



Roadmap for Strengthening Vegetable Seed Systems in Benin

Amavi Lys AGLINGLO

World Vegetable Center _ West and Central Africa



Outline

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- 2. Methodology**
- 3. Status of vegetables seed systems in Benin**
- 4. Main constraints identified along the vegetable seed chain**
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1. Context

- Vegetable crops play an important role in food and nutrition security and are a source of income for actors involved in their value chains
(Schreinemachers et al., 2018)
- In Benin, the production, availability and accessibility of vegetable crops remain limited (MAEP, 2017).
- Due to several constraints including : low availability of production inputs, in particular quality seeds of improved varieties (MAEP, 2021)
- Access to quality seeds of productive varieties occupies an important place in Beninese government's strategy for agricultural development (PSDSA 2017-2025; PNIASAN, 2017-2021)

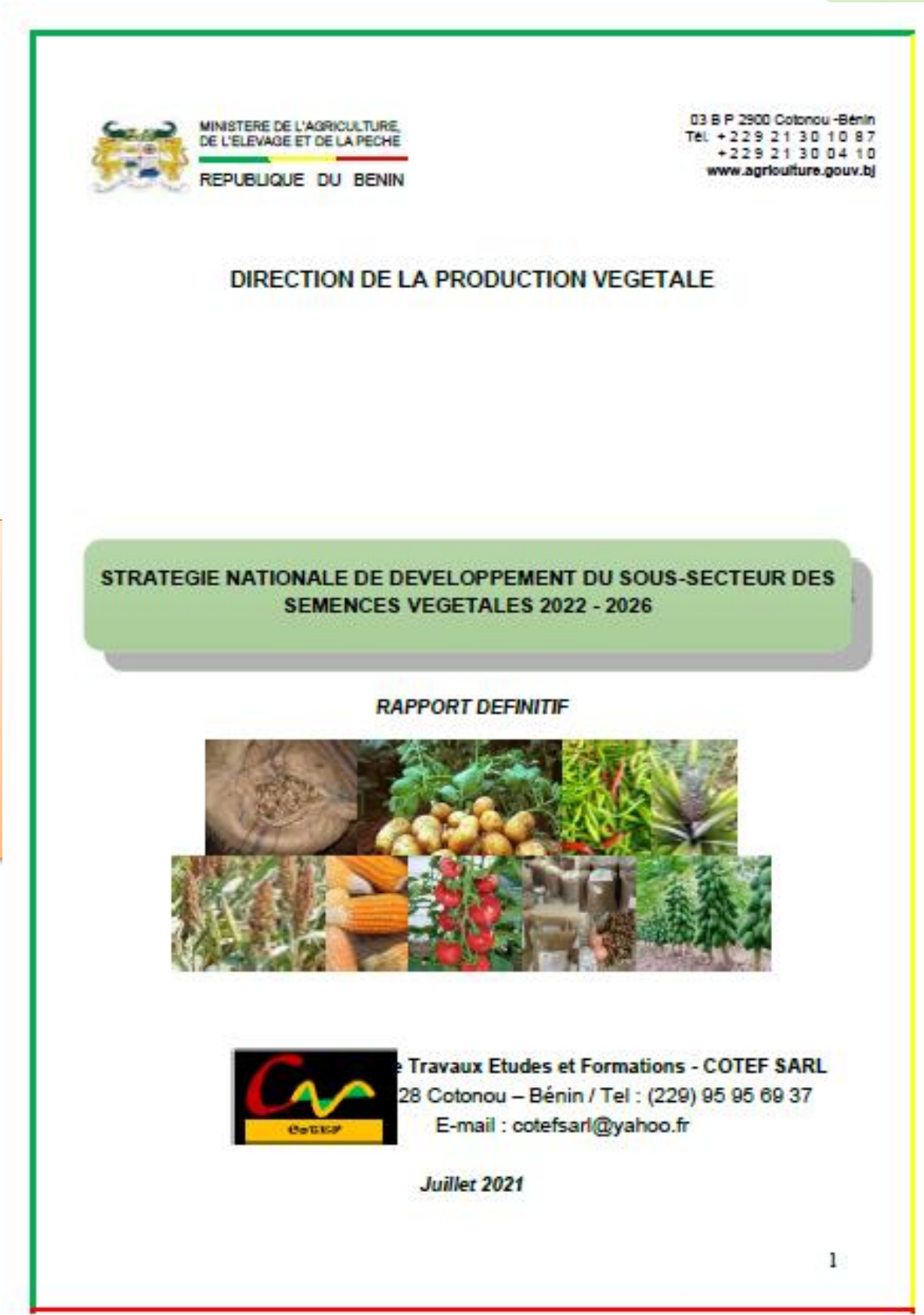


1. Context

- National Strategy for the Development of the Plant Seeds sub-sector (2022-2026) with the objective of :

Improve the availability and accessibility of quality seeds for high-value crops, in order to increase the rate of use of seeds of improved varieties from 20% to 50% by 2026.

- Specific features of vegetable seeds not taken into account in this general strategy document



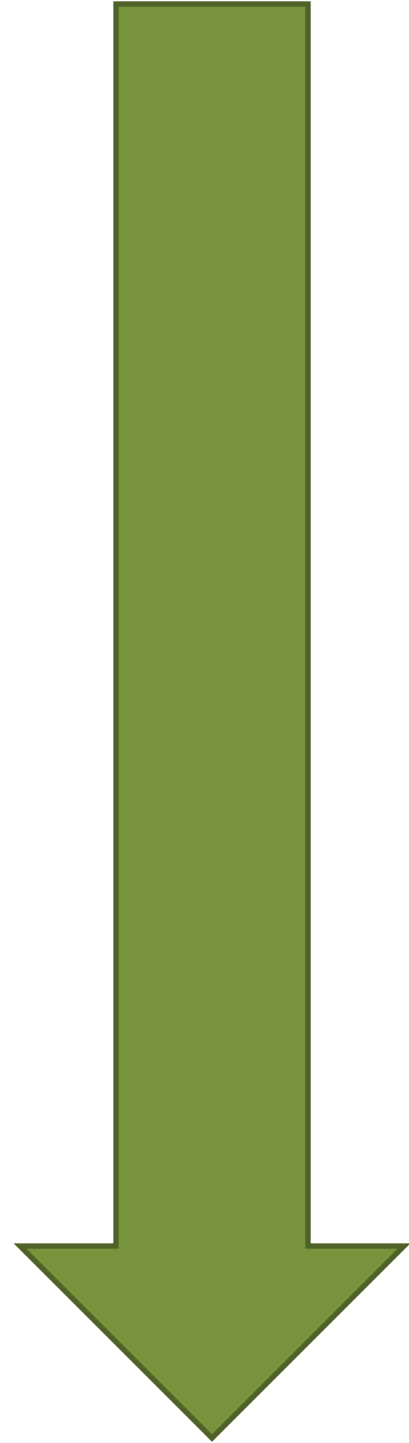
1. Context

- Why the importance of having an operational strategy document specific to vegetables, to support the implementation of the government's overall strategy.

Objective of the seed roadmap

Contribute to strengthening vegetables seed systems by providing stakeholders with a package of priority actions to be implemented in a synergistic dynamic.

1. Context



1. What is the current situation of the vegetables seed systems in Benin?
2. What are the visions and ambitions of stakeholders in the vegetable seed system?
3. What are the strategic actions required to create a strong vegetable seed system in Benin?

2. Methodology

- Participatory process conducted by team composed of a representative of :
 - Ministry of Agriculture' technical directorate (Plant Production Directorate/National Seed Committee)
 - National Agricultural research Institute (INRAB)
 - Agricultural Universities
 - World Vegetable Center (as facilitator)



MINISTÈRE DE L'AGRICULTURE,
DE L'ÉLEVAGE ET DE LA PÊCHE
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INRAB INSTITUT NATIONAL DES
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2. Methodology

1. Literature review

Identify the various legislative and regulatory texts existing at the regional and national levels that govern the seed sector in general and vegetable seeds in particular



2. Individual consultations of stakeholders

Surveys of stakeholder organizations involved in the vegetable seed sector, using a tailored questionnaires. Data on their roles, interventions, results obtained, constraints and challenges collected.

2. Methodology

3. Multi-stakeholders workshops

- Analyze the current vegetable seed systems
- Identify, by consensus, the strengths, weaknesses, opportunities and threats (SWOT) associated with each segment of the seed chain
- Make consensus on the main constraints
- Formulate a vision, ambitions, and define strategic actions to be implemented

Stakeholder consultation



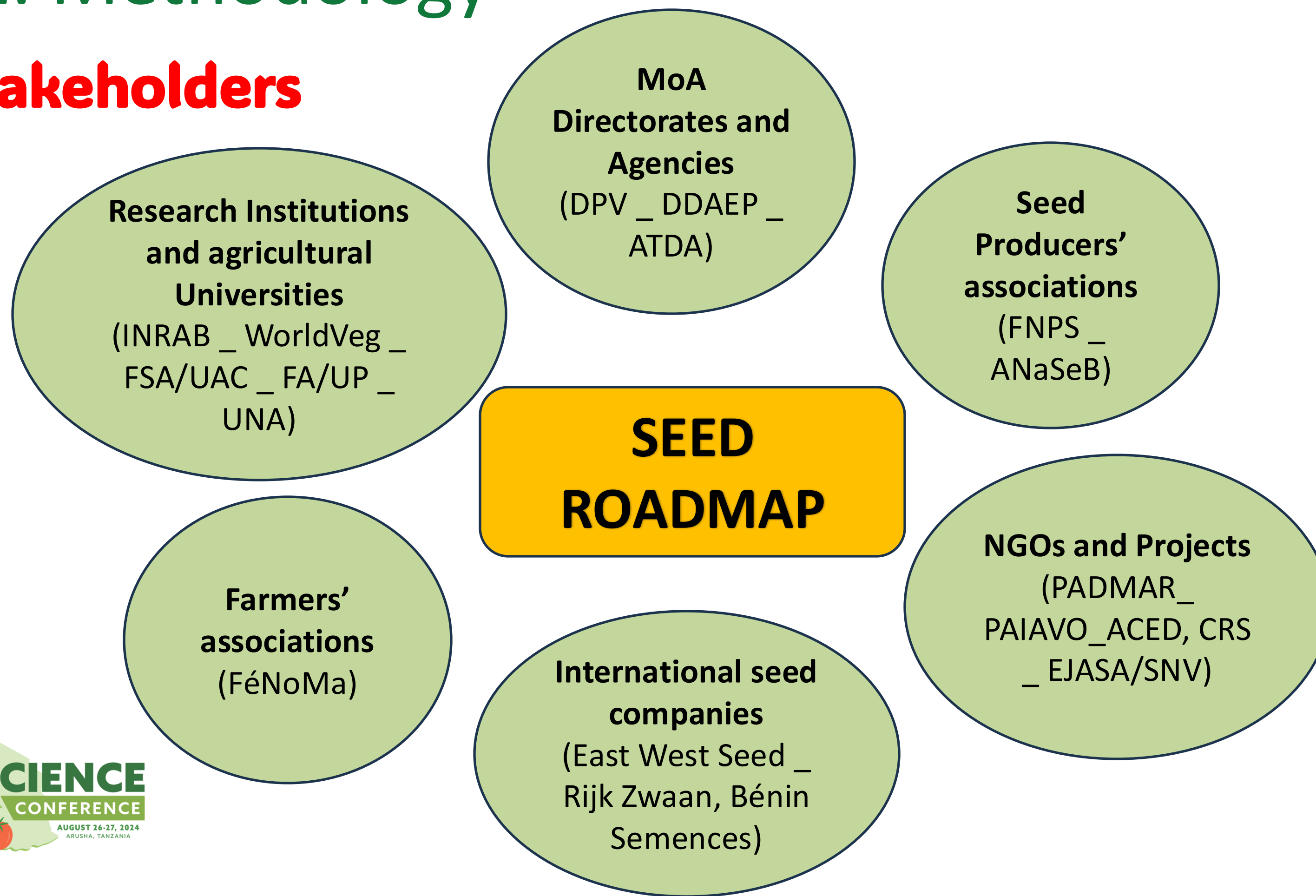
2. Methodology

4. Finalization of the document and Official handover to MoA



2. Methodology

Stakeholders



3. Status of vegetables seed systems in Benin

- Vegetables seed systems**

- Importance of formal and informal seed systems by vegetable type
- 80% of vegetables seeds used are supplied by the informal systems (MAEP, 2021)

Vegetable type	Imported seeds	Formal (locally produced and certified seed)	Semi-formal	Informal
Exotic vegetables not suitable for local seed production (e.g. lettuce, carrot, cabbage)	++++	-	-	-
Exotic vegetables suitable for local seed production (e.g. tomato, pepper, onion)	++	+	+	+++
Traditional vegetables (e.g. jute mallow, bitter leaf, African basil)	-	+	+	++++

“+” indicates the importance of the system and “-” indicates that the system does not provide significant amounts of seed for this category of vegetables.

3. Status of vegetables seed systems in Benin

Existing regulatory framework

- Seed regulations in Benin : laws, decrees, orders and Strategic documents
- **National regulations are aligned on the Regulation C/REG.04/2008 on the harmonization of rules governing the quality control, certification and marketing of seeds and planting materials within the ECOWAS zone (ECOWAS, 2008)**



ECONOMIC COMMUNITY OF
WEST AFRICAN STATES



COMMUNAUTE ECONOMIQUE
DES ETATS DE L'AFRIQUE DE
L'OUEST

SOIXANTIEME SESSION ORDINAIRE DU CONSEIL DES MINISTRES

Abuja 17 - 18 Mai 2008

**REGLEMENT C/REG.4/05/2008 PORTANT HARMONISATION DES REGLES
REGISSANT LE CONTROLE DE QUALITE, LA CERTIFICATION ET LA
COMMERCIALISATION DES SEMENCES VEGETALES ET PLANTS DANS
L'ESPACE CEDEAO**

LE CONSEIL DES MINISTRES

VU les Articles 10, 11 et 12 du Traité de la CEDEAO tels qu'amendés portant création du Conseil des Ministres et définissant sa composition et ses fonctions ;

VU la Décision A/DEC.11/01/05 portant adoption de la politique agricole de la CEDEAO ;

VU la Décision C/DEC.14/12/90 portant création d'un comité semencier ;

VU la Décision C/DEC.16/12/90 portant création des comités techniques inter Etats chargés du suivi des tendances des prix pour produits agricoles ou groupes de produits ;

VU la Décision C/DEC.1/05/83 relative aux programmes à court et moyen termes sur la mise en œuvre de la stratégie régionale de développement agricole ;

VU la Décision A/DEC.5/5/82 relative à la production de semences sélectionnées de base et aux choix des stations de production ;

VU la Décision C/DEC.1/5/81 relative à une politique agricole commune ;

CONSIDERANT le rôle stratégique du secteur agricole dans l'économie des Etats membres à travers l'alimentation des populations et la réduction de la pauvreté en milieu rural ;

CONSIDERANT la nécessité de promouvoir au sein des Etats membres, une agriculture durable plus productive et compétitive permettant d'assurer la sécurité alimentaire et d'améliorer le niveau de vie des agriculteurs ;

CONVAINCU que les semences sont d'une importance fondamentale dans la promotion d'une agriculture durable et dans la réalisation de la politique agricole de la Communauté ;

3. Status of vegetables seed systems in Benin

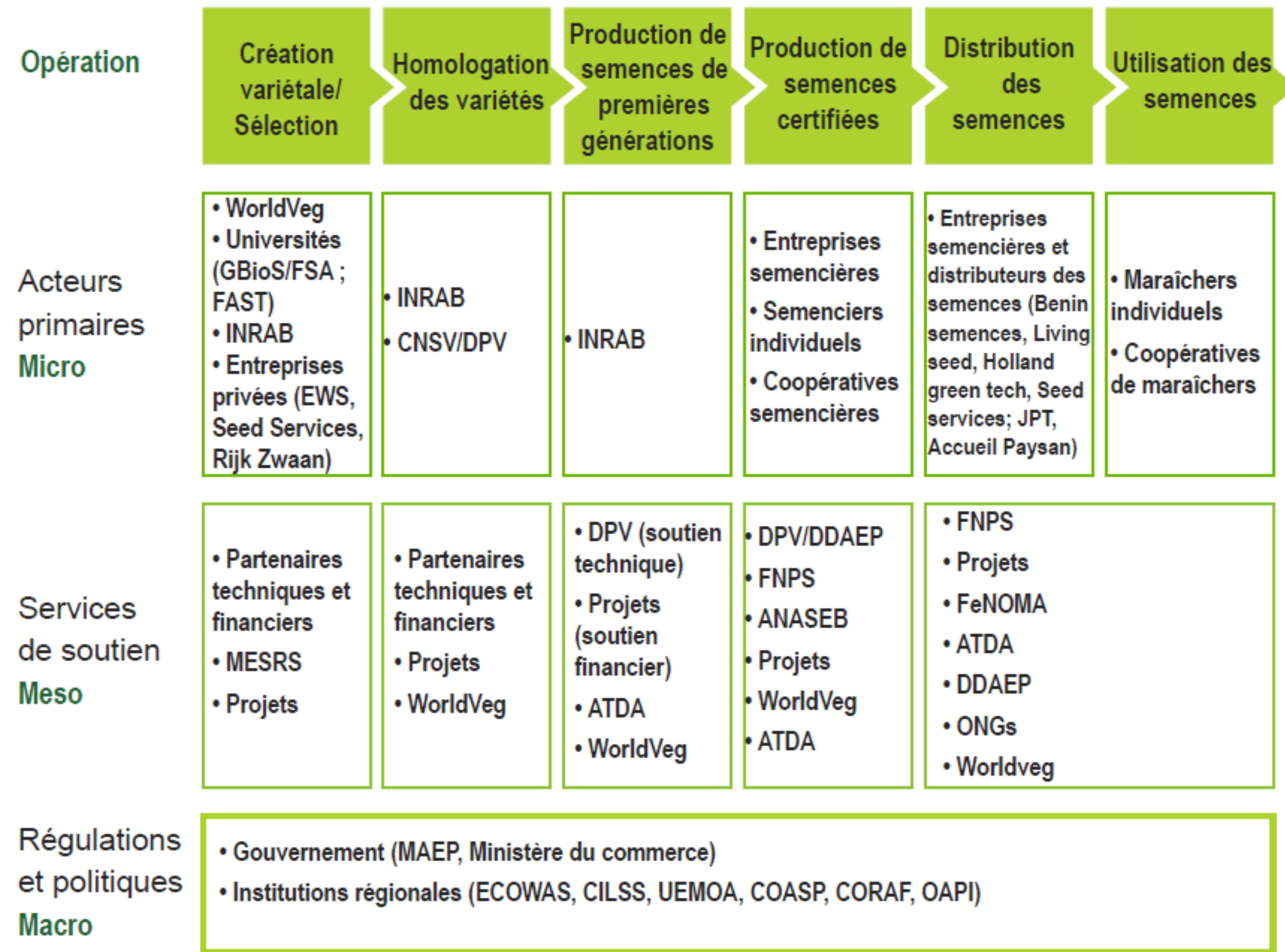
Existing regulatory framework

16 national seed regulations including :

- National seed policy (MAEP, 2015)
- General Technical Regulations for the production, marketing, quality control, certification and packaging of seeds and seedlings in the Republic of Benin (Decree n°176/MAEP/DCAB/SGM/DRH/DPOC/SA of June 7, 2010)
- Specific technical regulations (RTA) approved by ministerial decree (13 crops, including 9 vegetables) (2019)
- Several decrees establishing Variety Catalogue(CaBEV), creating the national plant seed committee (CNSV), etc.

3. Status of vegetables seed systems in Benin

Organizational framework of formal seed systems

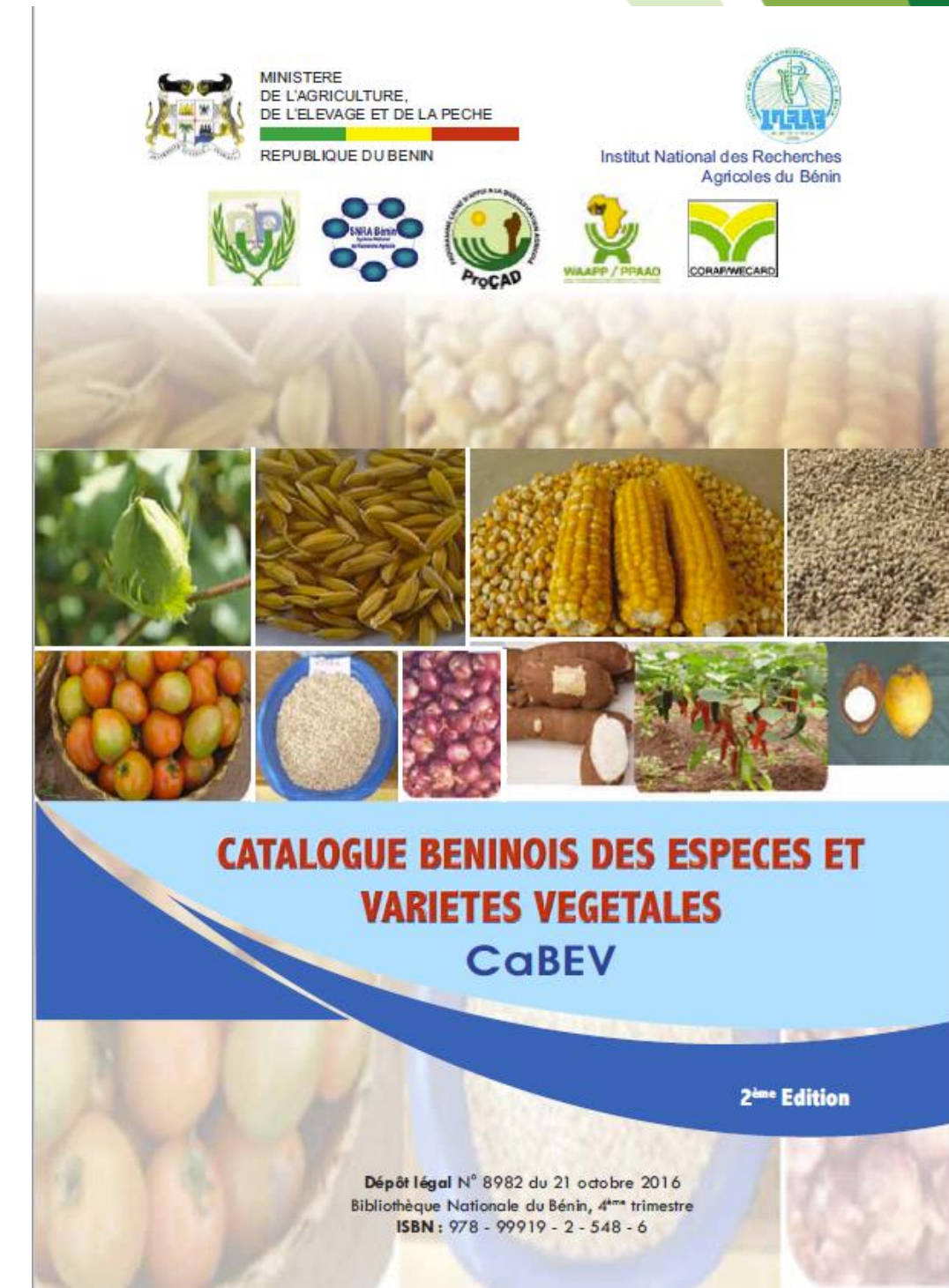


3. Status of vegetables seed systems in Benin

National Variety Catalogue (CABeV)

Exotic species	TAVs
Tomato	Okra
Pepper	Amarante
Onion	Celosia
	Tchiayo (African Basilic)
	Gboma
	Jute Mallow

Species	List A	List C
Tomato	03	02
Pepper	01	02
Onion	0	01
Gboma	0	01
TOTAL	04	06



3. Status of vegetables seed systems in Benin

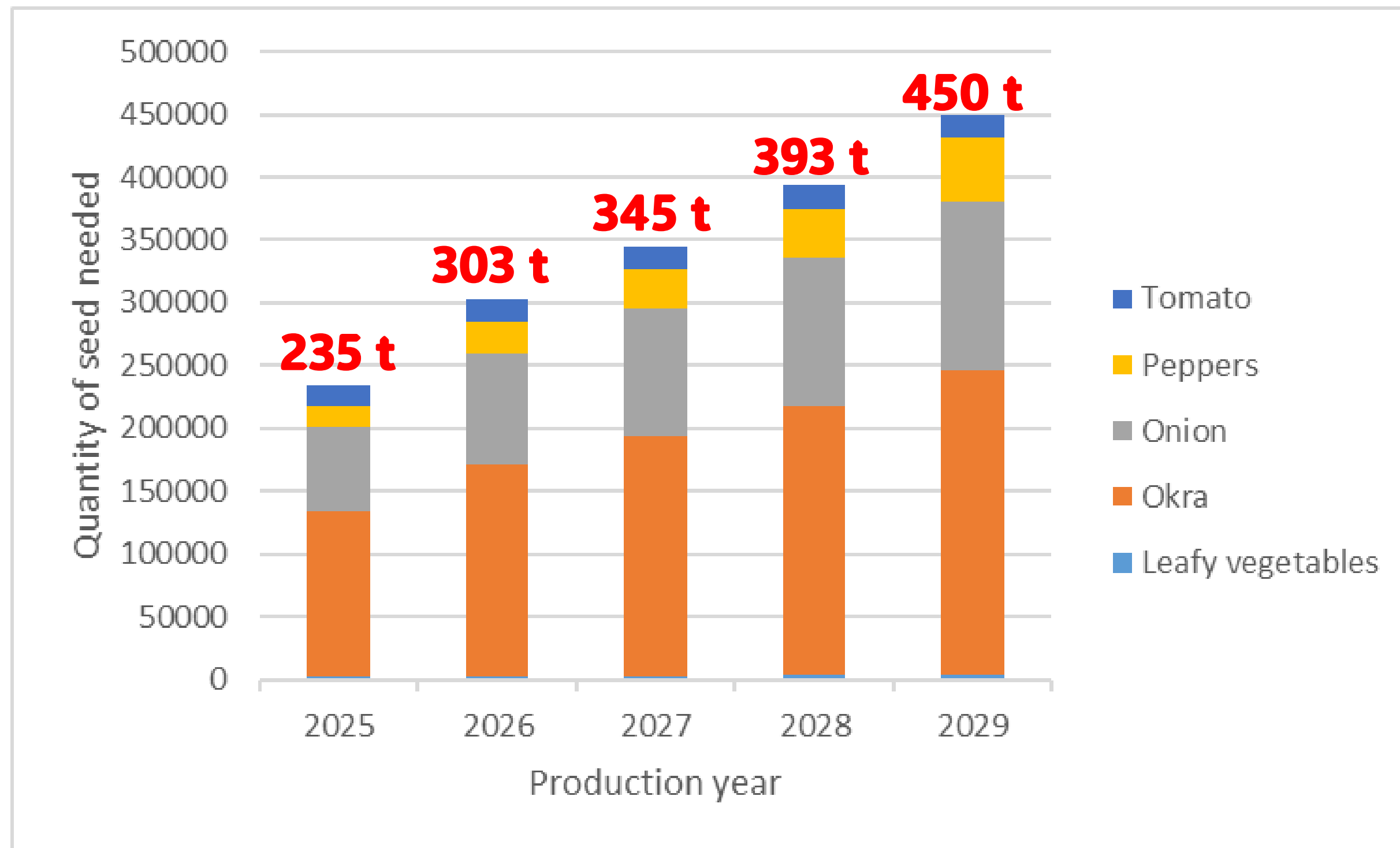
Certified seed production level

- Local certified seed production dominated by Individual seed producers
- Average production in 2022 : **831 Kg** (Tomato, chili pepper, leafy vegetables and Okra)
- Supply lower than the demand for these crops

Cultures	Quantités de semences maraîchères certifiées produites (kg)			Moyenne annuelle (kg)	TOTAL sur les quatre années (kg)
	2019-2020	2020-2021	2021-2022		
Tomate (TLCV15)	0	0	0	0	0
Gombo (Keleya)	0	0	38,95	12,9	38,95
Gombo (ICRISAT)	81,528	400,388	548,06	343,3	1029,976
Gboma (Kpinma)	70,97	386,15	112,5	189,9	569,62
Gboma (Côte d'Ivoire)	7	0	48,5	18,5	55,5
Piment long (TPS 0251)	1,732	27,438	52,653	27,3	81,823
Piment rond (Gbatakin)	0	29,4	187,52	72,3	216,92
Tchiayo (Locale)	0	25,2	10,7	11,9	35,9
Corète Potagère (Locale)	0	0	100,45	33,4	100,45
Amarante (Locale)	230	0	133,7	121,2	363,7
TOTAL	391,23	868,576	1233,033	830,9463	2492,839

3. Status of vegetables seed systems in Benin

Forecast of vegetable seed demand for next 5 years



4. Main constraints identified along the vegetable seed chain

- Low availability of specialized human resources in vegetable breeding in the public and private sector and in seed inspection at the Directorate of Plant Production (DPV) and at the Departmental Directorates of Agriculture, Livestock and Fisheries (DDAEP)
- Lack of investment in vegetable breeding by the public and private sectors
- Long duration (about two years) for variety registration and release
- Lack of information on the cost for variety release and registration in the Beninese Catalog of Species and Varieties (CaBeV) ;

4. Main constraints identified along the vegetable seed chain

- The delay in seed certification due to the centralization of the process and the lack of resources (financial, materials, inspectors) of DPV and DDAEP
- Inefficient seed distribution network of the formal sector that only covers part of the country
- Lack of resources of the National Plant Seed Committee (CNSV) the body in charge of seed policies and regulations implementation

5. Keys actions to strengthen vegetables seed systems in Benin

01 *Research and vegetable varietal improvement*

Ambition : A market-led vegetable variety improvement.

Priority actions :

- Strengthen research and breeding capacity in terms of research infrastructure and human resources through investment in training of vegetable breeders and seed technologists, as well as in research infrastructure.
- Support public private partnerships in variety development, testing, registration, and scaling.

5. Keys actions to strengthen vegetables seed systems in Benin

02 *Variety release and registration*

Ambition : An efficient variety release and registration mechanism.

Priority actions :

- Streamline the variety release and registration processes by allowing breeders to use their own data from multi-locational evaluation trials for registration.
- Create an online platform to facilitate a timelier updating of the national species and variety catalog as well as to provide stakeholders with up-to-date information on varieties registered for use together with other relevant documents.

5. Keys actions to strengthen vegetables seed systems in Benin

03 **Breeder and foundation seed**

Ambition : Increased and timelier availability of high quality early-generation seed (pre-basic and basic) for certified seed producers.

Priority actions :

- Establish forecasting mechanisms to facilitate the planning of the production of early-generation seeds.
- Allow registered seed companies to produce their own early-generation seed.
- Strengthen the capacity of the private seed sector and public sector in terms of human capacity and infrastructure to produce and deliver high-quality early-generation seed.

5. Keys actions to strengthen vegetables seed systems in Benin

04 *Commercial seed production and quality assurance*

Ambition : A well-structured and efficient quality assurance system taking into account the diversity of vegetables. Locally produced seed is of high quality, competitive in price, and includes a diverse range of vegetable species and varieties.

Priority actions :

- Train more seed inspectors in vegetable certification and set up additional seed quality (germination, purity, health) testing laboratories to decentralize the certification process to the departmental level.
- Develop and introduce quality assurance mechanisms such as Quality Declared Seed (QDS), minimum quality standards or truth-in-labeling as alternatives to government-controlled seed certification for vegetables.
- Allow commercial seed production of traditional vegetables which are not currently registered in the national catalog using alternative quality assurance mechanisms.

5. Keys actions to strengthen vegetables seed systems in Benin

05 *Seed marketing*

Ambition : A resilient distribution network to facilitate vegetable farmers' access to quality seed.

Priority actions :

- Promote locally produced certified seed through seed fairs, demonstration trials, exchange visits, media, and the distribution of seed samples to farmers.
- Implement anti-fraud measures to counter the distribution of fake seed.

5. Keys actions to strengthen vegetables seed systems in Benin

06 *Sector regulation and governance*

Ambition : Improved functioning of seed sector governing bodies and a more conducive environment for the development of the sector.

Priority actions :

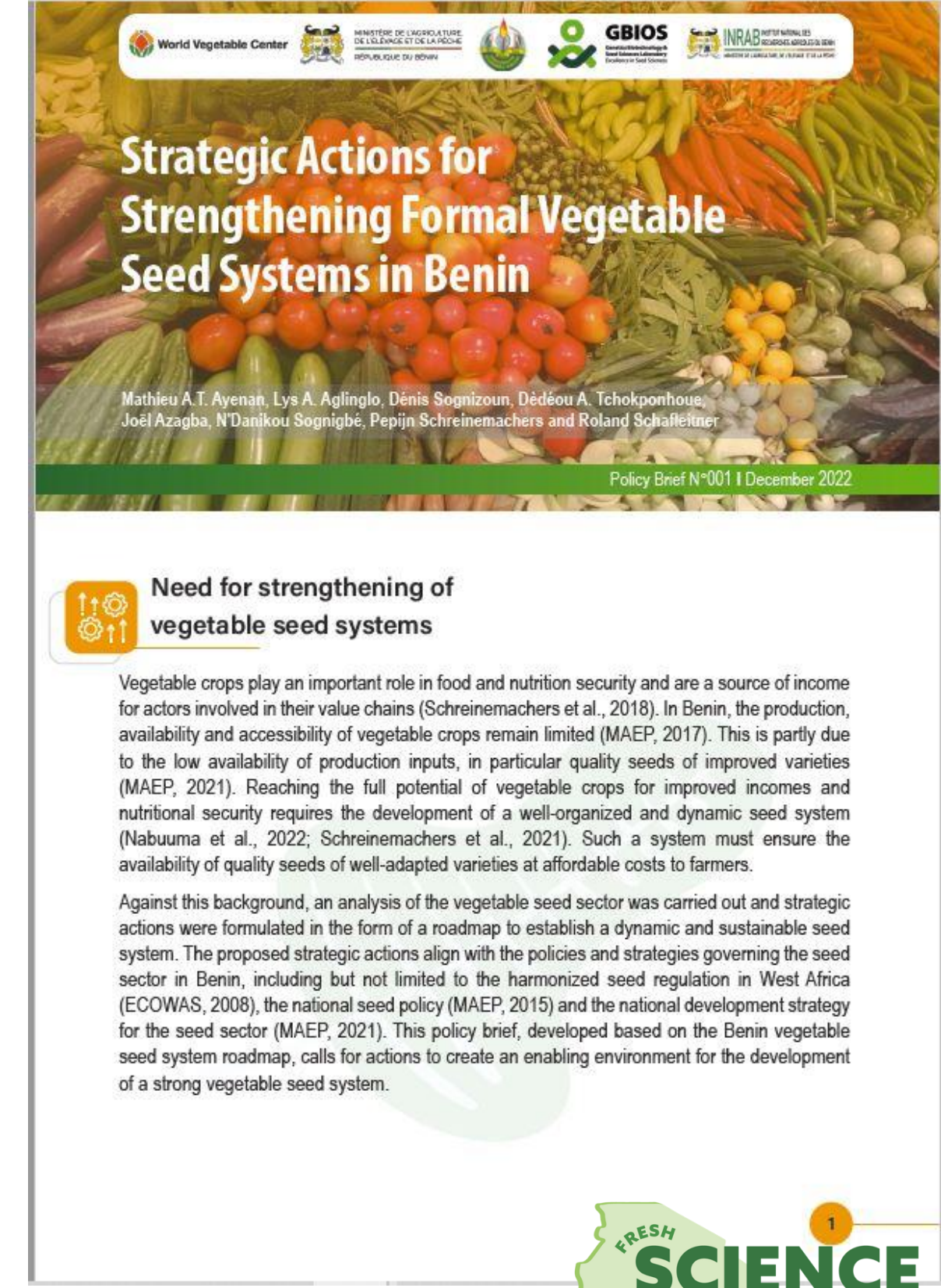
- Establish a funding mechanism inspired by the National Seed Fund in Burkina-Faso financed by certification fees, to support the functioning of the National Plant Seed Committee (CNVS) and seed certification process.

5. Keys actions to strengthen vegetables seed systems in Benin

06 *Sector regulation and governance*

- Attract foreign investment (money, technical know-how, and germplasm) by creating a conducive environment for variety registration with strong intellectual property protection, ease of doing business, offering seed companies the possibilities to use Benin as a base to breed and introduce varieties to the rest of ECOWAS.
- Advocate at regional level the need to expand the number of vegetable crops included in the regional catalog for seed trade and define a list of quarantine pests to ease safe seed movement between countries.

6. Outputs and Lessons learned

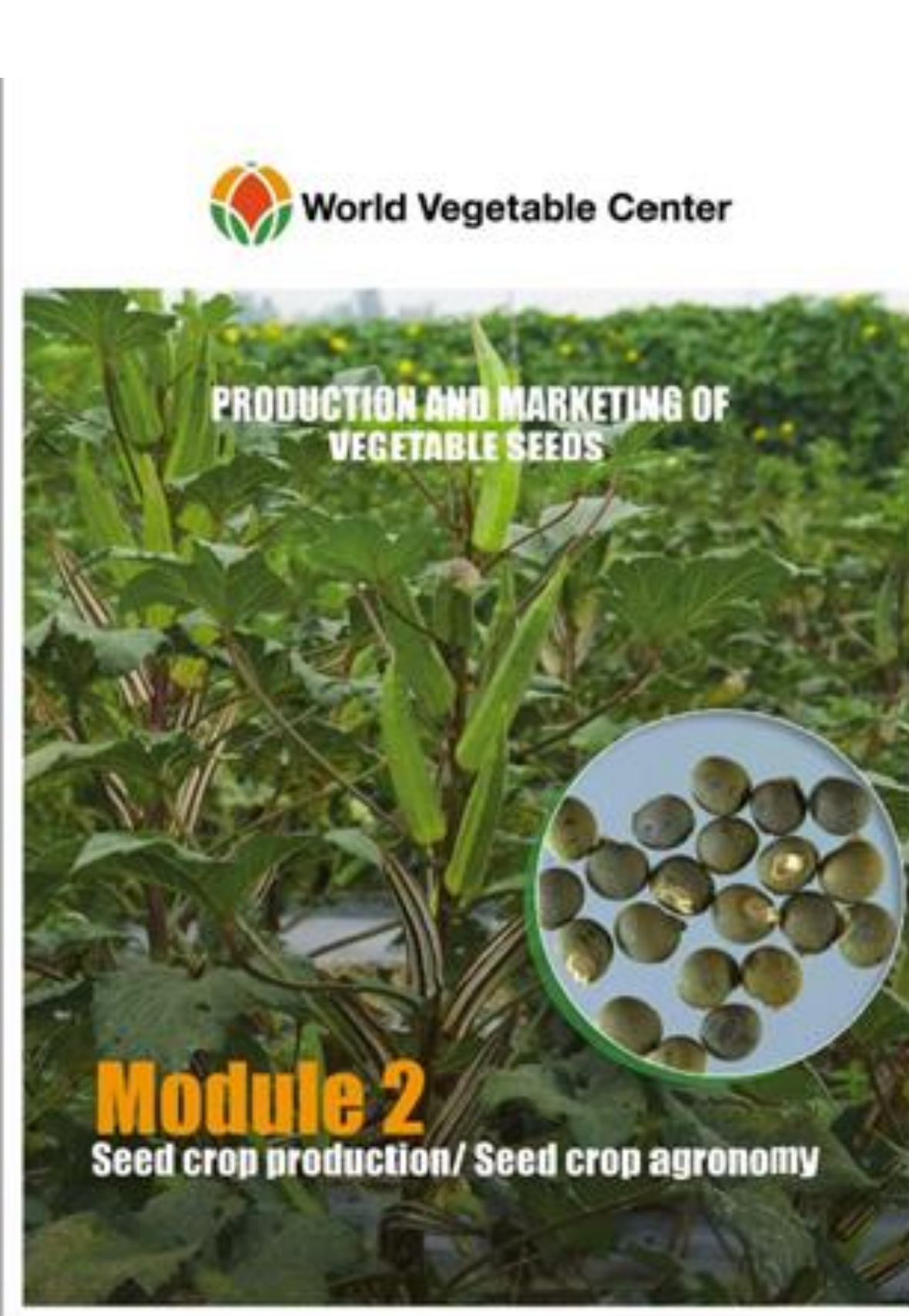


6. Outputs and Lessons learned

- Strategic partnership with MAEP, Structure leading the process
- Projects: FRESH, SAFEVEG, and CGT: Synergies and resources mutualization
- Involvement of key stakeholders: DPV, INRAB, Universities, DDAEP, Seed producers associations and seed companies and others active project in the seed sector
- Limit of the document : lack of budget estimates for the implementation of identified actions

7. Ongoing interventions derived from the seed roadmap

- Capacity building of seed producers on quality seed and seedlings production of improved vegetable varieties
- Awareness campaign of Seed producers on existing regulations



7. Ongoing interventions derived from the seed roadmap

- Ongoing registration of over 30 improved vegetable varieties in the national catalog of varieties (SafeVeg and CGT)



7. Ongoing interventions derived from the seed roadmap

- Contribution to funding the meetings of the National seed committee to speed up variety release process (SafeVeg, FRESH and CGT)
- Partnership with INRAB for variety testing and selection (On-station and on-farm participatory trials)
- Organization field days to showcase varieties
- Distribution of seed kits to create the demand for new improved varieties



7. Ongoing interventions derived from the seed roadmap

- **Contribution of others project (EJASA/SNV _ ACMA3 _ PADMAR _ etc.) to the funding of several activities includes in the vegetables seed roadmap**
- **Under TAAT II : a Global seed roadmap being developed for Benin government” priority crops including vegetables assorted with budget. WorldVeg is leading Vegetable part (Budget estimated for the implementation of actions identified on vegetables seed roadmap and included in the global seed roadmap)**



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Thank You

<https://worldveg.tind.io/record/75823/files/e15160.pdf>

<https://worldveg.tind.io/record/75811/files/e15153.pdf>

<https://www.youtube.com/watch?v=bdxSXaIKblo>

<https://www.youtube.com/watch?v=saVwZ4Uggw4>



Email

lys.aglinglo@worldveg.org



Website

<https://avrdc.org/>



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