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Seed Sector Framework in Iraq

AN EXPLORATION ON SEED REGULATIONS, COMPLIANCE, AND
STAKEHOLDER EXPERIENCES

Report

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Executive summary

A short project was performed late 2022 by Nectaerra, KIT and WUR, on assignment from Seed NL, into the seed regulatory system in Iraq, both from a legal (laws) and practical (experiences) point of view. Goal was to provide an understanding of the main obstacles and solutions that exist for an optimized seed trade relationship between both countries, and what follow-up actions are required. The facts and views collected in this study do not necessarily reflect those of the Dutch government.

Over the past years the vegetable seed/seed potato export to Iraq has grown exponentially due to a growing interest for agriculture sector development, food demand/security and a high level of employment in agriculture. However, Iraq is strongly affected by harsh growing conditions, has below average production yields, and faces strong agricultural competition from surrounding countries.

An efficient seed trade between suppliers and buyers, variety testing, certification, release, and protection, that allows timely access to new varieties and local R&D and seed production, are important elements that determine the position of Iraq in international seed trade, and ultimately the success and livelihood of agricultural stakeholders and consumers in Iraq, and their international partners.

Two main seed laws govern the seed sector in Iraq, law No. 50 (2012) and No. 15 (2013). Examination shows they are partially outdated and not in line with international and European standards such as UPOV, for instance due to the absence of novelty description and a short, 10-year variety protection period. The government of the Kurdistan Region of Iraq (KRI) has since enacted KRI Law No. 15 of 2021, which is not formally recognized by Bagdad, but aims at licensing KRI seed importers and to control seed imports at the KRI borders.

This legislation, Bagdad-KRI differences and untransparent procedures lead to confusion and can contribute to unwanted effects, such as unfair royalty payments (experiences by some Dutch growers trading “EU free varieties”), extensive breeder dependency on local agents to manage everything from import to sales, the risk of influence of individuals and companies on enactment of law, and hesitance of international companies from investing in Iraq and establishing local production.

Regardless, Dutch breeders generally consider Iraq a very interesting market, manage long-lasting relationships with agents, and are positive about Iraq’s speed and interest to introduce new varieties, with new variety release being the focus of most Dutch breeders. There is a good number of new varieties released annually.

A hybrid consultation workshop was held online and in Erbil in December 2022 with a high-level group of Iraqi stakeholders, among others from the Ministry of Agriculture (MoA) and National Seed Commission (NSC). DGs from MoA stated that there would be an interest to update seed law, especially when receiving technical and legislative support. There is an additional interest in updating testing labs and facilities in Iraq to international standards, and staff knowledge and capability in terms of seed germination, contamination, and plant health testing procedures. In the absence of governmental testing labs, the cost of testing seeds, especially potatoes, is high. New climate resilient seed varieties are also of interest. This holds opportunities for Dutch knowledge and technology.

In line with the observations, a first step follow-up is recommended:

- Arrange (semi-)government-to-government dialogue with Iraqi government stakeholders, including knowledge exchange visits to the Netherlands and Iraq, focusing on:
 - o Opportunities and support for seed sector development in Iraq, including legislation.

- Dutch experience with seed legislation and UPOV membership (over which the Netherlands is now temporarily presiding).
 - Knowledge exchange with NAO and Plantum.
 - Optionally, further knowledge exchange with private sector (already active in several Dutch sponsored projects), laboratory services and breeding technology, ultimately leading to facilitation of trade and stimulation of local investment by Dutch companies.
- Capitalize on opportunities to host side shows or seminars with stakeholders at conferences or other events. This may be extended beyond the seed sector to climate adaptation, water-food, salinity, etc., depending on the venue.

Contents

Executive summary	3
1 Project background and goals.....	7
2 Seed sector framework and new varieties	8
2.1 Components of a modern seed sector	8
2.2 The role of certified seed in food production	9
2.3 The importance of new varieties in Iraq	10
3 Potato and vegetable trade with Iraq.....	12
3.1 Introduction.....	12
3.2 Potato	12
3.3 Vegetables	13
3.4 Dutch trade partners	13
4 Seed regulatory framework	15
4.1 Background and history.....	15
4.2 Current Seed Regulatory Framework	15
4.2.1 Seed Law No. 50	15
4.2.2 Seed Law No. 15	17
4.2.3 KRI Seed law No. 15, 2021.....	18
4.3 New legislation under development	19
4.4 Iraqi seed law in the international context	19
4.5 Regulatory stakeholders in Iraq.....	20
5 Seed system practices.....	23
5.1 Variety testing and control	23
5.2 Variety release in Iraq.....	23
5.3 Variety protection.....	24
5.4 Seed distribution, marketing, and market access in Iraq.....	25
6 Workshop on seed regulatory system	26
6.1 Background and summary.....	26
6.2 Attendees.....	26
7 Policy-level and practical solutions.....	27
8 Conclusions	30
9 Recommendations for follow-up actions.....	32
9.1 Short-term follow-up.....	32
9.2 Beneficiaries	32

9.3	Acknowledgements	33
10	References.....	34
11	Appendices.....	36
A.	Potato trade statistics in Iraq	37
B.	Vegetable trade statistics in Iraq.....	40
C.	Seed law No. 50 (2012) – Literal translation	43
D.	Seed law No. 15 (2013) – Literal translation	53
E.	KRI Law No. 15 (2021) – Copy of original	59

1 Project background and goals

Background

Over the past years the vegetable seed/seed potato export to Iraq has grown exponentially due to a growing interest for agriculture sector development, the need for local food security and high level of employment. Nevertheless, Iraq still depends strongly on import of certain seeds. The seed potato export to Iraq was 21.000 MT (class C1/C2) in 2019 (source: NAO).

However, experiences in Iraq by Dutch companies have been mixed, with some seed legislation a bit odd and some Dutch seed companies and 'free' seed varieties experiencing trade restrictions.

Access to better varieties and seed/seed potatoes of internationally accepted quality require that such trade distortions are removed, and that seed legislation is re-evaluated/revisted. The local seed sector may need to be strengthened and see investments in local breeding and seed production against climate change and salination of Iraq's soil and water.

Therefore, the question and opportunity are how to improve the seed/potato seed system so that all involved benefit, from farmers to distributors, to government, and the local economy.

Objectives

This project has set out to:

- Understand the seed law that is formally in place.
- Understand practice and seed trade experiences of Dutch and Iraqi stakeholders.
- Reflect on "comparable" situations in other countries.
- Reflect on findings and road forward through workshop discussion with a group of stakeholders.

Data

This report is based on open-source information through internet, and various documents provided by Dutch and Iraqi stakeholders, including the Iraqi seed laws. A reference list is provided here: 10. References.

Consultations

The following Dutch organisations were consulted for this report: Consulate of the Netherlands in Erbil (Iraq), and Dutch organisations NAO, Plantum, HZPC, Agrico, Schaap Holland, Agroplant, Interseed, Rijkzwaan, Bejo, Bakker Brothers, De Bolster.

The workshop was supported by the Ministry of Agriculture and Water Resources (Iraq), KRG-MoAWR, National Seed commission (KRG-MoAWR), Salahaddin University, and ARD Unifert.

Project limitations

The project relies heavily on personal references and shared data from the consulted individuals at the public and private organisations mentioned above. The formal framework of seed legislation is not unambiguously clear from official online data sources in Iraq, such as a Ministry website. The practical realisation of the seed law is referenced from interviews and the workshop.

2 Seed sector framework and new varieties

This Chapter details the seed sector framework, the role of certified seed in food production, and new varieties in Iraq.

2.1 Components of a modern seed sector

The main components of a seed system value chain are shown in Figure 1. The seed sector framework in Iraq has been assessed and reported here along these lines.

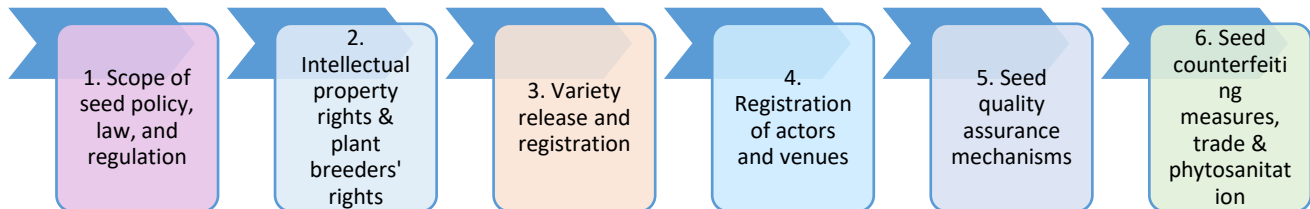
Seed value chain



Figure 1. Seed sector value chain (modified from Kuhlmann & Dey, 2021)

A modern seed sector typically consists of six components that are closely tied to the abovementioned seed value chain. In Figure 2, the regulatory elements are identified for the national and international levels.

National



International

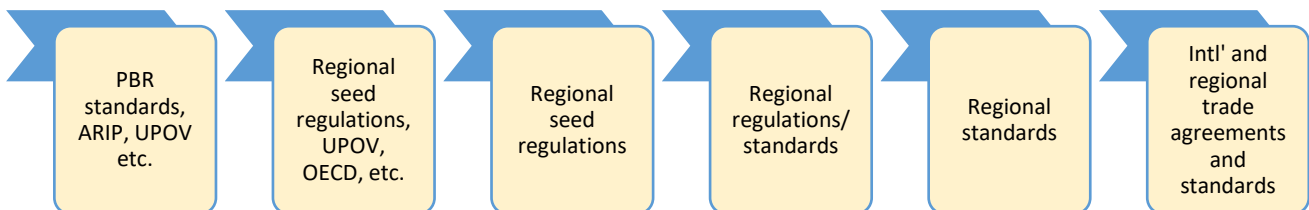


Figure 2. Seed system overview with legislation at national and international level (modified from Kuhlmann & Dey, 2021)

The purpose of a national seed system is to create a generous environment for the development of the seed industry, both public and private, with the objective to bring seed or propagating material of improved varieties to the market that suits the needs of farmers and the agriculture industry.

The six seed system components are described in more detail below:

1. Seed laws and regulations. A seed sector framework is governed by a set of seed laws, policies, and regulations, including the organizations responsible for enforcing these regulations. Seed regulation can vary per country, and is bound by its borders, but may relate to international and regional standards as pictured in the above regulatory value chain.
2. Plant breeding, bringing new improved varieties to the market through crossing and selection. Plant variety research and development can be conducted in-country, but because of the skills and high investments it is often performed abroad by international seed companies or research institutes. The varieties are then introduced to the country at a later stage.
3. A variety testing and release system, which allows varieties to be marketed in-country proven to be significantly better than the available varieties in terms of yield, pest and disease resistance or industrial use, and meets the standards for Value for Cultivation and Use (VCU) and Distinctness, Uniformity and Stability (DUS)
4. A variety protection system (if the breeder wishes to apply for), provides the breeder with the exclusive rights to produce and market seed of the released variety to provide for a reasonable return on investments. Internationally a protection period of 20 years or more is accepted.
5. A seed certification system, operated and controlled by an official seed certification agency, enforces quality standards for all seed and propagating material of released varieties produced and marketed in the country. To ensure high quality seed, a limited number of four to six multiplications is allowed, starting from Nucleus or breeder seed.
6. Seed trade and phytosanitary requirements. When seed is traded in-country or internationally, it must meet the Sanitary and Phytosanitary (SPS) standard requirement, which relates to biosecurity and quarantine issues of harmful seed-borne pests and diseases. SPS may apply to all plants, plant materials and derivatives traded, thus not exclusive for seeds and propagating material. It is therefore not further included in this study.

2.2 The role of certified seed in food production

Since the 1970's seed systems have evolved in many developing countries, including Iraq, in the context of the so-called 'green revolution', designed to rapidly supply seed of improved and higher yielding varieties of wheat, rice and maize to farmer communities, thereby significantly increasing agricultural production and contributing to increased food security and nutrition.

Certified seed is at the centre of a formal seed sector approach in many countries, which when coupled with plant breeding, a proper variety testing and release procedures and a sound seed production, processing, distribution, and supply system, can greatly add to the agriculture industry and food output of the country.

The purpose of a seed certification system is to provide farmers with high quality seed that is free from pests, diseases, and other contaminants. In addition, certified seed can help to preserve the genetic distinction of crop varieties and improve the overall health of the agriculture ecosystem. This is important because it ensures that the crops grown from the seed will be of good vigour and varietal purity so that farmers will get the desired results from their crops, such as high yields and resistance to pest and diseases. Through standardized certification and labelling procedures implemented by an independent seed inspectorate, certified seed also protects farmers from fraudulent traders. Only seed that meets the prescribed worldwide accepted ISTA quality standards (International Seed Testing Association) in terms of minimum germination, low contamination, and varietal purity, is allowed to be marketed.

Globally seed supply has evolved into a large industry with a total value of about 45 billion US\$ and exports amounting to 8.1 billion US\$, out of which the Netherlands has the largest share in export amounting to 1.95 billion US\$ or 24% share (Source: OECD, 2020). In Iraq, the presence of international seed companies is growing especially in crops like vegetables, potatoes, hybrid maize and oilseeds. For self-pollinating crops wheat, barley and rice, the industry is still primarily operated by (semi) government entities. The Netherlands has a large share in seed potatoes and vegetables.

Many seed varieties have patents or intellectual property protections, and farmers who purchase certified seed are typically required to sign licensing agreements that restrict their ability to save and replant seed from those varieties without permission. The risk of introducing certified crops is monocropping, so in any country a good variety or protection of certain varieties for certain areas is important.

As climate change continues to affect agricultural productivity, there is increasing interest in developing and promoting seed varieties that are more resilient to heat, drought, and other environmental stresses. Certified seed programs can help ensure that farmers have access to these new varieties and can adopt them in a systematic and effective manner.

Apart from the formal seed sector, a large informal or traditional seed sector is still an important aspect of seed supply catering to the needs of farmers, especially in terms of availability and price. In Iraq, depending on the crop and area more than 90% of the seed planted by farmers is obtained from the informal system, through on-farm saved and reused seed and farmer-to-farmer exchange systems. To meet the high demand for wheat seed in the country, the government of Iraq (GOI) supervises the on-farm production and extraction of seeds and manages the process of distribution to farmers.

2.3 The importance of new varieties in Iraq

Development of the seed sector starts with variety research and development. Improved varieties are the sector's main driver, while certified seed is the sector's vehicle to make them available to farmers. A high turnover of varieties is an indication of innovation and will benefit the agriculture sector.

Consulted stakeholders have referenced the interest in Iraq, and particularly KRI, to adopt new varieties. Considering regional variation and climate change, consulted MoA-GOI and MoAWR-KRG stakeholders point to a need to breed varieties adapted to:

- Saline conditions
- Drought
- Yield maximization
- Industrial use (e.g., French fries, chips processing)

Yields of crops in Iraq are generally low by international standards due to the use of traditional production and irrigation management practices, the lack of improved seed varieties, and saline soils and water supplies (Al-Dabbas, 2013). However, producers have seen success in Iraq in growing new varieties under those conditions and with good yields.

Different publications are available that cite development and testing of new varieties for various crops in Iraq.

No open-source or peer reviewed publications were found detailing Dutch variety development and testing. These have therefore not been included in this section.

Wheat

Due to global grain market developments, especially wheat (*Triticum aestivum* L.) trade with Iraq has come to a halt. Iraq has tried to make up for this shortfall through increased domestic production (M. Amin Ali et al., 2021). The war in Ukraine further strengthens this ambition.

Three relatively new cereal varieties, Charmo, Maroof and Alla, have shown good results under harsh conditions (M. Amin Ali et al, 2021) and are being used now by farmers.

Especially the Maarooof grain variety has been developed, registered, and released by the National Council for Seeds, the Public Authority for examination and accreditation of Seeds, and the Ministry of Agriculture (Al- Maroof et al., 2013; M. Al-Dabbas, 2013).

Rice

Another crucial cereal for Iraq is rice, which is the third most consumed crop by the Iraqi people. However, its cultivation and production are very low due to several challenges including drought. In recent years, varieties like Mashkab, Furat, and Yasmen were bred in Iraq.

Herbs and vegetables

Regarding vegetables, *Solanaceae* and *Leguminosae* are the two families most cultivated by Iraqi farmers. The main representative crop for Solanaceae group is tomato (*Solanum Lycopersicum* L.).

Because it is considered so important to the economy, and the livelihood of the country, many varieties have been introduced in recent years. ‘Zarina’ is an American French Hybrid, with a yield over 100 tons per hectare, performing above average in dry conditions with low rainfalls. Zarina has also a disease resistance to HR (Verticillium Wilt (Va, Vd), Fusarium Wilt (Fol 2), Bacterial Wilt (Rs), Tobacco Mosaic Virus (TMV)) and IR (Root-knot Nematodes (Ma, Mi, Mj), Powdery Mildew (It), Tomato Spotted Wilt Virus (TSWV)) (Sánchez-Rodríguez et al., 2014; H. WA Al-Juthery et. al., 2019). Against salinity, Edkawi cultivar alleviate salinity stress in tomato (M. Fan et al., 2011). The University of California listed some tomato varieties which, due to their resistance to drought, could benefit Iraqi agriculture and the Iraqi market. The cultivars are the following: ‘Caro Rich,’ ‘Pearson,’ ‘Yellow Pear,’ ‘Pineapple,’ ‘Amish Paste,’ and ‘Stupice’ (University of California, 2022).

Legumes

The other family which is mostly cultivated is *Leguminosae*. An example is Faba bean (*Vicia faba* L.). ‘Towaytha’ cultivar seeds was tested as drought resistant variety. Main strength point is drought resistance during germination stages, which are also the most critical for plant establishment. Other drought resistant varieties are ‘Local Syrian’ and ‘Aquadulce’ (Caser G. Abdel, 2007).

Forage crops

Iraq tests new salt-resistant forage crop varieties. This specifically targets forage crops that can bring increased income to communities that are living in areas with degraded soils (M. Al-Dabbas, 2013).

3 Potato and vegetable trade with Iraq

This chapter provides background information on potato and vegetable trade in Iraq. For further reference purposes only, most information has been contained in Appendices A and B.

3.1 Introduction

The agriculture and food sector in Iraq represents the second income source for the national budget after Oil (FAO 2018). In Iraq 9.3 million hectares, (or around 25%) of Iraq's land, are suitable for agricultural. In total, 2-4 million hectares are under cultivation, of which 1.2 million hectares are in the Kurdistan Region. Around half the cultivation is irrigated by rain. A typical practice is that farmers rotate their cultivation and leave other fields fallow, for instance to save water or restore soil from salinity. Grain and cereal production take up by far most of the agricultural land. The Iraqi farmers get seeds of crops from two main sources: through informal (farmer to farmer networks) and formal sectors (government and seed companies).

3.2 Potato

Potato is one of the most relevant food crops for the individual, as it is widely consumed as a major source of carbohydrates. This crop occupies a distinct consumption position for the Iraqi individual (Madlul et al., 2020). Most potatoes are produced in the Kurdistan Region, though there are potential in other regions too, such as Mosul and north-west of Baghdad, an important potato producing region in Iraq in the recent past. Despite this opportunity, now the amount of land used is not enough to sustain the need of all Iraqi people. Thus, although potato global prices are high, Iraq is one of the developing countries that imports potato in large volumes (FAO, 2015).

Potato production and import statistics are included for reference in Appendix A.

Potato royalty issues

The Dutch export of four potato varieties, Hermes, Rosetta, Agria and Draga, has suffered from royalty dispute with Iraqi traders. These varieties are produced royalty free in Europe ("free varieties"), however, the Iraqi company BEPCO (Nahar Al Alrad) has since several years claimed the licence to these varieties and has been demanding excessive royalties. This is enforced by Iraqi Customs at the border. Pepsico is also one of chips producers, and as big player they invest themselves, but in Iraq they seem to work with franchises.

Seed law 15 (see 4.2.2) shows that variety protection requires the claim of novelty, which in the case of the mentioned free varieties, cannot be proven. Regardless, BEPCO demands a €0.10/kg royalty, even where the normal commission lies around €0.02/kg. Thus far only the three Dutch companies Agroplant, SchaapHolland and Topseed have paid commission. In 2021 the Dutch Embassy requested clarification from the Iraq Ministry of Agriculture in Baghdad, but unfortunately the issue has yet to be resolved. It is in this regard important to note that Iraq is not a formal member of UPOV. This situation causes a market disturbance, as some potato producers are limited in their trade.

Alternatively, the Netherlands does have new varieties such as Taures that are suitable for processing, but their introduction takes time, while the Iraq potato sector is presently also sticking Hermes and the other varieties.

3.3 Vegetables

A wide range of vegetables can be grown in Iraq given Iraq's size and seasonal weather differences across the country.

Vegetable production and import statistics are included for reference in Appendix B.

From consultations it is understood from that some royalty issues for Dutch vegetable varieties exist with Iraqi trade partners, quite like those mentioned for potato (3.2). No more specific details could be collected.

3.4 Dutch trade partners

Table 1, for reference, provides a non-exclusive list of Dutch seed companies active in Iraq, and other Dutch stakeholders. Known crop varieties exported to Iraq are listed.

Table 1. Dutch seed companies and other Dutch stakeholders

Organization	Varieties Iraq	Website	Headquarters
Vegetables Seeds			
Rijkzwaan	Cauliflower, lettuce, cole varieties, mini-cucumber, sweet pepper, tomato, aubergine, melon	www.rijkzwaan.nl	Westland, De Lier
Enza zaden	Unknown	www.enzazaden.com	Enkhuizen
De Ruiter Seeds (Bayer)	Unknown	https://www.vegetables.bayer.com/za/en-za.html	Bleiswijk/Wageningen
Seminis (Bayer)	Unknown	https://www.vegetables.bayer.com/za/en-za.html	Enkhuizen
Syngenta seeds	Potato, watermelon, brassica, tomato, others	www.syngenta.com	Enkhuizen
Bejo zaden	Red beet, onion, others	www.bejo.nl	Warmenhuizen
The Bolster (Organic)	Chili pepper, others	www.bolster.nl	Epe, Gelderland
Nunhems (Bayer)	Unknown	www.nunhems.com	Limburg
Bakker Brothers	Tomato	www.bakkerbrothers.com	Noord Scharwoude
Ergon	Tomato	www.ergonseed.com	Enkhuizen
Seed potato			
Europlant	Potato	www.europlant.biz/en/home/	Heerenveen
Interseed NL	Potato	www.interseed.de/nl/home	Dronten
Stet Holland	Potato	https://stet-potato.com/	Emmeloord
Meijer Potato	Potato	www.meijerpotato.com	Rilland, Emmeloord
Agrico	Potato	www.agricopotatoes.com	Emmeloord
Schaap Holland	Potato	https://schaapholland.nl/	Biddinghuizen
Agroplant Holland	Potato	www.agroplant.nl/en/	Medemblik

Den Hartigh	Potato	www.denhartigh-potato.nl/en/	Emmeloord
HZPC	Potato	www.hzpc.com	Joure, Friesland
Syngenta	Potato	www.syngenta.com	Enkhuizen
Other stakeholders			
NAO, Dutch Potato Organisation	Potato branch organisation	www.nao.nl	The Hague
Plantum	Vegetable branch organisation	www.plantum.nl	Gouda
NAK Tuinbouw	Dutch authority for seed quality	www.naktuinbouw.nl	Roelofarendsveen
Ministry of Agriculture, Nature, and Food Quality	Legislative authority governing seeds	www.government.nl/ministries/ministry-of-agriculture-nature-and-food-quality	The Hague

4 Seed regulatory framework

4.1 Background and history

In Iraq, the importance of seed was recognized as early as 1927 when legislation was passed to encourage seed of improved cotton varieties. However, major development of the seed sector in Iraq did not begin before 1968, when the Government, with the support of FAO, established seed production farms and promoted seed certification activities. Improved ‘green revolution’ varieties of wheat, barley, rice, maize, and cotton were introduced and promoted throughout 1970’s. Since 1974 a national law and regulations on variety testing, release and registration is in place. Seed promotion programmes followed each other, and in 1995 a National Seed Board was installed chaired by the Minister of Agriculture to advise the Government on seed issues, such as development of policy guidelines and the monitoring of its implementation (Bartnick, 2017).

The US-led invasion of Iraq in 2003 disturbed the seed framework and legislation. In 2004, the new US supervised government enabled extension of the US Patent Act and US Reform, Order 81, to include Iraq, allowing US patent rights on varieties to be used in the country, which primarily dealt with wheat, barley, and maize. This law met some resistance as it severely restricted the free and commercial sale of introduced varieties in the country. However, given that over 95% of the seed flow occurred in the informal sector, it is doubtful whether the then government was able to enforce this law (Crosby, 2010).

4.2 Current Seed Regulatory Framework

The Iraq Ministry of Agriculture by approval of the Iraq parliament, introduced two seed laws in 2012 and 2013 to fill the gap in legislation. The jurisdiction of these legislation covers the whole of Iraq, including the Kurdistan region, and is in effect until today. When asking officials in Baghdad, there was no mention of any new seed law or amendments to these laws. Discussion with Kurdish officials and the Netherlands Consulate, however, revealed that the Kurdish parliament adopted a new seed law in 2021, valid only for the Kurdish region of Iraq. We will further elaborate on the seed laws below.

4.2.1 Seed Law No. 50

Established in 2012 and regulating quality and trade in seed and tubers. This Law consists of 38 articles divided in 8 Chapters, and according to Article 2.1 and 2.2 aims at:

- Organizing and encouraging the production of seeds in both the public and private sector.
- Ensuring the registration, adoption and protection of the new agricultural varieties derived from Iraqi researchers (and foreign breeders) and providing them in sufficient quantity at the right time and fair price in proper locations to farmers.
- Securing special procedures for the certification of seeds and other topic related matters.

A full English literal translation of the law is found in [Appendix A](#). The translation is non-official and meant for internal use.

Table 2. Summary of Seed law 50 per Chapter

Chapter 1, Article 1	Definitions
Chapter II-III, articles 3-6	<p>elaborates on the formation of a National Seed Council (NSC) under the Ministry of Agriculture as the main advisory body to the Government in relation to the national seed policy. The NSC consists of 13 members, of which four from the private sector, and the Minister as chair. The NSC is tasked with:</p> <ul style="list-style-type: none"> • presenting advise on issues related to the development of strategies for the national seed policy. • attracting local and foreign investments. • supporting the private sector for the development, reproduction, marketing, and export of seed varieties. • approval of procedures and criteria for certifying seed. • the formation of committees to resolve disputes of the seed industry. • granting licenses for the construction of, installation and operation of seed cleaning plants. • development of resources for a Seed Support Fund. • form subcommittees, prepare research and studies addressing issues in relation to the seed industry.
Chapter IV, articles 7-17	Elaborates on the procedures for Seed Certification and Propagation
Chapter V, articles 18-30	Elaborates on the procedures for trading of seeds and seedlings
Chapter VI, articles 31-33	Elaborates on the seed Inspectors appointment, competences, and authorization
Chapter VII	Elaborates on the penalties in case of violation of the procedures
Chapter VIII	Concludes with general and final provisions

In our opinion the law is largely in conformity with international standards on regulating quality control and certification of plant propagating material.

We were not able to obtain additional policy guidelines for implementing the law, such as quality standards and Iraqi organisations outside the NSC authorised to enforce the law. This may be made available in a follow-up to this project. From Article 1 (definitions), however, we deduct that:

- Four categories of seed multiplications are recognized in Iraq: Nucleus (breeder) seed, Foundation seed, Registered seed, and Certified seed.
- Iraq adopts the international standards for field crop inspection, laboratory testing and certification set by ISTA (International Seed Testing Association).

Furthermore, the seed law does not mention or acknowledge the existence of the informal seed sector, and therefore does not explicitly recognize farmers' rights for the on-farm reuse or farmer-to-farmer exchange of seed as advised by the FAO - International Treat on Plant Genetic Resources, of which Iraq is a contracting member. While this is not recognized, officially therefore, farmer-to-farmer exchange of released varieties may constitute a violation under the law. The fact is, however, that there is no way to enforce the law considering the general lack of capacity and infrastructure in Iraq. Stakeholders interviewed indicated that varieties of imported seed potato are frequently re-

cycled on-farm and at least part of it sold (uncertified) to third parties for planting. This indicates a gap in legislation. Introducing approaches to embrace the informal sector and strengthen both formal and informal sector is an issue that may be recommended in a further amendment to the law.

4.2.2 Seed Law No. 15

Established in 2013, it regulates variety testing, release, and protection. This law consists of 20 articles divided in 5 Chapters. The law aims at:

- Developing scientific documentation and knowledge in the breeding and improvement of plants in line with international conventions of agricultural varieties
- Protecting the rights of developers and those who carry out the breeding and genetic improvement.

A full English literal translation of the law is found in [Appendix D](#). The translation is non-official and meant for internal use.

Table 3. Summary of Seed law 15 per Chapter

Chapter I, Article 1	Definitions
Chapter II, articles 2-4	Deals with the establishment and tasks of a National Committee (Not the same as NSC mentioned above), chaired by the Minister of Agriculture, having not less than 6 and not more than 10 members (individual members not specified). The National Committee has the following powers: <ul style="list-style-type: none"> • registration and approval of new strains, varieties, hybrids, upon receiving proper information on distinctness and value for cultivation and use. • disclosing the genetic source of the new variety, proving the selection is done in a legitimate way. • Receiving a quantity of seeds (part of them is kept in the Genetic Resources Bank and the remaining part is used for testing purposes). • to make decisions on the banning, import and export of any genetically modified variety or hybrid.
Article 5	Regards the naming of new varieties
Article 8	Regards stopping the use of varieties
Article 10	Deals with conditions for registration or accreditation of a new variety
Article 11 to 17	Elaborates on the rights of the breeder to protect the variety from propagation, sale, export or import and storage, including exclusions, transfer of ownership
Chapter III, Article 15	Deals with the transfer of ownership
Chapter IV	Regards the permits to exploit the new variety
Chapter V	Deals with the Final Provisions

We consider this law to be largely in conformity with international conventions on agriculture variety release and registration. However, regarding PVP we do observe a few important deviations, notably:

- The aspect of ‘novelty’ is not mentioned in this seed law.

- The duration of the variety protection after release is only 10 years and not 20 years as in many other PVP legislation.

This raises questions about the different concept of variety protection in Iraq and what it means in practice. We will elaborate on this further in the text in paragraph 4.2.3 and in Chapter 6 on stakeholder experiences in seed potato and vegetables.

We further note that article 11.3 on essentially derived varieties (EDV), are directly copied from UPOV regulation, convention 1991 (art 14.5). The translated text makes sense only when the UPOV articles are read in parallel (see annex, comments Plantum).

Finally, we note that there is no independent Plant Variety Protection Office in Iraq. All tasks related to PVP are integrated in the National Seed Committee (source: Workshop input).

Furthermore, whereas the variety testing procedures for release to the market may take up to 2 years, the duration of variety testing and registration in Iraq is one to two years for the main crops. For potatoes and vegetables only one year applies (2-3 testing fields in geographically diverse circumstances, each at least 120 km apart).

4.2.3 KRI Seed law No. 15, 2021

Approved by KRI parliament in 2021, this law regulates the production and importation of seeds and seedlings, and registering, confirming, and preserving agricultural species in the Kurdistan Region of Iraq. The law entails 18 articles and came into force recently.

A full English copy of the law is found in [Appendix E](#). The translation is non-official and meant for internal use.

Table 4. Summary of KRI Seed law 15, 2021 per Chapter

Chapter I, Article 1	Definitions
Article 2-7	Deals with procedures for seed production, requirements, application, quality testing and post-harvest processing
Article 8-12	Deals with obtaining licenses for seed import, seed quality requirements, documentation, and exceptions for research purposes
Article 13-14	Specifying penalties in case of violation of procedures, and the formation of a committee in the ministry to deal with violations, and other procedural questions
Article 15-18	Deals with the final provisions

Based on discussions with stakeholders and government officials we believe that this seed law was drafted by the Kurdistan Government to have more grip on the growing seed industry in Kurdistan, promoting seed production, accrediting seed importing agencies, and laying out import requirements, as legislation until now was entirely enforced from Baghdad.

We note that key aspects of quality seed production and seed trade are included in the Kurdish seed law with the authority set by a 'Commission' in the KRI Ministry of Agriculture and Water. However, the law is basic and lacks transparency, and is therefore difficult to compare with the more comprehensive Iraqi Seed Law 50.

More importantly, the new legislation does not in any way recognize the Iraq seed laws, or the authority of the National Seed Committee. As such the official status in the context of the Iraq seed

sector remain unclear. Input from the Erbil workshop on 13 December 2022 reveal that the Iraqi NSC is aware of this seed law but so far does not recognize it. Even a Kurdish official (also member of NSC) reiterated that the NSC is informed but retains full authority over seed certification in the country. In essence, we believe that the KRI seed law is more about the licensing of local KRI seed importers and control of seed imports at the KRI borders than replacing seed certification procedures.

Dutch stakeholders mentioned that the adoption of this law can be a serious risk, as frictions between Baghdad and KRI may not suit their Iraqi business in the future.

This said, the Kurdish Ministry of Agriculture and Water is ambitious about boosting agriculture development in the Kurdish region. A recent successful project on co-development of agricultural policies between The Netherlands and Kurdistan has been quite successful and gave concrete examples in how to attract local and foreign investments, to which the seed sector is a vital element. The final report elaborates on the potential of the Kurdish seed sector development and how the Netherlands can assist Kurdistan (and Iraq) in further professionalization. We advise to support this ambition and assist at different levels upon specific Iraqi and KRI demand.

4.3 New legislation under development

There is currently no new legislation under development. The KRI may want the Kurdish Seed law No. 15 (2021), aimed at enhancing seed trade for KRI, to be re-worked and aligned with Baghdad. During the seed workshop in Erbil, the DGs from MoA stated that there would be an interest to update seed law, especially if they would receive technical and legislative support.

4.4 Iraqi seed law in the international context

Europe

European law demands that before sales, all seed potatoes are officially inspected and certified. This is done to ensure that the seed potatoes meet the minimum EU requirements for quality and health. Member states of the European Union (EU) must meet the requirements of the Plant Health Regulation (2016/2031/EU) and Directive 2002/56/EC for the marketing of seed potatoes.

Potatoes are susceptible to harmful organisms, of which many are passed on to the next generation via the tuber. Two kinds of harmful organisms are recognized: for regulated quarantine pests there is a zero tolerance, as they can be very harmful and pose a high risk of spreading if not properly tested through a certification regime. There are also non-quarantine pests, where pests are allowed to a certain threshold in seed potatoes.

Although the Iraq seed laws compares well with international seed laws, there is a lack of strict law enforcement and compliance regarding seed certification procedures. During the workshop it was confirmed that, although the Baghdad seed laboratory may have proper facilities to test seed health, there is currently no seed certification available in the governorates for seed potatoes and vegetables in the private sector. At present, all seed production should be conducted under control of the producer applying own (mostly visual) standards as he may not have proper equipment for testing. As such, there may be high risk of the spreading of harmful diseases.

According to anecdotal reference by Dutch seed potato exporters, Iraq is not different from other Middle East countries such as Egypt or Algeria. On-farm multiplication of exported potato seed is rarely subject to strict quality control as is required by seed law. There are simply not enough field

inspection and laboratory staff or equipped laboratories in place to enforce certification. Iran may differ in this respect as only SE class seed potato is imported and multiplied once or twice under strict quality control into class E and A. Beyond this, especially in small farmer communities, seed potato is informally reproduced on-farm in similar practice as other countries.

Egypt

Regarding plant variety protection, recently there has been some marked changes in the Middle East, particularly in Jordan and Egypt. In 2015, the Egyptian government amended the 2002 Egypt seed law to align it with the EU and UPOV regulations. After the new seed law was circulated among the UPOV members, Egypt became a full member of UPOV in November 2019. Almost immediately thereafter, Egypt also aligned with the Common Market for Eastern and Southern Africa (COMESA Seed Trade Harmonization Regulations), which affiliates closely with the UPOV regulations convention 1991.

In the Egypt seed law, the requirements that must be demonstrated to merit protection for a specific plant variety (novelty, uniformity, stability, and distinctness) are preserved, whereas the variety protection duration has been set at 20 years.

During an interview with the director of the PVP office in Cairo, it was mentioned that Jordan also amended its outdated seed laws, to become UPOV member. In Jordan, the release of new (vegetable) varieties takes only weeks, by adopting available DUS data. This allowed Rijkswaam to shift from trade to investment and made Jordan the main foreign investment country in the MENA region.

In the Middle East and North Africa (MENA), five countries are currently UPOV member: Egypt, Jordan, Israel, Tunisia, and Morocco. Iraq is observer-member of UPOV, but there has been little discussion among NSC members on the issue of amending Iraqi seed laws. No further steps to start a procedure to become full member have been started.

4.5 Regulatory stakeholders in Iraq

The following organisations and departments are connected to Seed Law (Figure 3).

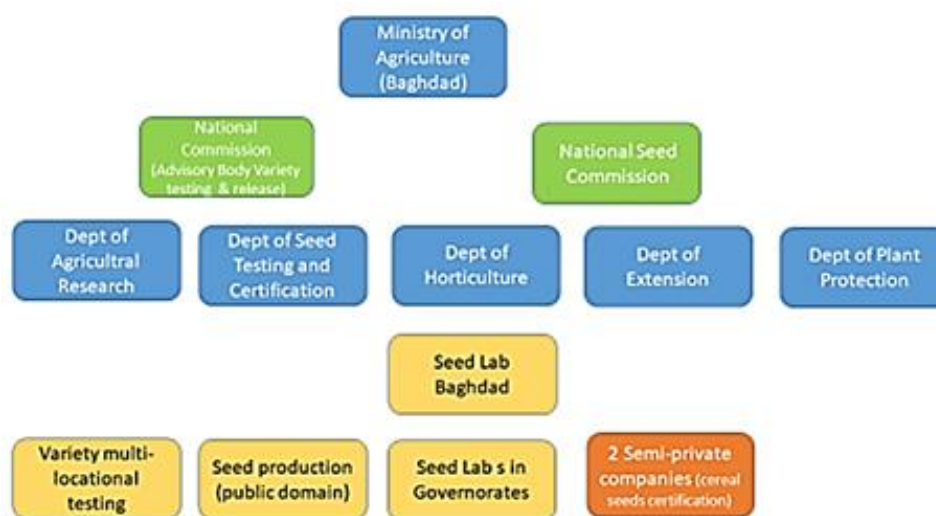


Figure 3. Organisational framework of public seed authorities in Iraq

A summary of the main parties is provided below. Some roles and responsibilities can be seen to overlap between different organisations.

Ministry of Agriculture

Responsible Ministry for managing public and private agriculture in Iraq, including seed law enactment and overall management.

National Seed Commission (NSC)

The National Seed Commission deals with the implementation of the seed policies, and distribution of seed to the different governorates for planting by farmers. According to the law 15, the National Seed Commission is formed in the Ministry of Agriculture+, headed by the minister of Agriculture (or a person represents him/her). NSC members consist of 6-10 experts from MoA, meeting once per month.

NSC is tasked to (FAOLEX, 2022):

- Establish procedures and criteria for certification of seeds in line with international standards.
- Institute committees to resolve disputes related to seeds production.
- Increase resources for the Fund to support the seeds.
- Grant licenses to create, install and operate seed cleaning factories.

National Commission on Plant variety testing and release

Chaired by the Deputy Minister of Agriculture (Seedquest, 2001) and also known as the Public Authority for examination and accreditation of Seeds (FAOLEX, 2022), it is tasked with:

- Seed Varieties Official Guide
- Ranking of products
- Certificated and non-certificated Seeds Card (according to the compliance to the standards established by the MOA)
- Laboratories for official seed analysis
- Inspections of fields and cleaning plants
- Methods, procedures, and documentation required for the definition of quality standards.

The NC deploys seed certification labs that are in Baghdad and in several governorates, primarily dedicated to certifying seed of wheat and barley. These are run by two semi-government companies. Except for the Baghdad seed laboratory, none of these seed labs have the capacity to certify crops other than wheat and barley, also the one in Erbil has the capacity or equipment to perform these tests. It was indicated during the workshop that if certification is needed of international (imported) seed or seed of potato or vegetables, this is run by the directorate of horticulture in Baghdad, and not the directorate of seed certification.

Department of Agricultural Research

Breeding, nucleus, foundation seed.

Department of seed testing and certification

Testing and certification of mainly wheat and barley, and testing of imported seeds

Department of Horticulture (MoA)

Responsible for variety development, testing, certification and production of vegetable seeds and potato.

IPA Agricultural Research Centre (IPARC)

Responsible for variety development of crops such as cereals (barley, wheat, rice, maize), food legumes (lentil, chickpea, faba bean) and industrial crops (peanut, soybean, sunflower).

State Board for Agricultural Research (SBARC)

Responsible for cereals, vegetables, and cotton.

Agricultural and Biological Research Centre (ABRC)

Developing varieties of cereals and industrial crops.

State Board for Seed Testing and Certification (SBSTC)

The SBSTC is responsible for coordinating the import, marketing and distribution of vegetable seed imported from abroad. The varieties imported should be tested in Iraq and released according to Decree No 9 of 1991.

At present, three agricultural research centres, three companies and about 1500 growers are primarily involved in production of various seed classes nationwide. The agricultural research centres are responsible for production of Breeder and Foundation Seed.

Iraqi Company for Seed Production (ICSP) and Mesopotamia Seed Company (MSC)

Semi-public organisations responsible for large-scale commercial production of later generations. Registered, Certified and Commercial Seed are produced through contract growers who are selected by the State Board for Seed Testing and Certification (SBSTC) in collaboration with the seed producing companies (Seedquest, 2001).

Agricultural Supply Company (ASC)

Coordinates the marketing and distribution of vegetable seed produced by local research centres. The price paid to the contract growers is based on the grain price and a premium of 50-100% for Foundation, 35-75% for Registered, 25-50% for Certified and 10-25% for Commercial Seed (Seedquest, 2001). ASC also directly imports seeds under supervision of SBSTC.

5 Seed system practices

This chapter highlights the practical workings of the seed system and the regulatory system in Iraq, and a focus on potato and vegetable crops. This chapter is broken down along the main components of the seed value chain.



5.1 Variety testing and control

There are two breeding strategies for developing new varieties:

1. The short-term goal focuses on introduction and screening nurseries to select and evaluate genotypes that are adapted to the climatic conditions of the country. Introductions are made from international agricultural research centres such as ICARDA, CIMMYT and ICRISAT or from other regional institutes or through exchange with NARS from the region (Cyprus, Jordan, Syria, and Yemen).
2. The long-term plan is to develop and handle segregating populations to identify early or advanced generations for local adaptation. Each agricultural research centre has stations representing different agroecological regions to conduct the breeding and selection programs. They evaluate segregating materials, pure lines or varieties in observation trials for 1 to 2 years based on maturity groups for yield and yield components, resistance to major pests and quality characters. After observation trials, the yield trials are conducted for 2-3 years to identify promising materials in 2-3 stations. Promising lines will be further tested in on-farm trials using agricultural management practices.

Whereas the full variety testing procedures for release to the market internationally may take 2 years or more, the duration of variety testing and registration in Iraq is markedly less and lies at about one year for potatoes and vegetables. For potatoes and vegetables only one year applies (2-3 testing fields in geographically diverse circumstances, each at least 120 km apart).

5.2 Variety release in Iraq

Seed potato companies in the Netherlands all agree that Iraq is a thriving market, where farmers are eager to adopt new varieties. This is especially true in the fresh (ware) potato market and for French fries processing, although it is more visible in the north of Iraq than in the central and the south of the country. In the chips processing industry, the dominance of old varieties like Hermes and Lady Rosetta is evident and difficult to change with new varieties, also because of the dominance of established processing industries like Pepsi (Lays).

From the Iraq variety catalogue (2022), we learn that the number of potato varieties released since 2002 is 130; Of these, 79% or 103 varieties are introduced by Dutch companies, and out of these 53

varieties are currently under ‘protection’ in Iraq. See Table 5. No information was obtained on vegetable varieties that were released.

Table 5. Dutch companies in Iraq, total number of potato varieties released (protected and free)

Country	Company	Total varieties released	Protected	Free
NL	AGRICO	29	15	14
	AGRO PLANT	6	2	4
	DEN HARTIGH	3	3	0
	EURO PLANT	12	12	10
	HZPC	21	5	16
	I.P.M.	12	11	0
	INTERSEED	2	2	0
	MEIJER	5	1	4
	STET	8	5	3
	TPC	3	0	3
	SEMAGRI	2	0	2
Subtotal		103	56	56

5.3 Variety protection

The approach to plant variety protection (PVP) in Iraq is contained in Seed law No. 15 (2012), article 9 to 17, which elaborates on the right of the breeder to obtain and protect the variety after registration from unlicensed use in Iraq. The formulation appears to be quite different from what has become the international standard to Plant Variety Protection under UPOV regulation.

Novelty not included in PVP

In seed law no. 15, article 2, clause 3 it states: ‘... an accredited (registered) variety or hybrid is characterized by distinctness, homogeneity and stability, and has a high genetic value and a new agricultural or industrial additive’.

We note here that while there is mention of DUS, there is no reference in the law to novelty.

UPOV regulation (article 5) states that breeder rights can be obtained when the variety is novel, distinct, uniform, and stable. A variety is regarded novel:

If at the date of filing of the application for breeders’ right, propagating material of the variety has not been sold to others earlier, in the territory (country) of contracting party, for the purpose of exploitation of the variety, earlier than one year before that date (UPOV, article 6).

In Iraq, therefore, the aspect of novelty is not adopted and appears to be synonymous with distinctness from other varieties and the need to add value for agriculture cultivation and/or industrial use.

In principle, this opens the door to the rather odd phenomenon of protecting varieties that have been earlier introduced, popularized, and marketed in Iraq. This approach to PVP is not seen anywhere in the world (anecdotal reference by NAO). When asking government officials for clarification, they acknowledged this and mentioned that this issue has given rise to discussion in the

National Seed Commission in Baghdad, but thus far has not given rise to any resolve. When some years ago a local Iraqi agent used this gap in the law to receive protection of older varieties like Hermes, some Dutch and Iraqi stakeholders objected and reported trade disturbances to the Netherlands Embassy. Since the law is not clear on this issue, even after consultation with the Ministry of Agriculture, the Netherlands Embassy failed to lift the trade disturbances.

PVP duration

In the Iraq Seed law, article 14, the protection period for a variety is set at ‘... 10 years starting from the date of filing the application for its registration for agricultural crops, with the exception for tree and vine varieties which receive a protection period of 20 years.’

Under UPOV regulation, the duration for plant breeder rights is a fixed period not less than 20 years, giving the breeder time to recuperate investments on research and development of the variety through royalties. The duration may differ per crop and per country, and for potato varieties in the European Union this is fixed at 30 years.

After discussion with stakeholders in the Netherlands and Iraq we conclude that the Iraq variation is an automatic and exclusive licence to the local agent/company that filed the variety for registration. One stakeholder mentioned that this article is more about agent protection than variety protection. Further investigation led to the realisation that foreign companies are tied to their agent for at least 10 years. In case they run into disagreement, and want to change agents, they should know that this can be done only after 10 years, unless proper consent of the agent is reached to change agents and procedures for transfer of breeders’ rights is followed with or without compensation (article 15). If there is no consent reached, the agent may, in the worst-case scenario, disallow the seed sale of the variety through legal means (article 17), which may cause disturbance of seed trade of the varieties.

5.4 Seed distribution, marketing, and market access in Iraq

In Iraq, about 90% of the total vegetable seed required is imported by the Agricultural Supply Company (ASC) and the private sector. The seed import is supervised and controlled by the State Board for Seed Testing and Certifications (SBSTC). The guidelines for seed import are as follows:

- Seed should not be imported or offered for sale without proper phytosanitary certificates.
- Seed must be tested and certified before distribution.
- Import is allowed only for varieties approved for cultivation in the country.

The SBSTC is responsible to coordinate the import, marketing and distribution of vegetable seed imported from abroad. The varieties imported should be tested in Iraq and released and meet minimum quality standards (germination) as recommended in Seed law No. 50.

The government runs certified seed production programs on government farms with contract growers for wheat, barley, and soybean. Seed production of 26 wheat varieties is performed in KRI (6 more to come), in cooperation with Baghdad. KRI is working closely with the National Seed Committee in Baghdad. Since 2009, with support of FAO, a seed certified production programme has started in vegetable seed of tomato, eggplant, cucumber, and okra. This programme has become more active and expanded since 2019. The latter programme was started to become less dependent on imported seeds.

6 Workshop on seed regulatory system

6.1 Background and summary

A hybrid workshop was held on December 13th, 2022, in Erbil at Salahaddin University and online with a group of high-level experts from Iraq. The project was also presented to 20 Iraqi agricultural scientists from various universities during a visit to Wageningen in Nov'22.

Main objectives were to establish a communication line with important stakeholders in the seed regulatory system in Iraq, to exchange experiences on Iraq seed policy and the regulatory system, and to clarify issues for the project team that had remained unclear during the project's desk-research phase.

The workshop followed a presentation of the study's findings to date, and a roundtable with questions moderated by WUR. All information has all been included in the text of this report.

The workshop was received very positively by those attending. Iraqi participants acknowledge the long and important trade relation with The Netherlands and welcomed future collaboration in seed law development and various other topics.



Figure 4. Workshop attendees in Erbil, December 13th, 2022

6.2 Attendees

1. DG of Horticulture department (MoA)
2. Snr. Mgr. Department of Extension (MoA)
3. DG of Research and development (KRG-MoAWR)
4. Snr. seed expert and member of the National Seed commission (KRG-MoAWR)
5. Several Snr. seed experts from Salahaddin University
6. Agriculture Advisor of the Consulate General of the Kingdom of the Netherlands in KRI
7. Head of ARD Unifert company in Iraq
8. Sales manager- Debbane Agri company (Online)
9. HZPC The Netherlands (online)
10. Project team Nectaerra – KIT - WUR

7 Policy-level and practical solutions

The study consultations, workshop, and some literature citations (Jongerden et al, 2018; FAO, 2017; World Bank, 2017) point to a variety of practical and mostly institutional, policy-level reforms and actions that could strengthen the Iraq and KRI seed sector and trade with, among others, Dutch suppliers. These reforms are listed below in different categories.

Seed law

- For seed law, the main issue is the lack of consistent policy and disruption of the seed value chain. This situation puts all those involved and Iraqi farmers at a disadvantage compared to competitors (Jongerden et al, 2018). For Iraq to become part of the international seed community it is crucial to start preparing for a new seed law that replaces all current seed laws in Iraq and in KRI, and to bring it more in line with MENA and EU countries. The new seed law must address all seed registration and protection issues to enhance trade and productions, such as seed certification, plant health and processing. Novelty should be explicitly included, while the PVP period, which is now 10 years for most crops, would need to be increased to at least 20 years.
- Iraq is not yet a member of UPOV. Becoming a member will address many of the issues mentioned above and will support seed sector development in Iraq.
- Legislation differences between KRI and Iraq/Bagdad leads to confusion and can contribute to unwanted effects. The described potato royalty dispute may be an example of this. Influence of individuals and companies on enactment of law may also contribute.

Seed production

- Only a small portion of seeds is formally propagated locally, and farmers rely on imported seeds. Production in The Netherlands is also reaching its limits. Therefore, both countries would benefit from more investment for local production. Safeguards in the regulatory system must be addressed first.
- There is a need to breed and produce seed varieties that are better adapted to drought and salinity. In this context there was a special request to assist Iraq breeders with rapid genetic modification technologies to speed up the breeding process (despite GMO's not accepted in the country).
- There is a need for better quality seed production and seed processing, and bagging procedures,
- Breed or produce seed of varieties that are better adapted to drought and salinity. In this context there was a special request to assist Iraq breeders in with rapid genetic modification technologies to speed up the breeding process (despite GMO's not accepted in the country).
- Provide seed cleaning and treatment services by mobile cleaners for farmers using retained seed.
- Initiate proper variety maintenance procedures and joint inspection by SBSTC and breeders (variety maintenance).
- Seed processing can benefit from various changes. Adequate maintenance of existing seed plants can be ensured, and new plants established where necessary. The knowledge of technicians can be improved, with better management to avoid variety mixtures during processing. Finally, local producers can benefit from assistance of SBSTC for internal quality control of seed plants.

- Upgrade the knowledge of technical staff working in the seed companies.
- Improve selection of contract growers and supervision during seed production and harvesting.
- Encourage companies to enter vegetable seed production and, if possible, cooperate with international seed companies.

Import/export/marketing

- Despite the growing potato market in Iraq, quality export is a challenge. Quality control and assurance of the commodities may decline export chances due to the lack of expertise. Increasing seed quality assurance will help to adapt and meet the criteria of EU.
- Facilitate export/import procedures to be less time-consuming.
- Many farmers consider protection and marketing of production as the main problem, more so than low farm productivity. In those cases, farmers claim that government may want them to produce more, but they also see no possibility to sell their products because there is little protection from cheap import from for example Turkey and Iran.
- Allow seed companies to set seed price based on market forces and establish their own distribution network.
- Establish enough sale points to bring seed within mobility zone of farmers.
- Promote use of new varieties and quality seed using the media.
- Encourage use of certified seed for farmers to adopt higher seed renewal rates.

Investment

- Farmers have limited access to credit outside governmental ad hoc subsidised credit programmes. The almost absence of institutional credit has made the cost of capital prohibitive for agricultural producers and thus discourage private investment. Implementation of farmers' credit can be enhanced.
- There is a lack of incentives to invest in agricultural processing industries or value chains development. This is due to knotty administrative and regulatory system.
- There are unclear requirements for registering and closing businesses and license application, limited communications infrastructure, difficult access to finance, and a non-competitive business environment with absence of transparent legal frameworks for rules-based market competition.

Supporting facilities

- Strengthen the laboratories with equipment and training in certification procedure to upgrade their capabilities to international standards.
- Upgrading seed laboratory standards and staff's knowledge and capability in terms of seed germination, contamination, and plant health testing procedures.
- There is a need to update testing labs and facilities in Iraq to international standards, and staff knowledge and capability in terms of seed germination, contamination, and plant health testing procedures.
- Strengthen the laboratories with equipment and training in certification procedure to upgrade their capabilities. Even Baghdad needs this.

Institutional

- During policy making processes, general statements and beliefs are not sustained by data or knowledge of the sector. Data-based policy making should be stimulated. Overhaul of Iraq's more limited communications infrastructure is also required.

- Strengthening institutional capacity and roles, that prevent the influence of individuals and companies on enactment of law.
- Policy makers can minimize or divert responsibility for the fall of the agriculture and food sector since 2003 and the lack of a coherent vision for the future of the sector. This may stand in the way of implementing and enforcing policies.
- Trust in politics and policy makers is generally low and at times there can be an unclear and unhealthy separation between law and politics. Citizens and businesspeople believe that corruption is the most important policy challenge in Iraq (World bank, 2017).
- Initiate a long term of cooperation programme between EU/NL and MoA (especially with horticulture and the legal departments) for capacity building and technical support.

8 Conclusions

This short study has focussed on potato and vegetables only. It has not always been possible to find clear distinction between crops and varieties, but the conclusions are generally valid for both groups. The study's factual conclusions are listed here in different categories.

General

- Yields of crops in Iraq are generally low by international standards, among others due to the lack of improved seed varieties that produce well under harsh, water scares and often saline conditions.
- Improved varieties are of vital importance and producers have seen success in Iraq in growing new varieties with good yields.
- Imported seeds are important in Iraq, but this holds risk of over-dependency and trade or conflict related supply problems.
- In Iraq, 90% of the seed planted by farmers is obtained from the informal system, through on-farm saved and reused seed and farmer-to-farmer exchange systems.

Seed law

- Seed laws are in place; however, seed law reform is critical for potato seed producers to start producing in Iraq (so-called “local for local”).
- Seed legislation is covered by laws 50 (2012) and 15 (2013) for Iraq and KRI.
- The approach to plant variety protection (PVP) is different from UPOV in 2 main areas: a) novelty is not included, and b) PVP period is 10 years, not 20 years.
- For Iraq to become part of the international seed community it is crucial to start preparing for a new Seed law that replaces all current seed laws in Iraq and in KRI, and to bring it more in line with MENA and EU countries. The new seed law must tackle all seed registration and protection issues to enhance trade and productions.
- UPOV membership: Iraq is not yet a member of UPOV, becoming a member will support the seed sector in Iraq. UPOV membership will give more credibility to foreign investors, while Iraq will also profit from more international knowledge sharing with UPOV members. It will also directly benefit in royalty disputes and excessive royalties, such as the examples mentioned for potato.
- In 2021, KRI approved law No. 15 (2021). It seems it was drafted by the KRI to have more grip on the growing seed industry in Kurdistan, promoting seed production, accrediting seed importing agencies and laying out import requirements. The law is basic and lacks transparency and is difficult to compare with Seed Law 50. It does not recognize the Iraq seed laws, or the authority of the National Seed Committee. Anecdotal reference from the workshop is that the NSC does not recognize this law and it appears more about the licensing of local KRI seed importers and control of seed imports at the KRI borders than replacing seed certification procedures.
- The legislation differences between KRI and Iraq/Bagdad leads to confusion and can contribute to unwanted effects. The described potato royalty dispute may be an example of this. Influence of individuals and companies on enactment of law may also contribute.
- During the seed workshop in Erbil, the DGs from MoA stated that there would be an interest to update seed law, especially if they would receive technical and legislative support.
- KRI's willingness to develop the seed sector is also important, and intent is shown by the recent active collaboration between the Netherlands and KRI.

Variety testing and release

- There is a need to update testing labs and facilities in Iraq to international standards, and staff knowledge and capability in terms of seed germination, contamination, and plant health testing procedures.
- In the absence of governmental testing labs, the cost of testing seeds, especially potatoes, is high. This is an opportunity for Dutch knowledge and technology.
- There is a good number of new varieties released (potatoes > 100).

Variety protection

- Variety protection law unclear to some NL seed producers.
- The trade disturbance exists due to protection from EU 'Free varieties' in Iraq. The effects are considered minimal, as most Dutch seed companies increasingly rely on introducing their own varieties to the market. That the varieties are relatively quickly released is attracting more seed companies to enter the market.

Seed production in Iraq, market access and export

- The impact of neighbouring countries on Iraq's agrifood sector is significant.
- Despite the growing potato market in Iraq, quality export is a challenge. Quality control and assurance of the commodities may decline export chances due to the lack of expertise.
- There is a need for better quality seed production and seed processing, and bagging procedures.
- Farmers rely on imported seeds, and only a small portion is formally propagated locally, necessitating the establishment of investments.
- Expansion in production of potato seed in the NL is very difficult, so local production in Iraq is a key solution to Dutch investment in Iraq.
- A company like HZPC is willing to adopt the concept "local for local" production for local market- proves the potential growing market.
- There is a need to breed and produce seed varieties that are better adapted to drought and salinity. In this context it is noted that some Iraqi stakeholders requested the assistance of Iraqi breeders with rapid genetic modification technologies to speed up the breeding process (despite GMO's not accepted in the country).

Role of Dutch seed sector

- Local agents of international and Dutch companies do most of the work in dealing with Iraqi government, such as the testing and registration of new varieties, and distribution and sales to farmers. Most seed companies trust their agents fully.
- Seed companies usually invest in a decade-long relationships.
- Dutch seed companies are generally fine with the seed sector developments in Iraq. They consider that:
 - o New varieties are tested and registered quickly, within 1 to 1.5 year.
 - o Farmers, especially in the north, adapt to new varieties relatively quickly. Therefore, the time from introduction to large scale adoption is quick.
- In the future, goal of most breeders is to invest also in local for local production.

9 Recommendations for follow-up actions

The study's recommendations for short-term follow-up are listed, together with the study's beneficiaries and acknowledgements.

9.1 Short-term follow-up

The project and workshop can be used to enter more bilateral discussion on seed law and give way to exchange visits. There seems a willingness to update seed law, practices, and capacity when knowledge support is provided. Immediate issues relate to facilitation of trade and stimulation of local investment by Dutch companies.

The Netherlands has assisted many countries in strengthening their seed sector. Concretely, it was recognized by Iraqi stakeholders and Dutch growers that SeedNL could support seed sector development in Iraq/KRI in future in the following way:

1. Arrange (semi-)government-to-government dialogue with Iraqi government stakeholders, including knowledge exchange visits to the Netherlands and Iraq. Stakeholders were present in the workshop. Tentatively subjects would be:
 - a. Opportunities and support for seed sector development in Iraq, including legislation.
 - b. Dutch experience with seed legislation and UPOV (over which the Netherlands is now temporarily presiding).
 - c. Knowledge exchange with NAO and Plantum.

It seems useful to connect to experiences of Iraqi and Dutch stakeholders involved in other Dutch sponsored projects (several SDGP and Nuffic projects with private sector and WUR). Private sector may also be included in connection to laboratory services and breeding technology.

2. Capitalise on opportunities to host side shows or seminars with stakeholders at conferences or other events. This may be extended beyond seed sector to climate adaptation, water-food, salinity, etc., depending on the venue.
3. In time, it may be useful to broaden bilateral exchange to multilateral exchange involving other European stakeholders in Iraq (Spanish, English etc.).

9.2 Beneficiaries

Ultimately, these recommendations and actions are aimed at benefitting various stakeholders:

- Iraqi farmers and consumers; better and more abundant access to crops with better quality, and further socio-economic development.
- Iraqi (semi-)government; stronger trade position (size, resilience), knowledge and agriculture revenues (GDP).
- (Dutch) breeding companies: better market opportunities and success (revenues, R&D).
- Supporting actors: a modern seed regulatory system and seed sector are prerequisites for continued socioeconomic development. This indirectly benefits a range of other organisations (R&D, suppliers, consultants etc.).

9.3 Acknowledgements

Necterra, KIT and WUR would like to express our sincere gratitude to the following organisations for sharing their thoughts for this report: SeedNL, the Dutch Consulate in Erbil, NAO, Plantum, HZPC, Agrico, Schaap Holland, Agroplant, Interseed, Rijkzwaan, Bejo, Bakker Brothers, De Bolster, and from Iraq; the Ministry of Agriculture, Ministry of Agriculture and Water Resources (in Kurdistan regional government), National Seed commission, University of Kerbala and Salahaddin University.

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11 Appendices

A. Potato trade statistics in Iraq	37
B. Vegetable trade statistics in Iraq	40
C. Seed law No. 50 (2012) – Literal translation.....	43
D. Seed law No. 15 (2013) – Literal translation.....	53
E. KRI Law No. 15 (2021) – Copy of original.....	59

A. Potato trade statistics in Iraq

Local production

With approximately 70.000 ha planted annually, potatoes are rapidly growing in importance in the Iraqi food basket. People consume potato mostly as fresh (ware) potato, but potatoes processed into chips and or French fries quickly catches up in importance.

Potato is grown chiefly in the northern uplands around Mosul and the central valley of the Tigris and Euphrates rivers near Baghdad. Some potatoes are also grown in the lower Tigris-Euphrates Valley, but production there is limited by saline soils. Conditions in both the uplands and the central plain permit two crops of potatoes most years. A spring crop is planted in early January to mid-February around Baghdad, two or three weeks later near Mosul, and somewhat later still in the highlands of the extreme northeast of the country.

In the last decennium, the maximum potato production was reached in 1999 due to land expansion, at 3,906 ton. Minimum production was reached in 2014 at 440 ton, connected to various factors such as a reduced crop productivity, lack of government policies, unstable macroeconomic environment, and the wars in Iraq in 1995, 2003, 2014, 2015 (Madlul et al, 2020). The latter factor has made Iraqi farmers reluctant to grow this crop, leading to a decrease in the productive area and consequently, a decrease in potato production.

It is possible that nonprice incentives may hinder the modification of price incentives in stimulating potato supply in Iraq (Madlul et al, 2020). Thus, nonprice factors may control factors that influence a decision-making process. Technological change causes shifting of the potato supply function by increasing domestic potato production.

Figure 5 shows an increase in potato price, but it is unclear how farmers respond to non-price and price factors. Research (Madlul et al, 2020) suggest that Iraqi potato growers may be averse to new technological solutions, which led to a low production response. However, interviews with Dutch seed companies indicate the opposite and that especially growers in KRI are very adaptive to new technological development and varieties).

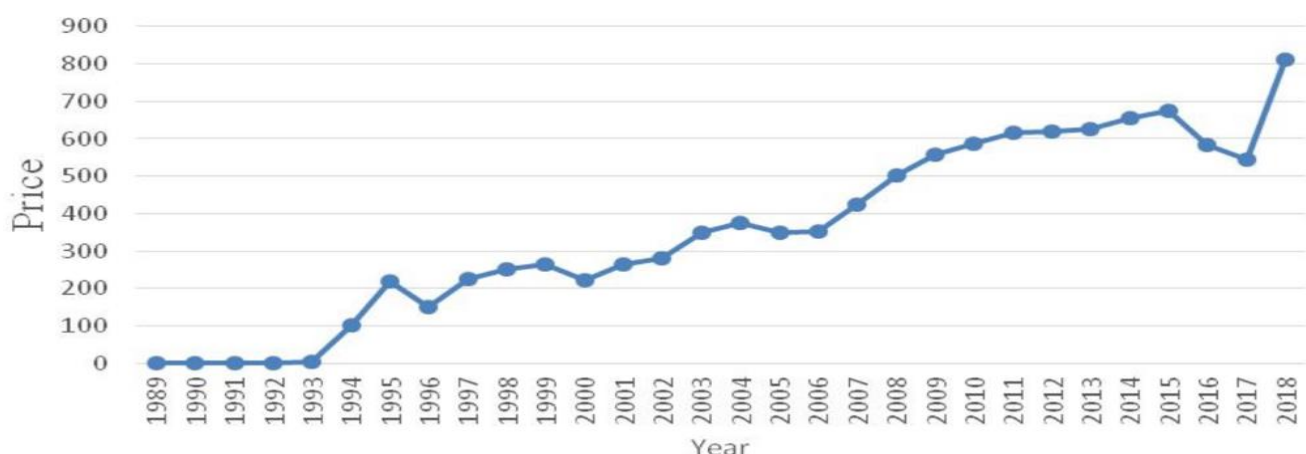


Figure 5. Iraqi price of potato crop in Iraq 1989-2018 (Madlul et al., 2017)

Import

Figure 6 compares the production of neighbouring countries for potato and other main vegetables.

Crop	Iran	Iraq	Jordan	Turkey
Wheat	2.0	2.9	1.0	2.9
Potatoes	32.1	26.6	26.0	30.9
Cucumber/gherkins	23.7	7.6	96.2	47.2
Eggplants	30.5	16.5	33.1	34.4
Tomatoes	39.6	16.9	67.5	65.4

Figure 6. Comparison of produce yields in four countries, 2017 (tons per ha) (Jongerden et al, 2019)

Iraq has a lower production regarding all crops (except wheat), but its production of cucumber, eggplants, and tomato is also relatively much smaller than potato and wheat. Regarding potato, this situation can be explained by looking at the market. (26 ton/ha is not bad!)

In the relatively small potato sector in northern Iraq, the market is protected by the company investing in potato production. The company guarantees farmers a minimum price. When there is a drop in market prices, farmers can sell their potatoes at a fixed price to the trader, for which the company has expanded its cold storage facility. Production is put back on the market as imports dry up and prices rise again. Market regulation thus results in price security, organized by the trader, which stimulates farmers to produce and results in high productivity (Jongerden et al., 2019).

Dutch seed commands about 75% of total European export to Iraq and in 2020 has grown to a total of 25.000 tons, with a value of approximately 1.5 million euros. See Figure 7.

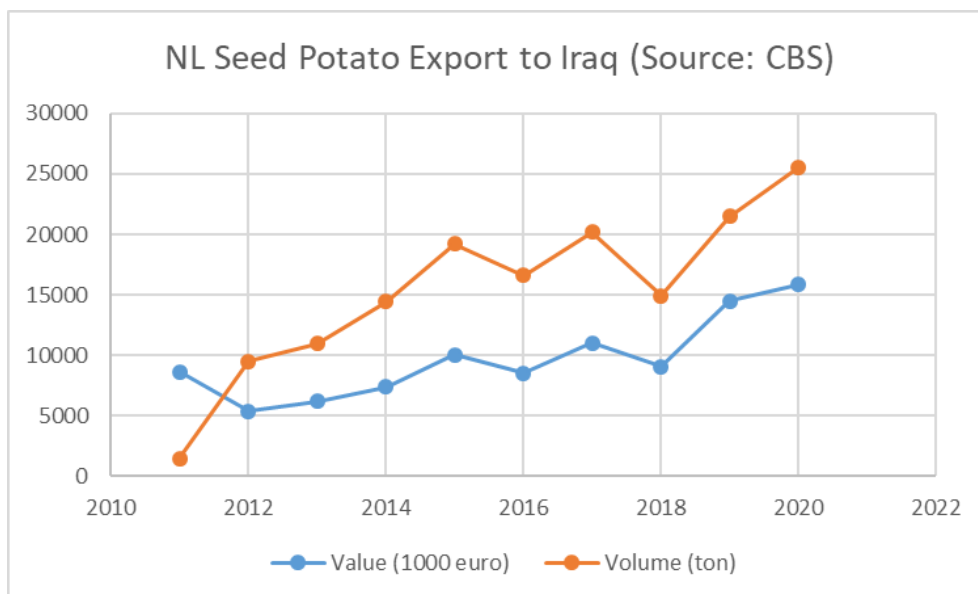


Figure 7. Dutch seed potato export to Iraq (source: NAO)

The potato sector in Iraq, particularly Kurdistan is growing. This growth of potato cultivation in Iraq goes hand in hand with increased import of seed potatoes. The major share of potato production is marketed as ware potatoes, but increasingly production is used for processing into chips or French fries. Processors need quality and reliable (contract) growers who in turn need quality seed potato. For that quality, Dutch companies have had trade relations with Iraq since the early 1990's, and some companies going back to the 1970's.

21,000 MT of class C1/C2 seed potato was exported. The Netherlands has a 75% total market share, most other import is from France, UK (Scotland) and Germany. For distribution, seed potato companies have local agents, who in turn can have one or more importers and distributors representing different parts of Iraq.

Seed potato production potential in The Netherlands is 800.000 MT. Further production in The Netherlands is limited due to available land space, and therefore further growth of seed potato class (C1, C2) should preferably come from licensed production in countries of destination. For the largest potato companies, trade should make gradual place for local investment and production ("local for local"). This is already done in for instance Iran and Kenya. This requires investment, but most companies are only ready to invest long-term under adequate variety protection covered under seed law provisions. Baghdad and KRI policies aim at agricultural growth through the increase of private investment in agriculture, yet despite such intentions, the current institutional framework is not conducive to private sector investment in agriculture (Jongerden et al, 2018).

For Dutch companies, this situation also makes the management of sustainable, reliable business relationships very important. The somewhat smaller companies (compared with larger companies like HZPC and Agrico) are more dependent on trade.

B. Vegetable trade statistics in Iraq

Local production

The total volume of fresh, processed, and frozen vegetables in 2022 was 1.573 million tonnes. This was almost the same as 2021 at 1.610 MT), but still less than pre-Corona volumes (1.688 MT). The projected production presented by Statista, Figure 8, illustrates a growing trend starting from 2023. In 2024 production (1.701 MT) overpasses the pre-Corona 2020 production.

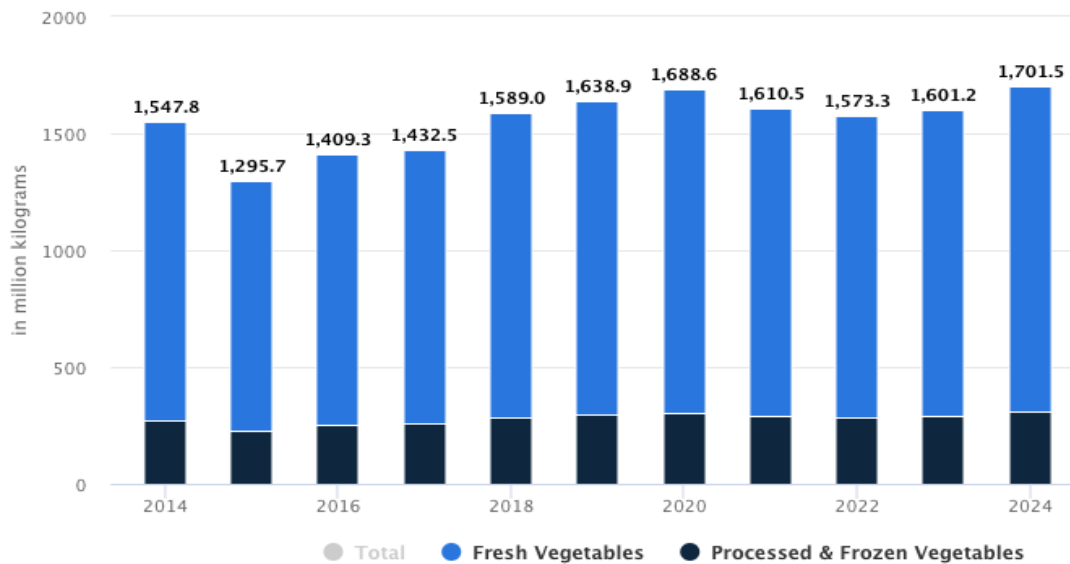


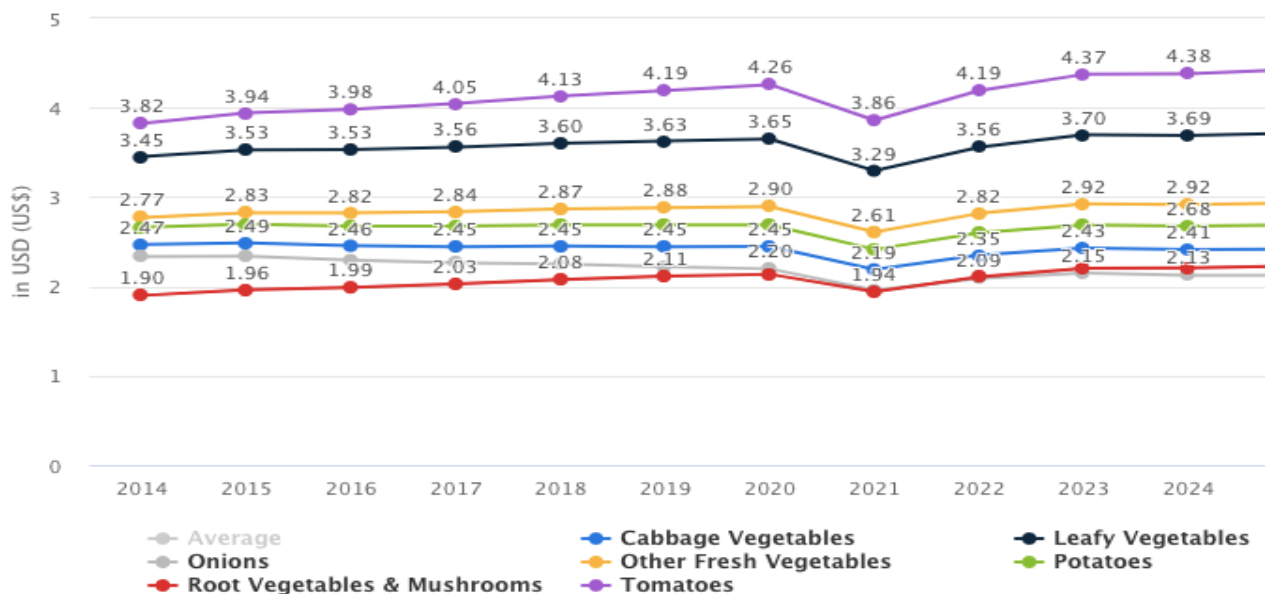
Figure 8. Volume for fresh and processed and frozen vegetables in Iraqi market (Statista, 2022)

In 2022 data, the production of fresh vegetables was 1.288 MT, with 0.284 MT from processed and frozen vegetables. The production trend for vegetables grown in Iraq for fresh consumption is shown in Table 6.

Table 6. Volume of fresh consumed vegetables produced per year in million kilograms (Statista, 2022)

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Cabbage Vegetables	83.2	70.1	76.7	78.3	87.0	89.8	92.4	88.3	86.2
Leafy Vegetables	135.5	113.2	122.8	124.5	137.8	141.8	145.8	139.0	135.7
Onions	150.9	128.4	141.8	146.4	164.9	172.7	180.5	173.8	171.3
Other Fresh Vegetables	480.1	401.5	436.1	442.6	490.1	504.5	518.8	494.4	482.6
Potatoes	115.5	97.2	106.3	108.6	121.0	125.4	129.7	124.1	121.6
Root Vegetables & Mushrooms	195.8	161.4	172.8	173.1	189.2	192.4	196.9	186.2	180.6
Tomatoes	111.9	93.1	100.8	101.9	112.5	115.5	118.4	113.0	110.4
Total	1,273.0	1,064.9	1,157.3	1,175.4	1,302.6	1,342.1	1,382.4	1,318.7	1,288.4

The USD sales price of various vegetables is shown in Figure 9.

**Figure 9. Fresh vegetables price per unit in US\$ (Statista, 2022)**

The average vegetable export price lies USD 3,031/ton in 2021, which is a 5.5% rise from 2020. See Figure 10. The average vegetables import price was USD 475/ton, a decrease of 2% against the 2020 (Indexbox, 2022). Vegetable production in Iraq is thus more than 6 times larger than import.

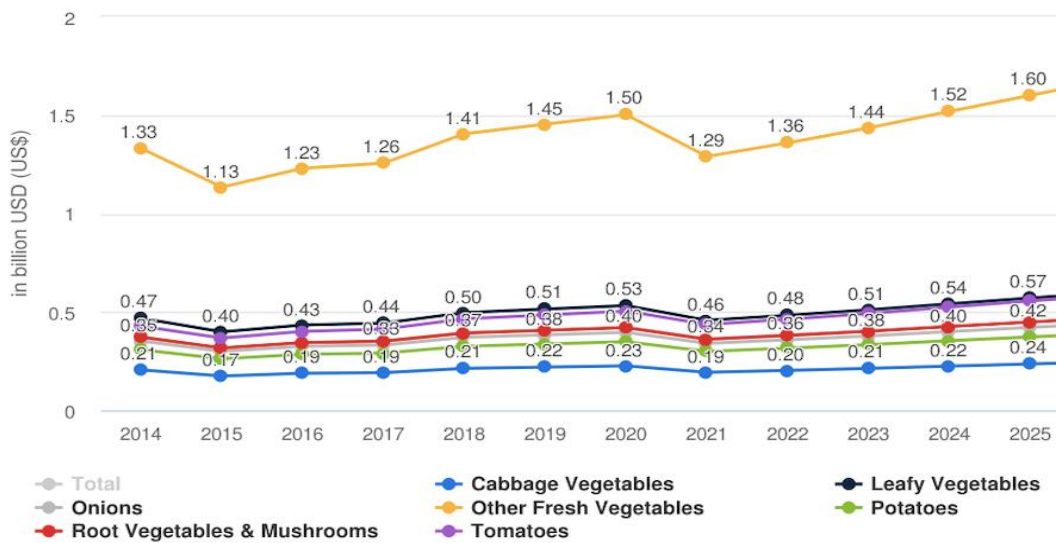


Figure 10. Revenue fresh vegetables per unit in billion US\$ (Statista, 2022)

Qatar, Saudi Arabia, and Turkey are currently Iraq’s largest export markets for vegetables, amounting to 89% of total exports (Indexbox, 2022).

Import

Fresh tomato is the crop with the highest import demand in Iraq (USD 183 million) of all fresh vegetables. Domestic production is relatively low, and demand is high. This represents great opportunities for Iraqi tomato industry. Iraqi domestic production of tomatoes and tomato products accounted for only 25% of domestic supply by volume in 2017 (FAOstat, 2022; Statista, 2020). The country shifts from one production area to another to supply quality and healthy tomatoes to its population all year round.

Consumer analyses, conducted by the International Trade Centre, reported the following advantages and disadvantages for fresh tomato production (Figure 11). Thus, tomato packaging quality, price and availability are areas for improvement in Iraq.

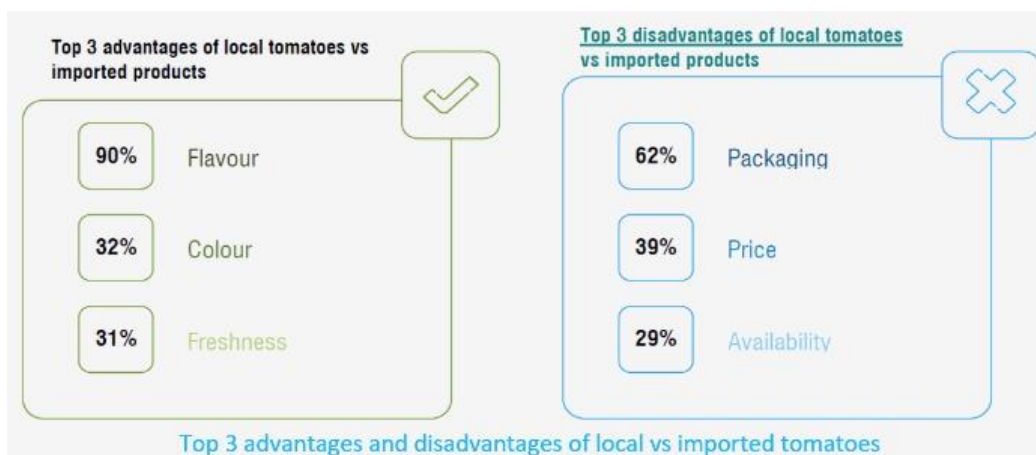


Figure 11. relative advantages and disadvantages of local and imported tomato according to Iraqi customers (International Trade Centre, 2022)

C. [Seed law No. 50 \(2012\) – Literal translation](#)

Based on what has been approved by the House of Representatives in accordance with the provisions of Article 61, Clause I, and Article 73, and Article 73, Bind III, of the Constitution

The President of the Republic decided on 27/8/2012 to issue the following law

No . 50 of 2012

Seed and Seed Law

Chapter I

Definitions and objectives

Article I.1 The following terms shall mean the crow of this Law. Meanings Expressed therein

Ministry: Ministry of Agriculture

Second: Minister : Minister of Agriculture

Third: The Council: The National Seed Council

Fourth: Seed Certification Control of seed quality, reproduction and production in accordance with the conditions and specifications adopted in the certification procedures

Fifth A - Variety: A group of identical plants within a species characterized by their qualities from any other group of the same type and the variety may be derived (new) or entered from outside Iraq after registration and approval (after approval) subject to the controls of seed certification in accordance with the provisions of this Law.

Sixth, meet the part where the plant reproduces, whether it is its seed, fruit, cutting, or tuberculosis.

Seventh, the degree of seeds is determined according to the technical specifications

Seeds of the nucleus: seeds or vegetative reproduction material produced by or under the direct supervision of the responsible plant breeder or the plant breeding mill responsible for the development of the variety and these seeds are used in the production of foundation seeds and are subject to the international standards adopted during the stages of their propagation.

Seeds of the foundation: seeds that directly produce seeds of the kernel and contain genetic qualities and cleanliness and the supervision of seed production is from plant breeders or a specialized scientific institution

Registered seeds: Seeds resulting from the cultivation of foundation seeds or other registered seeds and contain the genetic characteristics representing the variety and be of a high degree of genetic purity and cleanliness and these seeds are produced under the supervision of the competent authorities and are a source of production of certified seeds.

Certified seeds: Seeds resulting from the main seeds, registered seeds or from other certified seeds and must have the qualities represented for the variety in them and have a degree of purity and cleanliness special to distinguish them from commercial seeds and produced by official bodies directly competent or by contracting with distinguished farmers.

Twelfth - Gene Bank: A private institution concerned with the collection of most of the genetic genes and types of economic plants controlled conditions for the benefit of researchers

Thirteenth - Card Repels Y: Card TYM Maha Competent Authority

Fourteenth - Competent Authority: General Authority for the Inspection and Certification of Seeds

Fifteenth - Downloading the rank of the B seeds: The seeds were darkened by the ranks of DNA from those ranks for which I submitted an application.

Sixteenth - Frying standards: Prescribed materials applied to the cultivation of seeds and seeds approved by the competent authority

Informal seed sector: Farmers or any group of producing companies or planters who produce seeds or seeds for their own use or for use by other farmers.

Identification card: Any written mark or y-riah permanently fixed on the seed container includes the specifications of the seeds and seeds.

IX: Any written mark or r and irrigation that is fixed in the seed container or seeds and can be disposed of.

Nest Ron - Seed Card Authenticated: Seeds outside the specifications of certified seeds.

Official Directory of Items: The published list and in accordance with the provisions of the law includes the approved and eligible items forth certification program.

Twenty-second – Owner: Whoever owns, rents or entrusts the cultivation of the land.

Twenty-Three - Seed Analysis Certificate: The certificate in which the results of laboratory tests of the seeds are recorded.

Twenty-fourth - The consignment of seeds is a certain amount of seeds or seeds that are of one variety or whose fissure, date and weight are known.

Article 2 - This Law aims at the following:

First: Regulating and encouraging the production of seeds and seeds from the public or private sectors or from both in accordance with the provisions of this Law.

Second: Ensure the registration, approval and protection of new agricultural varieties derived from researchers of the Republic of Iraq, including only previously approved registered varieties, and provide them in sufficient quantities in a timely manner to be provided to farmers at reasonable prices and in appropriate locations, and secure special procedures for the certification of seeds and salaried liquid.

Chapter II

National Seed Council

Article 3 – First: A Council called the National Seed Council shall be formed in the Ministry and shall consist of:

A. Minister as President

B. Senior Undersecretary and Vice-President

C. Representatives of the following entities, not less than one of whom is a member of the Director General

- 1 Ministry of Finance
- 2 Ministry of Planning
- 3 Ministry of Science and Technology
- 4 General body for seed inspection and certification
5. General Authority for Agricultural Research
6. Authority for Extension and Agricultural Cooperation
- 7 General Authority for the Prevention of Plantations / Department of Agricultural Quarantine
8. Dean of the Faculty of Agriculture at the University of Baghdad
- Mesopotamian State Seed Company 9

D. A representative of seed producers as a member

E. Representative of farmers as a member

A representative of seed production companies or centres in the private sector as a member

Second : The Council has a decision chosen by the President of the Council from among the employees of the Ministry

Article 4

First: The Council shall hold its meetings at the invitation of its President at least once every thirty days and in the presence of at least two-thirds of its members, provided that they include the Chairman of the Council or his deputy.

Second: - The decisions and recommendations of the Council shall be issued by a majority of the votes of those present, if the votes are equal, the side with which the President voted shall prevail.

Third: The Deputy Speaker of the Council shall replace the President in his absence

Fourth : The President of the Council may use experts and specialists from the public and private sectors to attend its sessions and shall not have the right to vote when taking decisions

Fifth: The remuneration of the experts and specialists hired by the Council shall be determined in accordance with the law.

Article 5: First: The term of membership in the Council shall be limited to (2) years, renewable years.

Second: The Minister of Agriculture, in coordination with the competent Minister, may terminate the membership of any member of the Council if he finds that he is incompetent.

Chapter III

Functions of the Council

Article 6 The Council shall assume the following functions:

First, to present advice to the Minister on issues related to the development of strategies for the national seed policy.

Second, attracting local and foreign investments in the field of seeds

Third, supporting the private sector for the development, reproduction, marketing and export of seed varieties

Fourth: Preparation of research and studies related to the seed industry

Fifth, the approval of procedures and criteria for certifying seeds in accordance with the initial criteria

Sixth, the formation of committees to resolve the disputes of the seed industry

Development of the resources of the Seed Support Fund

Eighth: Granting licenses for the construction, installation and operation of seed cleaning plants

Ninth, the Council shall form subcommittees whose members shall be from inside and outside the Council and shall authorize them with some of its functions and powers

Chapter IV

Seed Certification and Propagation

Article 7 The General Authority for the Inspection and Certification of Seeds in the Ministry of Agriculture shall assume the following tasks:

A- Preparation of the official directory of varieties for seeds and seeds

B- Publish a list of approved and eligible varieties for the seed certification program in Iraq

C. Maintain records of registered and accredited varieties with the deposit of appropriate quantities of seeds in gene banks.

Article 8 Varieties registered and approved in the Official Varieties Manual shall be eligible for the seed certification program in Iraq according to criteria issued by instructions issued by the Minister.

Article 9 First, the seeds of the varieties approved in the Official Manual of Varieties shall be subject to mandatory certification procedures.

Second, the seeds of varieties produced from the informal seed sector shall be subject to mandatory certification procedures in the event that they are not traded.

Thirdly, the seeds provided for in clause (II) of this Article shall be subject to mandatory ratification procedures if they meet the conditions stipulated in Article (11) of this Law.

Article 10 The technical specifications of approved seeds and seeds that are not subject to ratification shall include the following:

First: Minimum limits for germination ratios, moisture, state of health, genetic and physical purity

Second: The form and content of the identification cards that must be installed on the seed consignments of the varieties concerned

Article 11 The production of seeds shall require the approved variety for a specific crop as follows:

First: To be of known origin

Second: Produced from a product of seeds or seeds licensed in accordance with the provisions of this Law

Third: Produced on the appropriate land provided for in the official Directory of Varieties

Fourth: Produced and planted in accordance with the technical conditions approved by the Council

Fifth: The source of its production and rank should be in accordance with the standards adopted in the Council

Sixth: Tested in an official seed laboratory in accordance with the requirements approved by this Law

Article 12 - The competent authority shall determine the rank of the approved variety and shall grant the seed producers a certificate of certification with specific specifications containing the details of the certification and its entry in the register of certified seeds.

Article 13 - First: Seed inspectors shall inspect fields, seed purification laboratories and seed sales offices, take samples and conform them with the approved specifications and issue field certificates with laboratory specialization certificates for seed ranks in accordance with the standards approved by the Council

Second: The packaging of samples taken from seed inspectors shall be tightly sealed with their indication in accordance with the approved requirements, and sent to an official laboratory for testing within the period specified under this Law.

Article 14 - First: The Ministry shall approve the laboratories of the competent authority and its branches in Iraq as accredited laboratories for the purposes of seed testing

Second: The Minister may, on the recommendation of the Council, cancel the accreditation of any laboratory for the examination of seeds under this Article for justified reasons considered by the Minister

Thirdly, the necessary methods, procedures, technical means, terminology and documents approved internationally and recommended by the competent authority shall be used to examine and determine the quality of the seeds.

Article 15 - First: Seeds and seeds shall be subject to the process of purification and fogging in the authorized laboratories prepared for this purpose in accordance with the provisions of this Law.

Second: Plants for the purification of seeds and seeds shall be established on the basis of a permit granted by the Council and registered with the Ministry.

Third: The laboratory equipment provided for in clause (II) of this Article shall be subject to periodic inspection.

Fourth: The Minister may cancel the approval of any of the seed cleaning plants for justified reasons considered by the Council

Article 16 - First: The authorized purification plant shall give notice to the competent authority of the completion of the purification process

Second: The laboratory prepares the consignments for examination and auditing and to be arranged in an orderly manner to take original samples from them

Article 17 - First: Samples of seeds and purified seeds shall be submitted to the official laboratory for laboratory testing and the results shall be submitted to the competent authority.

Second: The competent authority shall issue certification cards for the rank accepted in the field inspection.

Third: The competent authority shall grant uncertified seed cards when the certification criteria are not met.

Fourth: The competent authority may relegate the rank of seeds or seeds and issue certification cards for a lower rank lower than the rank accepted in the field inspection.

Fifth: The seed producer or his legal authorized person who lowers the rank of his seeds more than one degree or is rejected as certified seeds may object to the decision to download the rattle or the decision to refuse to the minister within 15 fifteen days from the date of notification of the rejection.

Chapter V

Trafficking in seeds and seeds

Article 18 - Trafficking and trading in seeds and seeds shall be subject to the following procedures:

First: Submit an application from the producer, exporter or importer to the competent authority to obtain a license for the production, export or import of seeds and seeds

Second: Submit samples of seeds or seeds to the competent authority to conduct laboratory tests on them before production, export or import and that the Council approves that they meet the standards of quality and quality

Article 19 - The competent authority may, upon request from the applicant for leave, send a seed inspector to inspect the field, land or warehouse or send seeds or seeds built in the application to verify their specifications before granting the leave

Article 20 - First: The approval of the license shall be granted to the producer, exporter or importer of seeds or seeds by the National Seed Council and after the recommendation of the competent authority on the request provided for in clause (I) of Al-Majah (18) of this Law and shall be renewable every (3) three years.

Second: The leave includes the following:

Name and address of the product, exporter or importer of seeds and seeds

B- The location of the farm determined by the registration system of seed producers

C. Variety and rank of seeds planted

D. Field and laboratory inspection reports

Article 21 - First: If the competent authority rejects in its recommendations the application for the license of a producer, exporter or importer of seeds or seeds, it shall provide a written justification to the applicant during the same agricultural season.

Second: Whoever rejects his application may object to the rejection decision before the Minister within 30 thirty days from the date of notification of the rejection.

Article 22 - The producer, exporter or importer of seeds and approved seeds shall be obliged to:

First: Ensure that facilities are provided to seed inspectors to conduct field inspection or any other inspection at the times determined by the competent authority

Second: Allow seed inspectors to take seed samples to be sent to an official laboratory for laboratory testing.

Third: Submit the consignment of seeds or seeds after harvesting to the seed purification laboratory for the purpose of purification and processing

Fourth: Follow all the requirements prescribed by the competent authority

Article 23 - The competent authority shall maintain a register of the names of importers and exporters of seeds and seeds

Article 24 - The importer or exporter shall take into account the following:

First: The import or export license must be valid

Second: The types, varieties and country of origin of the imported or exported seeds and seeds must be affixed to a certificate issued by an official body recognized by the competent authority and accompanied by the consignments of seeds and seeds when they are entered into Iraq or taken out of Iraq.

Third: The documents and identification cards of seeds or seeds and their packaging must meet any other requirements prescribed by the Council

Fourth: Submit a notification to the Council about any genetically modified organisms in the seeds or seeds proposed for import and the nature of this amendment.

Article 25 - The shipment of imported seeds or seeds shall be subject to the following conditions:

First: Examine them in the laboratories of the International Union for Seed Testing (ISTA) or under equivalent international examination rules and are certified seeds in accordance with the laws of the country of origin provided that the certification system in the country of origin is recognized by the Ministry.

Second: To import from an importer of seeds or seeds licensed

Third: To be examined in the official laboratory of the competent authority in accordance with the provisions of this Law.

Fourth: Its production shall be in accordance with the similar conditions and standards specified in instructions issued by the Minister.

Fifth: To be packed inside tight packaging and conform to the requirements of seed packaging

Sixth: The shipment of imported seeds and seeds must be accompanied by a certificate of origin, a certificate of laboratory examination and a certificate of health safety with certification cards on it.

Article 26 - First: The imported seeds or seeds must be of approved varieties in Iraq

Second: The Minister may, in case of emergency, upon the proposal of the Council, allow the import of a limited amount of seeds of varieties that are not approved in Iraq and are accredited by the importing countries for a specified period of time, provided that they are from an agricultural environment similar to Iraq's climatic conditions.

Article 27 - Imported seeds and seeds shall be returned to Iraq in violation of the provisions of this Law or destroyed, with the exception of small quantities of them imported for research purposes.

Article 28 - The consignment of seeds and seeds to be exported to an official laboratory shall be submitted for examination and determination as to whether they meet the requirements of the importing country and meet other conditions of export.

Article 29 - First, the license issued under the provisions of this Law to a producer, exporter or importer of seeds or seeds shall be revoked in one of the following cases:

Failure to comply with the provisions of this Law

(b) If he relinquishes the possession of parts or is stripped of the ownership of some or all of the land specified in the application submitted under the provisions of this Law.

C. Death or loss of the person concerned

d- If the seed product or the licensed person fails to provide seeds or seeds in accordance with the controls specified by the competent authority in any of the field inspection or laboratory examination and if he fails to maintain a clear isolation of the seed consignments or seeds between harvesting and purification for two consecutive agricultural seasons or three separate seasons

Second: Upon cancellation of the leave in one of the cases provided for in paragraphs (a), (b) and (c) of clause (I) of this Article, the successor shall have the right to follow up the cultivation of the crops existing at the time of cancellation and may apply for a leave within 180 hundred and eighty days and this request shall be considered a new application.

Third: The product of seeds or seeds licensed to abandon the license issued in accordance with the provisions of this Law upon written request

Article 30 - The Ministry may return the cancelled license of the producer, exporter or importer of seeds or seeds by proposal of the competent authority and the approval of the Council after being convinced of the disappearance of the reasons for the cancellation.

Chapter VI

Seed and Seed Inspector

Article 31: First: The Minister shall authorize the competent authority to do the following:

Determine the inspector of seeds and seeds from the employees of the Ministry to implement the provisions of this Law

B- Contracting with the inspector of seeds and seeds from those with competence from outside the Ministry

(c) Issue a certificate of authorization to each seed inspector to be submitted upon request from any person who objects to the exercise of his duties under the provisions of this Law.

Second: The inspector of seeds and seeds must possess the technical qualifications specified in instructions issued by the Minister.

Almaga 32. The seed inspector shall exercise the following functions:

First: Inspection of fields, storage facilities and offices related to the transport and storage of seeds and seeds intended for sale

Second: Inspection of the fields of cultivated crops for seed production and seeds whether they comply with the approved field standards and examine them in an official laboratory

Third: Drawing samples of seeds and seeds and testing them in an official laboratory

Fourth: Inspection of any building dedicated to the retention of seeds and seeds at appropriate times

Fifth: Open any container containing seeds of seeds and withdraw samples from them for testing

Sixth: Provide a written notice to the owner of the seeds and seeds to abide by the following:

A- Not to destroy or dispose of seeds and seeds that do not conform to technical specifications not more than 30 thirty days

B- Remove any defect in seeds and seeds and send them back for inspection within a period determined by the inspector and when the defect is not removed, it shall be disposed of in accordance with the law.

C. Seizure of seeds and seeds for the provisions of this Law

(d) Examining and seizing any records or documents related to seed and seed consignments and seeds if they constitute evidence of violation of this Law.

Article 33: The inspector of seeds and seeds shall, when making a seizure, be bound by the following:

First: Giving the owner of the seeds a receipt supporting the seizure or receipt of seeds and seeds

Second: Notify the competent authority within 14 fourteen days from the date of placing the reservation

Third: Return the seized material upon completion of the investigation unless it is decided to destroy it

Chapter VII

penalties

Article 34 - First: Anyone who commits one of the following violations shall be punished by a fine of not less than 250,000 two hundred and fifty thousand dinars and not more than 5,000,000 dinars or by imprisonment for a period not less than 10 ten days and not more than six months.

(a) Sale of certified seeds or seeds that are not packed with containers or do not carry identification cards indicated in accordance with this Law.

(b) The use of a certified word or any word synonymous with a description or designation of seeds or seeds not certified in accordance with the provisions of this Law for the purpose of sale.

(c) A person who identifies himself as a licensed seed or seed importer who does not possess a valid license issued under this Law.

d. Importing seeds or seeds into Iraq that do not conform to the approved requirements or selling illegally imported seeds

Export of seeds or seeds from Iraq that do not comply with the approved requirements

(f) Causing or permitting the submission of samples of seeds or seeds for examination that are not representative of the consignments taken from them or tampering with samples taken in accordance with this Law.

(g) Production of seeds or seeds with a crop that is all or part of it intended to be seeds of one of the ranks of propagation of the nucleus or foundation, registered, certified or special rank without the approval of the Ministry

(h) The circulation of seeds or seeds in Iraq covered by this Law without examination by the competent authority.

i. Circulation of seeds or seeds showing their unsuitability for cultivation or the expiry of the period specified for their suitability for cultivation

(j) Modify, distort or remove any identification card, certificate, original or official record issued under this Law.

K. Disclosure of information without official transfer

Obstruction or objection of the seed inspector in the exercise of his official functions under this Law, including refusing to provide information or documents or providing false or misleading information

Second: In addition to the penalties provided for in clause (I) of this Article, the Court may:

A. Confiscation or destruction of seeds and related crops

B- Cancellation of the license of the producer, exporter or importer of seeds and seeds

Third: The party violating the provisions of this Law shall bear the payment of the value of the damages for which it is responsible in accordance with the legislation in force.

Fourth: The owner or importer shall bear the cost of processing or destroying seeds, seeds or any other costs when violating the provisions of this Law.

Chapter VIII

General and final provisions

Article 35 - First: The decision or result issued by the competent authority may be appealed after 15 fifteen days from the date of notification to the same authority.

Second: The decision provided for in clause (I) of this Article may be appealed to the Minister within 15 fifteen days from the date of notification thereof.

Third: The Minister shall form a committee of 3 three experts to be selected from the roster of experts drawn up annually by the Council from those with experience in seed and seed affairs to study the objection.

Fourth: The committee shall investigate the subject of the objection and submit recommendations to the minister within 15 fifteen days from the date of referral of the matter for approval

Article 36 - The remuneration of experts shall be determined by instructions issued by the Minister, and the objector shall be obliged to perform them to the experts when submitting his objection and if the decision of the Committee is issued in favour of the objector, it shall be returned to him.

Article 37 - The Minister may issue instructions to facilitate the implementation of the provisions of this Law

Article 38 - This Law shall be published and shall be effective 90 puma after the date of its publication.

Jalal Talabani

President of the Republic

Positive causes

For the purpose of regulating the provisions on seeds and seeds and limiting the organs concerned with them and the mechanism of their production and ratification with them in a manner consistent with the contexts adopted globally, this law has been legislated.

D. [Seed law No. 15 \(2013\) – Literal translation](#)

In the name of the people

Presidency of the Republic

Based on what was approved by the House of Representatives in accordance with the provisions of Article 61, Clause I, and Article 73, Clause III of the Constitution.

The President of the Republic decided on the date of

Promulgation of the following law

No. 15 of 2013

Law on the Registration, Accreditation and Protection of Agricultural Varieties

Chapter One

Definitions

Article 1 The following terms for the purposes of this Law shall have the meanings set forth therein.

First of all, the National Committee for the Registration, Accreditation and Protection of Agricultural Varieties

Second, the competent certification body - the Department of Seed Inspection and Certification

Third, the variety is a group of pure plants that are genetically similar in characteristics that distinguish the variety and that can be distinguished by their external appearance from the rest of the varieties of the same species.

Fourth, the breed is an offspring with identical genes in their composition (plants or seeds) resulting from self-pollination for several generations with selection.

Fifth, the hybrid offspring resulting from the taxation of pure genetically differentiated parents characterized by the power of growth and the result of other qualities

Sixth, the producer of the variety (the deductor) is a natural or concerned person who develops a new genetic structure (breed, variety, hybrid)

Seventh Registration The process of documenting data related to the new genetic structure (breed, class, hybrid) to stabilize its distinctive qualities to ensure the rights of the inferred

Eighth: Adoption of the process of releasing the strain as a new variety of self-pollinating crops or varieties and hybrids of mixed crops pollination for agricultural purposes and for the recommended areas after verifying its agricultural efficiency under the bases of approval of varieties

Ninth, the seeds of the kernel are the seeds that the jam has developed and the first ring for the multiplication of the variety and these seeds are usually owned only by the jam

Tenth, the seed of the foundation is the seeds produced from the propagation of the seeds of the kernel and under the supervision of the competent certification authority from the non-breeder, and the jam can be used when there is a difference in determining the specifications of the seeds of the variety

11 Bank of Genetic Resources - the entity that is linked to the Ministry of Agriculture and collects the genetic resources of plants and preserves them in appropriate storage conditions for the purpose of preserving their vitality and qualities and is responsible for their sustainability

12 Protected Variety - The Item that has been registered in accordance with the provisions of this Law

13 Plant genetic source - genetic resources that represent the production of sexual or asexual reproduction, which includes all non-sexual resources and fixed genetic species, whether produced by natural selection or by one of the methods of breeding and hybridization, and has elements (stability, differentiation, homogeneity)

14 Bulletin - Bulletin of agricultural varieties issued by the Committee and annual

15 Derived varieties - are varieties that are derived from plant breeders from existing varieties or from the style of an ancient environment or from local varieties or certified introducers in agriculture, and their derivation represents genetic improvement or purification

Chapter Two

National Committee and its Functions

Article 2 - First: The committee shall be formed under the chairmanship of the Minister of Agriculture or his authorized person and the membership of a number of experienced and competent persons nominated by the President shall not be less than 6 members and not more than 10 ten members.

Second: The Committee shall meet at least once a month at the invitation of its Chairman.

Thirdly, the quorum of the Committee's meeting shall be completed in the presence of the majority of its members, including the Chairman, and its decisions shall be taken by a majority of the members of the Committee, and if the votes are equal, the side with which the Chairman is with him shall prevail.

Fourth: The Chairman of the Committee may host any of those with experience and competence when necessary

Article 3 - The Committee shall undertake the following:

First: Registration and approval of new breeds, varieties and agricultural hybrids produced from the product of the variety, provided that it provides a description of the variety provided that it provides a description of the variety to be registered or approved or both includes the most important phenotypic and functional qualities and any other qualities that distinguish it from other agricultural varieties of the same species, as for the synthetic and hybrid varieties, their genetic origins must be fixed and can be kept secret if the producer of the variety so wishes.

Second: The adoption of the variety or hybrid by revealing the genetic source on which it relied in the deduction and must prove that it obtained the genetic source by a legitimate way and otherwise will bear legal responsibility in accordance with the law

Third: Adoption of the new variety or hybrid that is characterized by stability, homogeneity and excellence and has a high genetic value and added agricultural or new industrial

Fourth: Registration, accreditation or both for the new breed, variety or hybrid under an application submitted by the producer of the variety to the Committee with all the required data according to the form prepared for this purpose and for a period of not less than 60 sixty days from the date of planting

Fifth: Obliging the producer of the breed, variety, or hybrid to provide a quantity of seeds determined by a decision of the committee and keep part of them in the bank of genetic sources and the remaining part to be used for the purposes of experiments verifying the variety

Sixth: Assign specialists to subject all items and hybrids submitted for registration or accreditation (or both) to experiments to verify the extent of their stability, homogeneity, distinction, and industrial and agricultural value.

Seventh: Documentation of the breed, variety or hybrid for registration or accreditation (or both) provided that it includes the specifications and results of the verification experiments and its evaluation as well as the decision of the committee to accept or reject registration or accreditation (or both) with an indication of the reasons for the refusal

Eighth: Publish the registration or accreditation data, instructions and controls in the bulletin issued by the Committee

Ninth: Prevention, acceptance, restriction, import, export, sale, cultivation, propagation, dissemination or transfer of any genetically modified variety or hybrid

Article 4.

First: The product of the breed, variety or hybrid shall be notified of the decision of the Committee in writing and within a period of 30 thirty days from the date of issuance of the Committee's decision.

Second: The product of the breed, variety or hybrid may object to the decision of the Committee within 30 thirty days from the date of its notification, and the Minister's decision shall be subject to appeal to the competent court of first instance within 30 thirty days from the date of notification.

Article 5 The breed, variety or hybrid shall be named after the approval of its adoption as follows:

First: The designation should be from a word or a set of words and numbers or a set of letters and numbers, taking into account the following:

The name should be simple, short, easy to pronounce and not be confused in its spelling

B- It is preferable not to use numbers and symbols as names

C. Good qualities in the variety should not be overstated as they may not be accurate when introducing new varieties.

d- After farmers stop planting one variety, their name should not be used on another for a period of at least 10 years.

Second: It is not permissible to register a type label if:

a) Contrary to the provisions of the law

(b) Contrary to public order and morals.

c. misleads or causes error with respect to the characteristics, value, or definition of the variety

Article 6 A model of the seed, breed or hybrid registered approved shall be deposited with the Bank of Genetic Resources.

Article 7 The Committee shall collect test fees for the breed, variety or hybrid submitted for registration or accreditation or both, provided that a percentage of the test fees shall be allocated to the testing bodies and in accordance with instructions issued by the Minister.

Article 8 The use of the variety or hybrid shall cease by a decision of the Committee in the light of technical reports submitted by the bodies accredited to the Committee if the following is proven:

First, the approved variety or hybrid is no longer distinctive, fixed, or homogeneous with genetic traits.

Second, the approved variety or hybrid has become less agricultural, industrial or economic value than a new variety with the same specifications.

Article 9 It is not permissible to:

First: Propagation of seeds of the variety or hybrid and its development if they are certified

Second: Introduction and import of seeds of a variety or hybrid unless they are certified

Article 10 - The right to register, accredit, or both for the breed, variety or hybrid shall be in accordance with the following:

First: For the detector to which the rights devolve

Second: For all persons involved in its deduction if it is the result of their joint effort, provided that the registration is carried out in accordance with their agreement

Third: For the inductors if it is verified that each of them is independent of the other

Fourth: To the employer, if the worker derives it as a result of the execution of an employment contract, under which he commits himself to complete this deduction unless the contract stipulates otherwise.

Article 11: After registering the breed, registration, accreditation or both, the breeder acquires the right to protect it by preventing third parties from carrying out the following works with regard to the breeding material of the protected variety for commercial purposes.

- A. Production (Propagation)
- B. Preparation for propagation purposes
- C. Offer for sale or other marketing work
- D- Export and import
- E. Storage of any agricultural purposes

Second: The consent of the breeder, variety or hybrid to perform the acts provided for in clause (I) of this Article shall be obtained in respect of products harvested or picked, including whole plants or plant parts, obtained through the use of reproduction materials.

Third: The provisions of clauses (I) and (II) of this Article shall apply to the following categories:

(a) Varieties derived mainly from the protected variety, if this variety is not derived mainly from another class and the variety is mainly derived from another class in the following cases:

1- If it is derived mainly from the original variety or from a variety derived mainly from the original variety and retains the total characteristics resulting from the genetic structure or from the group of genetic structures of the original variety

2- If it clearly distinguishes itself from the original variety

3. If it is identical to the original variety in terms of its basic characteristics resulting from the genetic structure or from the group of genetic structures of the original variety except for the differences caused by derivation

B. Varieties that are not easily distinguishable from the protected variety

c. Items whose production requires the repeated use of the protected variety

Derived varieties may be obtained mainly as a result of the selection of natural or stimulating variables, or by the selection of a different unit from the plants of the original variety or by reverse hybridization.

The performance by third parties of any of the acts provided for in clauses (I) and (II) of this Article shall be deemed an infringement of the rights of the derivative of the protected variety falling under the penalty of legal liability, if he knew or should have known that he was infringing on the rights of the deductor of the protected variety.

Article 12 - Does not include the right of the detector

First: Works carried out by individuals or companies from the public sector, the private sector and state departments for personal, non-commercial purposes, on a trial basis or in order to develop other new varieties or hybrids.

Second: Works relating to the protected classes or substances of any class or derived classes from these substances which has sold or marketed, by the person who derived these classes by himself or with his consent, unless such works involve the following:

A. Additional reproduction of the protected variety

(b) Export of the materials of the variety that permit its reproduction to a country that does not protect the species of races or plant species to which the variety belongs, unless the purpose of the export is consumption.

Article 13 - The producer is prohibited from continuing to produce the variety if the protected variety shows a harmful effect on the natural environment or the integrity of the biological diversity of the country or appears to it when used in contradiction with the values and beliefs of the society

Article 14 - The period of protection of the breed, variety or hybrid shall be 10 years starting from the date of filing the application for its registration, except for the varieties of trees and vines, so that the period of protection shall be 20 twenty years.

Chapter Three

Transfer, mortgage and seizure of the breed, variety or hybrid

Article 15 - First, all or part of the rights of the derivative may be transferred to third parties with or without compensation, mortgaged or seized

II. The right to the protected variety is transferred to heredity.

The procedures for the transfer, mortgage, seizure and other legal acts of the protected variety shall be determined by instructions issued by the Minister.

The transfer of ownership of the breed, variety or hybrid shall not be invoked, nor shall it be demonstrated or withheld against third parties except from the date of registration or reliance or both.

Chapter IV

License to exploit breed, variety or hybrid

Article 16 - First: The deductor may prevent third parties from licensing the exploitation of the breed, variety or hybrid protected by virtue of an editorial contract to be submitted to the committee provided for in clause (I) of Article (2) of this Law.

The Minister may, at the request of the Commission, grant the non-breeder, with the consent of the developer, a license to exploit the protected breed, variety or hybrid if the public interest so requires, and in this case the deductor may obtain fair financial compensation taking into account the economic values of the license from an impartial committee formed for this purpose.

The Minister may, at the request of the inferrer, revoke the license provided for in clause (I) of this Article if the licensee breaches any of the conditions of the license or the reasons that led to its granting are removed, and such revocation shall not preclude the preservation of the rights of those related to this license.

Chapter Five

Final provisions

Article 17 - First: The deductor of the protected variety may institute civil proceedings before the judiciary against anyone who has infringed or infringed on his rights to the breed, variety or hybrid protected in accordance with the law

The competent court of first instance shall have jurisdiction to hear cases arising from the application of the provisions of this Law on an urgent basis.

Article 18 - Articles (51) to (79) of the CPA Order No. 81 of 2004 repeal the Law on Patents, Industrial Models, Undisclosed Information, Integrated Circuits and Plant Varieties

Article 19 - The Minister may issue instructions to facilitate the implementation of the provisions of this Law

Article 20 - This Law shall be implemented from the date of its publication in the Official Gazette.

A. Jalal Talabani
President of the Republic

D. Khazir al-Khazaei

Obligatory causes

For the purpose of scientific and knowledge documentation in the breeding and improvement of plants in line with international conventions of agricultural varieties, and to preserve the efforts and rights of breeders and those in charge of breeding and genetic improvement from a legal point of view. This law was enacted.

E. [KRI Law No. 15 \(2021\) – Copy of original](#)**Waqaye'i Kurdistan****Republic of Iraq****Kurdistan Region****The President****Decision****No. (2) of 2022**

According to the authority we have been given in Paragraph **1**, Article **10** of Kurdistan Region amended Presidency Law No. (1) of **2005** and based on the legislation of Kurdistan Parliament in the usual meeting No. **6** on **09/11/2021**, we decided to pass:

Law No. (15) of 2021

The law of producing and importing seeds and seedlings, and registering, confirming, and preserving agricultural species in Kurdistan Region-Iraq

Article (1):

For the purposes of the provisions of this law, the following terms convey the provided meanings:

First: Region: Kurdistan Region – Iraq

Second: Ministry: The Ministry of Agriculture and Water Resources of Kurdistan Region

Third: Minister: The Minister of Agriculture and Water Resources

Fourth: General Directorate: The General Directorate of Agricultural Research and Guidelines of the Ministry

Fifth: General Directorate of Agriculture: The General Directorates of Agriculture in governorates

Sixth: Directorate: The Directorate of Producing and Developing Seed in the General Directorate of Agricultural Research and Guidelines

Seventh: Seed: Refers to a plant part which is used to develop and reproduce the plant, such as wheat, barley, lentil, onion, sprout, potato, and any other sorts.

Eighth: Grade: Refers to seed grade which is determined according to technical specifications and genetic purity.

Ninth: Breeder seed: Refers to that seed which is produced in a very limited amount under direct monitoring of a plant breeder in the Directorate of Research or in universities.

Tenth: Foundation Seed: Refers to a seed which is produced from the breeder seed through agricultural research or by companies specialized in agriculture, and it has the highest level of genetic purity compared to registered or trusted seeds.

20/01/2022

No. 277

Waqaye'i Kurdistan

Eleventh: Registered Seed: Refers to a seed which is produced from planting a foundation seed or another registered seed through agricultural research or by the eminent farmer, and it has a high level of genetic purity and specifications.

Twelfth: Species: A group of similar pure plants in terms of genetic which are recognized from other species of the same plant through their special specifications.

Thirteenth: Seedling: Refers to a modified permanent plant which is cultivated and grows in a greenhouse for the purpose of business and trading in agricultural activity.

Fourteenth: Trusted seed: Refers to a seed which is produced by the eminent farmer from the foundation seed, registered seed, or another approved seed, and it has similar genetic specifications as the cultivated species.

Fifteenth: Agricultural species leader: Refers to a list including the name of the approved agricultural species, which is issued by the national committee of registering, approving, and preserving the agricultural species.

Sixteenth: ISTA: Is an independent nonprofit agricultural organization which focuses on developing seeds and annually issues new relevant regulations and guidelines.

Seventeenth: Company: Refers to a company founded according to valid law which needs to have authority to produce and/or import seeds.

Eighteenth: High committee: Refers to a special committee for registering, approving, and preserving agricultural species and developing, growing, and distributing appropriate seeds in Kurdistan Region and Iraq, having its center in Erbil.

Article (2):

According to the provisions of this law, producing seeds and seedlings and its procedures are through formal permit.

Article (3):

The conditions to obtain formal permit of producing seeds and seedlings and its procedures:

First: Submitting an application to the directorate so as to obtain seed and seedling production permit.

Second: The application consists of:

1. The producer's name and address
2. The farm location
3. Type, species, and grade of the seed and seedling

Third: Submitting the ownership document or the right to operate in or leasing the land.

20/01/2022

No. 277

Waqaye'i Kurdistan

Fourth: The directorate needs to promote the company's application for the General Directorate so as to give the required permit.

Fifth: The General Directorate should decide to either approve or reject the application within thirty (30) days from the application submission date. In case of failure to respond within the specified duration, the application is regarded to be approved.

Sixth: If the application is not approved, the reason needs to be clarified, and the applicant can submit a complaint about the rejection decision to the minister within (15) days, and the minister should respond to the complaint within thirty (30) days, and in case of failure to respond, it is regarded decisive in favor of the complainer.

Seventh: The applicant should pay an amount of (50,000) fifty thousand IQD to obtain seed and seedling production permit.

Article (4):

First: The seed which the applicant wants to produce should be registered and approved in the high committee.

Second: It is not allowed to produce more than one agricultural species for one type of product in a field.

Third: The field that is used to produce the seed of a specified species must not be the one which was planted with another species, of the same type, in the previous year.

Article (5): The land allotted to produce seed should have the following conditions and specifications:

First: The land or the field should be appropriate for the type and species of the seed in terms of its geographic location, weather, soil type, and area.

Second: The land needs to have required permanent water resource, particularly where rainfall is limited.

Third: The distance between the seed production fields is two hundred fifty (250) meters and one hundred fifty (150) meters for those products that are (mixed fertilization) and (self-fertilization), respectively.

Seed producer should follow the following procedures:

First: Cleaning and treating the produced seed only in factories with establishment permit.

Second: Canning or putting the produced seed in container according to the guidelines of the directorate.

20/01/2022

No. 277

Waqaye'i Kurdistan

Third: The weight of the cans and containers should be equal and labelled with all information about the seed.

Fourth: The seed producer should have a special store to preserve the seed according to the seed's type.

Article (7):

The responsibilities and authorities of the directorate include:

First: Specifying the grade of the seed produced by the seed producer and placing the special label.

Second: Controlling the seed producing fields and analyzing the produced seed in the laboratory.

Third: Rejecting the seed or approving it if the required conditions were met.

Fourth: The field controller should consider the similarity of the cultivated and produced types and species.

Article (8):

First: According to the provisions of this law, private-sector companies need to obtain required permit for importing seeds and seedlings.

Second: In order to import seed or seedling, application is submitted to the Directorate, and the following requirements should be submitted along with the application.

1. The name and address of the company.
2. Insurance documents of (20,000,000) twenty million IQD from one of the banks for the profit of the ministry.
3. Establishment permit for local companies and registration documents for those companies that are located in other governorates of Iraq or are branches of foreign companies in the region.
4. The companies' income tax clearance approval.
5. Contract between himself and the company or the original institute that produces seeds and seedlings.
6. All approved scientific and technical data about the producing company or institute.

Third: After ensuring the company's procedure, the application should be promoted to the General Directorate.

20/01/2022

No. 277

Waqaye'i Kurdistan

Fourth: The General Directorate should decide to either approve or reject the application within thirty (30) days from the application submission date. In case of failure to respond within the specified duration, the application is regarded to be approved.

Fifth: If the application is not approved, the reason needs to be clarified, and the applicant can submit a complaint about the rejection decision to the minister within (15) days, and the minister should respond to the complaint within thirty (30) days, and in case of failure to respond, it is regarded decisive in favor of the complainer.

Sixth: The applicant should pay an amount of (50,000) fifty thousand IQD to obtain seed and seedling import permit.

Article (9):

The imported seed or seedling should be associated with the following documents:

First: Origin certificate

Second: Seed and seedling health certificate

Third: A certificate indicating reliable control from the country of origin provided that the control date does not exceed three (3) months for the seeds of field products and six (6) months for the seeds of trees from the date of entry from the border gate.

Fourth: Health and control certificate according to the specifications (ISTA) provided that it is issued by a laboratory approved by ISTA.

Article (10):

First: The ministry determines the border gate for the purpose of import.

Second: Transferring seeds and seedlings from Kurdistan Region to other governorates of Iraq should be associated with the approval of the ministry and that of the other side which receives the seeds and seedlings.

Third: The directorate is responsible for controlling the imported seeds and seedlings once they arrive.

Fourth: Importing wheat and barley seeds starts one weeks after the end of wheat marketing in the silos and is allowed until the end of December.

Article (11):

Agricultural research center and universities can import approved seeds only for the purpose of research and after informing the General Directorate.

20/01/2022

No. 277

Waqaye'i Kurdistan

Article (12):

First: High committee for registering, approving, and preserving the agricultural species in the ministry, with the agriculture minister as its leader and a number of experts in different fields as its members, provided that their number does not exceed twelve (12), forms in order to register, approve, and preserve the produced agricultural species.

Second: The committee registers, approves, and preserves the produced agricultural species and develops appropriate seeds and how to grow, distribute, and retrieve it.

Third: The preservation period for the species, the origin, or the mixture is only ten (10) years, starting from the date of submitting the registration application, except for tree species whose preservation period is twenty (20) years.

Article (13):

First: A compensation amount which is not less than (5,000,000) five million IQD and not more than (10,000,000) ten million IQD, or imprisonment for at least three (3) months or at most one (1) year, or both of them will be the punishment for anyone who commits one of the following violations:

1. Producing or importing seeds or seedlings without having relevant permit.
2. Importing seeds and seedlings against import conditions.
3. Giving wrong sample and information which is not equal to that of the imported seed and seedling.
4. Causing barriers to the seed controller.
5. Producing and selling seeds without conducting laboratory analysis for them.

Second: Despite the (first) provision of this article, the expenses of treating or eradicating the imported or produced seeds are paid by the one who commits the violation, and the producing and importing permit will be terminated.

Article (14):

First: A committee forms in the ministry which suggests to the ministry the termination of seed and seedling producing or importing permit in the following cases:

1. If the seed or seedling producer or importer commits one of the violations that were referred to in the (first) paragraph of Article (13) of this law.
2. If the seed and seedling producer stops his project without the minister's consent.
3. If the seed and seedling producer abandons his field.
4. Expiry of the land lease contract.
5. If the seed or seedling producer does not continue observing all terms and guidelines issued by the ministry.

Second: The committee's responsibilities and structure are determined by the minister.

20/01/2022

No. 277

Waqaye'i Kurdistan

Article (15):

The minister issues guidelines so that the provisions of this law can be easily executed.

Article (16):

The relevant parties need to observe and execute the provisions of this law.

Article (17):

The context of no law or decision is valid that is in contradiction with the provisions of this law.

Article (18):

This law is enforced from its publication date in the formal newspaper (Waqaye'i Kurdistan).

The issuance reasons

This law was passed in order to organize the production and import of seeds and seedlings and encourage the private sector specialized in this field, and also to register, approve, and preserve the produced agricultural species.

Nechirvan Barzani
President of Kurdistan Region

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