

**Capacity imperatives to improve
the vegetables seeds regulatory
system in Benin**



Background, objectives and methodology

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The vegetable sector in Benin is experiencing a growing demand for vegetables that is not well met due to low vegetable production.

A key constraint is the low penetration of improved/certified seeds among vegetable growers due, among others, to institutional, technical, human, material, and financial capacity gaps in the vegetable seed regulatory system (Figure 1). With support from the Netherlands Food Partnership through the Seed Law Toolbox program, an assessment is carried out to identify those capacity gaps and formulate an action plan that proposes capacity imperatives to improve the system. The assessment adopts an interactive and transdisciplinary approach that combines a review of policy documents with stakeholder consultations and perspectives to generate an acceptable roadmap for agricultural policies. Specifically, the methodology used the following three steps: describe the vegetable seed regulatory system, undertake a capacity needs assessment of key institutions, and formulate a plan to improve the capacity of these institutions.



Figure 1: Organizational framework¹ for seed regulation in Benin



Capacity gaps



Insufficient qualified experts in production, control, inspection, variety release and registration, and certification of vegetable seeds.

There is a notable shortage of technical staff at INRAB, DPV, and DDAEP. For example, there is still a gap of at least eight doctors, including specialized breeders, and at least ten technicians at INRAB. At the DPV, the transversality of the experts does not favor good efficiency in their performance, especially with the numerous vegetable crops with specific characteristics. A priori, there is still a gap of at least five seed inspectors, five laboratory technicians (microbiology, pathology, physico-chemical analyses of seeds), and two specialists in organization and professionalization of seed actors. As for the DDAEP, they have a few technicians and control agents, but the number of staff is insufficient to cover the territories of the departments.

1 DPV: Directorate of crops production, DDAEP: Departmental Directorates of Agriculture, Livestock and Fisheries (DDAEP), INRAB: National Institute of Agricultural Research of Benin, SPPI/DDI: Industrial Property Promotion Service of the Industrial Development Directorate



Gaps in existing vegetable seed expertise and weak financial and material incentives for existing experts.

Well-described job descriptions for staff exist in theory but are not widely consulted and used by experts in the execution of their duties. In the vegetable sector,

existing experts have limited knowledge of vegetable seeds. Generally, there are plans for capacity building of staff, but these are poorly implemented in practice. As a result, current experts lack specific training opportunities, particularly on vegetable seeds. In addition, discussions with stakeholders indicated that there are no specific incentives (financial, material) to motivate experts to carry out their missions.



Insufficient modern infrastructure and equipment. INRAB has a cold room that is not very spacious and adapted for the conservation of plant genetic resources and is cruelly lacking in modern laboratory equipment and materials. Although the DPV has a National Laboratory for the Analysis and Certification of Plant Seeds (LACS), it lacks a building to house this laboratory and bring it up to ISTA² standards, as well as materials and equipment for control and inspection missions. As for the DDAEP, the infrastructure and equipment are also in most cases obsolete and insufficient in number. For all these actors, the lack of rolling stock (cars, motorcycles) is also a major obstacle to inspection missions.



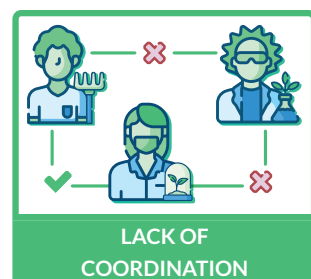
Weak expression of demand for pre-basic, basic, and commercial vegetable seeds.

The Beninese seed sub-sector generally lacks reliable statistics for estimating the real needs of seed growers and producers. This is also true for the vegetable sector which, in addition, includes several vegetables (fruits, leaves, roots) that make the estimation of needs even more difficult and complex. For example, the discussions indicated a low availability (quantity and quality) of pre-basic, basic, and commercial seeds to cover the needs of seed growers and market gardeners, with consequent delays in the production cycles of certified seeds and market garden crops.



Slowness and lack of information on administrative procedures for obtaining professional approvals, release and registration of seed varieties, and certification of vegetable seeds.

Overall, there is considerable slowness in the administrative procedures for obtaining professional licenses and for control, inspection, and certification of vegetable seeds. For example, the administrative formalities for importing and exporting seeds, which in theory should take three weeks, in practice take between two and three months. It is also currently impossible to know in advance the certification fees, which are high in practice because of control missions, which is not within the reach of most seed producers and reduces the volumes of certified seeds on the market.



Low visibility, coordination, and complementarity of actors in the vegetable seed regulatory system.

Even though the attributions of the DPV and the DDAEP are well defined, there is a lack of coordination and clarification of roles between these two actors in the field. Also, the delays noted in field inspections by the DPV agents suggest that there is little coordination between these two structures, which should normally complement each other, without restricting certain attributions to the DDAEP. In addition, there is a lack of funding to hold periodic meetings of the National Committee for plant seeds and to update the national catalog of seed species and varieties.



LACK OF REGULATORY FRAMEWORK

Lack of a regulatory framework for recognizing traditional mechanisms for certifying local quality seed. The formal vegetable seed system is still very embryonic in the country. At the same time, the informal system of vegetable seed production is growing. However, the production, quality control, certification, and marketing of the different categories of vegetable seeds and plants are only applicable to the varieties registered in the national or regional catalog, to the detriment of local varieties of vegetable crops that are of good quality and not registered in the catalog.



Capacity Imperatives



Increase staff number and qualified experts



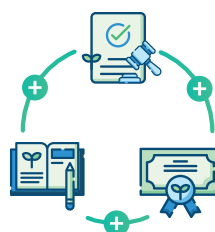
Strengthen the leadership in the seed sub-sector. There is a need to strengthen the leadership of the seed sub-sector on two aspects:

- (i) prioritize the seed sub-sector in the policy agenda by providing more funding for regulatory services, and
- (ii) improve the technical leadership of the DPV by increasing the number of technical experts and managers with specialized knowledge.

This will greatly improve and boost the deployment of regulatory services and increase the availability of seeds to producers. In the long term, it is hoped that there will be an independent plant seed regulatory authority (or agency). The advantages of such an authority are that:

- (i) there will be a more dedicated institutional environment for seed regulatory services and where recruitment of qualified experts will be facilitated with better material and financial incentives;
- (ii) it can generate revenues for the services provided (controls, inspections, seed testing, variety trials, etc.) that can be easily reinvested in the agency, and thus in the operation of the CNSV, equipment, staff training, and/or other staff incentives; and

- (iii) services will be faster and more efficient, especially those related to variety release, phytosanitary and certification services, and may attract more national and international companies to invest in Benin.



Strengthen the vegetable seed regulatory framework and institutional coordination.

There is a need to develop more Technical Regulations Annexes to strengthen the certification procedures for vegetable seeds. Also, there is a need to decentralize the certification process for vegetable seeds and allow DDAEP to certify seeds under the control of the DPV: this will require some mini-laboratories in the agricultural development poles (1, 4 and 5 for example) to speed up seed quality analysis. This will significantly reduce the delays previously observed and boost the use of certified seed. In addition, given the specificities and difficulties of conditioning basic seeds, the regulatory texts could be lightened to allow INRAB to produce and condition basic vegetable seeds. In addition, it is necessary to simplify and digitize the procedure for the release and registration of new varieties in order to motivate researchers in variety creation, by valorizing the results of the examination protocols of these varieties during their development. It is also necessary to accredit

INRAB to the African Organization of Intellectual Property to conduct DUS (Distinctness, Uniformity and Stability) and VCUS (Value for Cultivation, Use, and Sustainability) tests for the protection of new varieties and globally to popularize the regulatory provisions concerning plant seeds, particularly for vegetables.



Increase the number of staff in the regulatory organizations (INRAB, DPV, DDAEP) with more qualified and motivated experts on vegetable seeds.

At INRAB, there is an urgent need for specialized vegetable researchers and breeders and technicians. At the DPV, seed and phytosanitary inspectors and laboratory technicians are needed. As for the DDAEP, the number of seed and phytosanitary controllers and inspectors must also be increased. This lack of experts could be filled by recruiting young graduates specialized in selection, conservation, and management of seeds in general and vegetable seeds in particular. In addition, there is a need to periodically (every two years) reinforce the technical capacities of all the staff of the seed regulatory services on advanced knowledge of vegetable seeds such as practical recognition of vegetable seed varieties, pest and disease management of vegetable crops, virology, bacteriology and mycology of vegetable crops. The seed regulatory services should implement some local seed training programs and facilitate the participation of the staff in international short training and experience-sharing visits. In addition, it is important to provide incentives to experts to ensure retention of personnel.



Provide the regulatory organizations (INRAB, DPV, DDAEP) with modern materials, equipment, and infrastructure.

The DPV needs a building that meets international standards to

house the National Laboratory for Plant Seed Analysis and Certification (LACS) and materials and equipment (digital camera, GPS, probe, portable moisture meter, etc.) for missions. INRAB needs a modern cold room and laboratory equipment (refrigerators, petri dishes,

jars, dryers, moisture meters, etc.) for the conservation of plant genetic resources. The DDAEP must also be strengthened and provided with quality equipment (weighing scales, moisture meters, mini-laboratories, plant protection suits) to carry out basic tests and regularly inspect seed fields. For all these actors, it is necessary to acquire (and ensure the maintenance of) administrative vehicles and field motorcycles to enable them to carry out their missions properly. Furthermore, due to the development of plant transactions at the borders, the creation and provision of the necessary equipment (microscope, binoculars, etc.) for new border control posts is essential to properly protect the territory against the introduction and proliferation of pests.



Implement the certification of local varieties through the declared quality seed system and a digitalized platform for monitoring vegetable seed statistics.

To boost the formal vegetable seed system, it is necessary to set up the declared quality seed system, which is a system designed to guarantee quality control during seed production while consuming fewer public resources. In Benin, the seed varieties in list C of the catalog (reserved for local traditional varieties) can be valorized through the establishment of this system which is based on four main principles:

- (i) the establishment of a list of varieties eligible for this type of certification,
- (ii) the listing of seed growers with the competent organization (DPV),
- (iii) the verification of at least 10% of the seed crop by the competent organization, and
- (iv) the verification of at least 10% of the declared quality seed put on the market by the competent organization.

In addition, it is necessary to set up a digitalized system for monitoring statistics (actors, supply, demand) of seeds, especially vegetable seeds, to progressively adapt supply to demand of vegetable seeds. This can be done by designing a database in an open access digital platform that is housed at the DPV and decentralized to the Territorial Agency for Agricultural Development for regular information filling.



Policy implications

The implementation of these proposed actions requires a strong political will that could be translated in three different ways:



(i)

allocating specific resources from the annual budget of the Ministry of Agriculture to the seed sub-sector,



(ii)

subtly mobilizing some resources dedicated to strengthening the use of quality seeds in development projects on vegetables sector (PADMAR, PAIA-VO, PAPVIRE-ABC, FRESH, BMZ-CGT), and



(iii)

design and implement actions to strengthen the vegetable seed regulation system through various mechanisms (i.e Training, exchange visits, simplification of procedures, etc.) and financing instruments (Self-financing, support from the Netherlands embassy in Benin, the RVO-PSD instruments, or other partners)

The three methods can be carried out separately or in combination depending on the different policy options available. In the end, this will certainly improve the business environment in Benin and consolidate the institutional, regulatory, and legal bases of the national

seed sub-sector in order to make it more efficient, competitive, viable and in conformity with sub-regional, regional and international market standards; all of which contribute to the development vision of the seed sub-sector in Benin.

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