility of double cropping); It is fairly tolerant to prevailing diseases like blast. Adapted to lowland conditions;	Yield potential: 6.5 t/ha under rainfed/irrigated lowland; tillering: 24/plant; 1000 grain weight: 23 g; Aroma: Aromatic; Amylose content: intermediate;	Irrigated lowland	D18 TOX 40094-4-3	2018	2022

Forbidden Black Rice	LBROS-2022-1821	China	Unknown	MOA/CARI	Adaptability: strongly adaptable to harsh environments; Possesses a strong ability to compete with weeds; Resistance to RYMV is high; and it withstands drought, infertile soils; plant height is 135-145cm;	yield potential: 2.0 - 2.5 t/ha; adapted to multiple local agro-ecologies; Resistant to RYMV and false smut. 1000 grain weigh: 21 grams.	Rainfed upland/irrigated upland	land race	2017 (In Liberia)	2022
Bold grain	LBROS-20122-1822	Liberia	CARI Liberia	MAO/CARI	Strongly adaptable to harsh environments; ds: strong ability to compete with weeds; Resistance to stress: RYMV; and withstand drought, infertile soils, plant height: 110-125 cm; susceptible to false smut disease;	yield potential: 1.8-2.3 t/ha; adapted to multiple local agro-ecologies; 1000 grain weight: 24 - 26 grams;	upland/dryland	land race	1983	2022

PEARL MILLET [*Pennisetum glaucum (L.) R. Br.*]

Name of Variety	National Code	Origin/ Source	Breeder (s)/ Institution	Applicant	Distinctness Uniformity and Stability (DUS)	Value for Cultivation and Use (VCU)	Preferred Ecology	Pedigree/ Line	Year of Release	Year of Registry
IP 19586	LBRPG-2022-001	Niger	ICBA	MOA/CARI	Anthocyanin coloration of first leaf present; time of spike emergence: 43-46 days; leaf sheath pubescence: present; leaf sheath length: 11-15 cm; anther color: brown; node pigmentation: brown; spike exertion: complete seed color: cream; seed shape: globular; 1000 seed weight: 7-10 g; Tolerant to soil salinity and acidity toxicities;	Seed yield: 1.0 - 1.5 t/ha; tolerant to soil/water salinity; Rich in vitamins and mineral and healthy for human consumption. Used as forage for animals	Irrigated upland	Land race	1993	2022



SORGHUM [*Sorghum bicolour (L.) Moench*

Name of Variety	National Code	Origin/ Source	Breeder (s)/ Institution	Applicant	Distinctness Uniformity and Stability (DUS)	Value for Cultivation and Use (VCU)	Preferred Ecology	Pedigree/ Line	Year of Release	Year of Registry
ICSV-700	LBRSB-2022-012	ICRISAT India		MOA/CARI	Leaf sheath: anthocyanin pigmentation present; Plant: time to 50% flowering (50% of plants with 50% anthesis?) 56-65 days; Glume: color: Grayed yellow; Plant: total height (cm) at maturity (including panicle) 151-225cm; Panicle: density at maturity: semi loose; Tolerant to soil salinity and acidity toxicities, drought and heat;	Sorghum: used as food, fodder, and raw materials for the production of alcoholic beverages; yield under irrigation is 3.5–5.0 tons/ha. Under rainfed conditions, with little or no rainfall, yield varies from 800gm to 1.3 kg/ha	Irrigated upland	IS1082 x SC108-3)-1-1-1-1-1	2002-2004	2022