Seeds 2 Instructions for amateur breeders, seed savers and companies about rules and practice of trade and transfer of seeds for non-commercial use and conservation

Foreword

In this guide you can learn about the rules and practices governing the trade and exchange of seeds.

In this guide we describe the rules that exist in the EU market directives and the Danish regulations on the marketing of seeds, and we explain what you need to do to live up to the rules. We describe the Danish practice in relation to the rules and the specific opportunities and exceptions for non-commercial activities in relation to the rules. Also, we describe the rules laid down in EU directives on the conservation varieties and amateur varieties.

In this guide we describe the Danish practice within the existing rules on the issues identified in the Nature Business Authority 'Dialogue Forum on EU Variety Law' in the revision of the EU market directives in relation to the transfer of seed conservation varieties, market access and biodiversity.

The manual's goal is to provide relevant information and specific examples, otherwise you are always welcome to write to us by e-mail <u>planterlandbrugslov@naturerhverv.dk</u> or call us on 33 95 80 00.

Center for Plants & Agricultural Law

Imprint

Frø og sædekorn 2

Vejledning til amateuravlere, frøsamlere og virksomheder om regler og praksis for handel og overdragelse frø til ikke-kommerciel brug og bevaring Denne vejledning er udarbejdet af Miljø- og Fødevareministeriet i 2015 Foto: Colourbox, TystofteFonden og NordGen © Miljø- og Fødevareministeriet **NaturErhvervstyrelsen** Nyropsgade 30 1780 København V Tlf.: 33 95 80 00 Fax: 33 14 50 42 mail@naturerhverv.dk www.naturerhverv.dk ISBN 978-87-7120-731-6

Contents

1 What can you read about in the guide?	5
2 Why is trade and exchange of seeds regulated?	6
3 What species are regulated and which are not?	7
4 What is exempted from the rules?	7
5 Agriculture's Plant Genetic Resources	8
5.1 Agriculture's Plant Genetic Resources?	8
5.2 How to ensure the conservation of plant genetic resources?	8
6 What applies to the marketing of seeds for commercial use?	10
6.1 Approval of vegetable seed	10
7 Trade and exchange of seeds for non-commercial use	11
8 Transfer of seeds for testing and development	12
9 Conservation varieties and amateur varieties	13
9.1 Marketing of conservation varieties	13
9.2 Trade in amateur varieties of vegetable seed	15
10 Supply of seeds in a closed system	16
11 Populations of wheat, barley, oats and corn (heterogeneous material)	17
11.1 Trade in populations	
12 Other rules that apply to all seeds	19
12.1 Who has rights to seeds and food?	19
12.2 Use of own sowing	19
12.3 Plant Health Requirements	20
12.4 Organic Requirements	22
12.5 The compensation scheme for seed	22
12.6 Rules for trade in genetically modified seeds	22
12.7 The use of pesticides	23
13 Legislation	24
List of Annexes	25
Annex 1: Regulated species	26
Annex 2: Trade and exchange of seed	27

1 What can you read about in the guide?

In the guide we describe rules and Danish practice of trade and exchange of seeds, and we give concrete examples of how the rules work. The guidelines used seeds as collective term for seeds¹.

The guidelines are particularly to

- Farmers, gardeners and companies working with conservation varieties and amateur varieties
- Individuals, companies and associations, transferring seed with non-commercial objectives, i.e. Consumer
- Citizens who are interested in plant breeding, biodiversity and sustainability.

If the rules change, we will update the manual. You can follow the changes by subscribe to news of seeds on AgriFish Agency website²

1 Vou can find the latest ur

You can find the latest updated guidance on our website³

If you are in doubt about the rules, you can contact: **Nature Business Authority**

Center for Plants & Agricultural Act Phone 33 95 80 00 Email planterlandbrugslov@naturerhverv.dk The instructions are applicable as from 21 December 2015.

 $^{^{1}}$ In Danish, there are two notions for seeds: "frø" and "sædekorn"

² You can subscribe to news on seeds here: http://naturerhverv.dk/nyheder-og-presse/abonner-paa-news /

³ You will find our guides here: http://naturerhverv.dk/virksomheder/froe-og-korn/vejledninger/

2 Why is trade and exchange of seeds regulated?

EU market directives govern the production and marketing of seeds throughout the EU with a view to commercial use.

What is meant by commercial use?

As commercial use, we understand the marketing of seeds for agricultural and horticultural production, ie commercial production.

Marketing in this context means: sale, storage for sale, offering for sale and disposal, supply or transfer of seed.

The rules apply both to sales with and without payment. It means that marketing can take place without any form of payment for the seed.

Seeds are the foundation of our agricultural and horticultural production. Trade and exchange of seeds is highly regulated for through quality seeds to ensure greater productivity in agriculture and horticulture.

The rules stipulate that seeds need to be certified. Certification is an approval meaning that the seed complies with national and international minimum standards for purity, germination, traceability, etc. It is for reasons of achieving food security by increasing agricultural productivity as well as to ensure a harmonized trade and export opportunities.

When you look into a bag of seeds, a trained eye to determine the species is needed. But it is very difficult to determine the variety or varieties, if the seed will germinate, and whether there are other varieties or species in the bag. Wrong varieties, low germination or unwanted seeds in the seed can have major consequences for the buyer. It may result in lower settlement silkworm or the cost of re-sowing of the field. It can also entail the spread of unwanted species and the use of time of several years and money to remove them.

Therefore, the law demands that the seeds must be checked in several generations, from leaving the breeder as a new variety, be sown in the field of seed and seed production. The requirements are laid down by the Organisation for Economic Cooperation and Development (OECD) and the European Union. These requirements ensure traceability, identity and consistent quality.

Denmark has a large export of seeds

Denmark's export of seeds has doubled in the last 10 years and is now around 2 billion. Danish seeds are exported to over 80 countries worldwide. Exports are widely dispersed among different plant species, such as seed, grass seed, forage, turf and spinach. Denmark accounts for about 50% of EU production of grass and clover seed. This leadership position is carried by skilled growers, highly specialized plant breeding and trading as well as producing certified seeds to meet quality standards for trade in the EU and internationally.

3 What species are regulated and which are not?

Many agricultural and vegetable species are regulated in the EU marketing directives and must meet rules on variety registration, production and trade – in the Danish regulations on seeds, look at Section 6. In Appendix 1, there is a list of the species that are regulated.

Some species of seed are not covered by the rules. The species not listed in Annex 1 are free to be exchanged and are also sold for commercial use. Examples of such species include: Emmer, rocket and basil.

Varieties of agricultural plants used as vegetables in some cases are also excluded from rules. This applies for example to the oilseed rape variety Lilput used as a form of rocket, and certain varieties of swedes. This is because the species is not on the list of species of vegetable plants in Annex 1. Unlike peas and corn, which provide both agricultural plants and vegetable plants and therefore are regulated.

4 What is exempted from the rules?

There are a number of specific opportunities and exceptions to the rules on trade with seeds described in section 6.

These options and exceptions are described in separate sections of the manual:

- Species that are not included in Annex 1, see section 3
- Varieties of agricultural plants, which are used as vegetables, see section 3
- Trade and exchange of seeds for non-commercial use, see Section 7
- Transfer of seeds for testing and development, see section 8
- Conservation varieties and amateur varieties, see Section 9
- The supply of seed in a closed system, see section 10
- Populations of wheat, barley, oats and corn (heterogeneous material), see section 11

5 Agriculture's Plant Genetic Resources

5.1 Agriculture's Plant Genetic Resources?

This section presents the main lines of conservation work for the plant genetic resources and a number of key terms are defined. The concepts are used subsequently in instructions.

Plant genetic resources are the basis of all life on earth in the form of food and feed. No country or region in the world is completely self-sufficient in plant genetic resources to maintain and refine its major crops. In thousands of years, plant genetic resources belonged to the community, and everyone could gather and move around with seeds and plants all over the world, that is, activities were unregulated and there were no restrictions relative to this.

Plant genetic resources

Plant genetic resources means genetic material of plant origin of actual or potential value for agriculture and includes diversity, which is an essential factor for the improvement of crops. It covers reproductive material of particular country varieties, old and new plant varieties or wild relatives of the cultivated species.

5.2 How to ensure the conservation of plant genetic resources?

In early 1980, a non-binding international agreement to consider the plant genetic resources that's common heritage was adopted. The picture changed, however, and was replaced by the countries then got national sovereign rights to their own genetic resources, including own plant genetic resources.

The CBD, the UN Convention on Biological Diversity (CBD), was established in 1992, which is the overarching framework for ensuring biodiversity globally. Biodiversity provides, inter alia, the sovereign rights to own genetic resources and sets out the framework for the conservation, sustainable use, access to and equitable sharing of the benefits from the use of these resources, including plant genetic resources. Denmark ratified the CBD in 1993.

In accordance with the CBD, the FAO, the UN Food and Agriculture Organization, subsequently established the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which sets out the operational framework for the implementation of the CBD. Denmark ratified the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) in 2003. Denmark has

endorsed the FAO Treaty and committed itself to developing national programs for the Plant Genetic Resources for Food and Agriculture, plants and their wild relatives. Since 2004, Denmark has continuously developed national strategies and action plans⁴

The NAPs are about conservation, sustainable use, dissemination, research and international cooperation and administration. The conservation of genetic resources is an important factor in being able to develop plant varieties to future needs, for example, to meet new quality standards for food and forage crops and adaptation to the environment and climate, as well as to support the growing security in tomorrow's production, including in relation to climate change. Successful conservation efforts also require preservation of a vibrant and dynamic environment. Both plants, plant diseases, viruses and bacteria are developing sustained dynamic. Therefore, it is often needed to preserve genetic resources 'on farm'.

Ex situ, 'on farm' and in situ conservation

Ex Situ Conservation of gene banks as seed or clone archive in the open as vegetative material.

In Situ Conservation of nature of the wild relatives of cultivated crops. 'On the *farm': Conservation* of cultivation e.g. of land races.

In Denmark, we maintain the vegetatively propagated plants outdoors. Preserving vegetable collection takes place at the University of Aarhus in Aarslev, and fruit and berry collections in Pometet at Copenhagen University.

We also participate in the cooperation between the Nordic countries on the common Nordic gene bank, NordGen, located in Alnarp, Sweden. NordGen retains all the seed propagated planting material of agricultural plant genetic resources.

NordGen

NordGen is our common Nordic gene bank. NordGen's mandate is to ensure the long-term preservation responsibility for our Nordic genetic resources of plants, animals and forest. At the same time promoting the gene bank the use of the preserved material for food and agriculture, for example in connection with research and in the breeders work with develop new plant varieties.

⁴ You can read more about AgriFish Agency's work on conservation of plant genetic resources here: http://naturerhverv.dk/landbrug/genetiske-ressourcer/plantegenetiske-ressourcer/

There was an increased awareness of the importance of biodiversity and conservation of plant genetic resources in recent years, therefore, the EU has adopted directives on the conservation and use of varieties of agricultural, vegetable and amateur varieties through cultivation, to ensure conservation and sustainable use of plant genetic resources.

The goal is to protect the landraces and varieties that are naturally adapted to local and regional conditions and threatened by genetic erosion through growing and marketing. You can read about the Danish rules Section 9.

In the private, conservation happens through cultivation of a wide range of varieties for noncommercial use where seed savers and amateur breeders are working to secure biodiversity. You To learn about opportunities for trade and exchange of seeds that are not for commercial use in Section 7.

6 What applies to the marketing of seeds for commercial use?

If you want to produce and sell seeds for commercial use, ie you have a business for agricultural and horticultural production, your business must be registered with Nature Business Authority as a company. You must pay an annual registration fee to Nature Business Authority.

There are two main requirements that must be met when you then want to sell seeds:

- The variety must be registered with Danish variety list or the Common EU Catalogue of Varieties^{5 6}
- The seed must be certified / approved by Natural Business Authority.

The requirements specified in the EU market directives and the Danish regulations on seeds, see paragraph 13.

In the following section we briefly describe the approval of seeds of vegetable plants. You can read more about the production and marketing of seed of agricultural plants and vegetables website in our other guidance to companies that produce brands, seals and Trades with seeds⁷

6.1 Approval of vegetable seed

http://www.tystofte.dk/sorter-status/status-sortsliste-plant variety protection database / and

⁵ Here you can see if a variety is on the variety list:

http://ec.europa.eu/food/plant/plant propagation material/plant variety catalogues databases/search/public/index.csc

⁶ Here you can read about the variety testing in Denmark: http://www.tystofte.dk/

⁷ Here you will find our guides: http://naturerhverv.dk/virksomheder/froe-og-korn/vejledninger/

Seeds of vegetables are traded as *standard*. Standard is a category of vegetable seed which encompasses more lenient requirements compared to certified seed.

The category was originally introduced as a temporary solution to supply difficulties for certified seed, but have since become permanent, and standard is the most widely used category of vegetable seed. Seeds of chicory must be certified by the same rules that applied to agricultural crops as the primary industrial application.

Standard must meet the requirements of varietal identity and purity, minimum germination and freedom from weeds and seeds of other species, and freedom from plant diseases and pests. There is a requirement for sealing and labelling which helps to ensure seed traceability. There is no requirement for verification of the breeding of vegetable seeds.

Companies that produce and sell standard of vegetable may even try to take, analyze and mark the seed packages without authorization. The aim is to make it simple to produce vegetable seeds. It is also possible to sell standard and vegetable plants which are bought in another EU Member State or from a country outside the EU, but you should be aware that there may be special requirements for import of seeds, depending on species.

Borderline cases of commercial and non-commercial use of seeds

A shop specializing in the sale of vegetable seeds and plants and various equipment for the garden. Customers are private nurseries, nurseries and gift shops. Most of the sales are on the company's website.

NB! Sales to nurseries and horticulture considered as sales to commercial use and follow the rules in Section 6, while sales to private and gift shops are considered as non-commercial use of seeds and follow the rules in section 7.

7 Trade and exchange of seeds for non-commercial use

You are free to trade and exchange seeds, when it is for non-commercial use. The sale and exchange for example vegetable seed to private individuals are not covered by the rules. The figure in Annex 2 shows when seeds are freely traded, and when applicable requirements for variety registration and certification as described in Section 6. Seed savers follow the green trail in the figure. If you share seeds, you must also be aware that you are not going to help spreading unwanted plant diseases and pests, see Section 12.3.

Examples of non-commercial use of seeds

-A family cultivates some vegetables and exchanges seeds, for example, tomatoes, peas and chili with family, neighbours and friends.

-An entrepreneur installs a visiting farm with a large garden, where he builds a collection of conservation and amateur varieties, mainly vegetables and herbs. There will be food events and training in the cultivation and use of the crops. The seeds are originally preferably obtained through conservation network, NordGen and private garden owners. As the farm is almost self-sufficient in seeds and plants, they want to resell them to the visitors for private use.

-An association aims to preserve the cultivated diversity by inter alia collecting and growing old varieties and using them in the kitchen. Seed saving courses will be offered. Non-members are also welcome. Several of the association's members have for decades bred and improved plants / seeds. The seeds are delivered to NordGen. The seeds are exchanged mutually between members, if necessary, there is a fee of shipping, but also, they are sold in an increasing number of markets around the country.

-A few gardeners have started a group on Facebook, where you swap both seeds and plants and share advice and experiences on cultivation. The seeds' origin are both self-produced (e.g. from grandma's pumpkin and seed saver peas and beans), as well as bought seeds. It is normal that you cover shipping costs, and in some cases, also pay a small fee for the sought seeds and plants.

-A library has established a special system where citizens can borrow and exchange seeds of conservation and amateur varieties. The citizen will possibly provide seeds back, but not in the same condition as received. There's no money involved. The library also organises plant and seed exchanges.

-A museum has a special unit for historical varieties of flowers and vegetables. They exchange seeds and seedlings with other museums. They also sell seeds to visitors. The museum also organises plant and seed exchanges for visitors.

8 Transfer of seeds for testing and development

It is possible to exchange seeds in small amounts for experiments, testing, scientific purposes and processing, without the need that seeds satisfy the requirements of section 6. The exception is foreseen for sales for conducting experiments and development, thus ensuring innovation and the evolution of new foodstuffs such as Øland Wheat.

The means to keep evidence of this exchange could be a protocol describing objectives, goals, project organization (collaborators), materials and quantities, method, schedule and the plan for evaluation. The activities can be repeated in several growing seasons.

9 Conservation varieties and amateur varieties

In order to ensure *in situ* and 'on farm' conservation and sustainable use of plant genetic resources, it is possible to grow and trade landraces and varieties which are threatened by genetic erosion, although they do not meet the general requirements for variety registration and seed described in section 6. In the following section, you can read about the rules for trading in conservation varieties and amateur varieties.

9.1 Marketing of conservation varieties

A conservation variety, a landrace or variety of agricultural plants or vegetable plants is naturally adapted to local or regional conditions and threatened by genetic erosion. They are varieties with special needs in relation to ensuring varietal conservation and use. Therefore, more lenient requirements for variety registration and certification of seed of conservation varieties are in place.

This means that a conservation variety should not be tested to see if it can be distinguished from any known varieties, as is the case with ordinary variety registration. Rather it should be compared with a sample from NordGen. A conservation variety may also be more diverse in e.g. straw length or flowering time than commercial varieties. There is no requirement for testing a conservation variety's value compared to other varieties, for example, yield and disease resistance.

You can apply to have a variety registered as a conservation variety by Tystofte Foundation. Along with the notification, you'll have to submit testing material for identity checks.

Tystofte Foundation

Tystofte Foundation carries out tasks on behalf Nature of Business Authority. Notification to variety testing and control cultivation is done to: Tystofte Foundation Teglværksvej 10 4230 Skælskør Tel. +45 50808450 email <u>info@tystofte.dk</u>

Details on Tystofte Foundation can be found on www.tystofte.dk. Here you can also find Prices for variety testing and registration.

The notification shall contain:

- A description of the variety characteristics and its variety name
- Any results of unofficial tests of the variety
- Information on practical experience during cultivation, reproduction and use of the variety
- Information on the variety from institutions responsible for plant genetic resources, e.g. NordGen.
- Information on the region of origin. Denmark is regarded as one region with respect to the conservation varieties.

For information on variety testing on Tystofte Foundation's website.⁸

Nature Business Authority approves and records conservation varieties in the catalogue from a specific assessment of whether the landrace or variety is worthy of preservation, and whether it adequately meets the requirements for distinctness, uniformity and stability of the identity checks. In Denmark, a landrace or variety is worth preserving when it fulfils a registered and simultaneously accepted the long-term conservation stewardship of the landrace or variety.

A variety cannot be approved as a conservation variety if it is already on the Danish variety catalogue or if it is listed in another EU Member State or if it was deleted from the catalogue within the last two years. A variety cannot be approved as a conservation variety if it is protected by a national variety right or of a Community plant variety right, see section 12.1.

A variety that is approved as a conservation variety can be traded on favourable terms compared to commercial varieties, for example, there is no requirement for official approval of the seed before sale, nor do they require the seed be analysed by an approved laboratory.

However, quantitative restrictions for conservation varieties apply. Therefore, prior to each production season, you need to report the size and location of the production area and the quantity of seed that you expect to sell, to AgriFish Agency. Spring crops should be reported no later than 1 January and winter crops by 1 July. Nature Business Authority distributes hereafter quantities to producers. You will be notified by AgriFish Agency on the quantity of seed that you can bring in trade in the following season. The total amount of seed to be authorized for each variety and season may not exceed the quantities listed in the relevant documents in the notices of field seeds, seed and vegetable seed, see paragraph 13.

You can sell lots of conservation varieties without prior permission from Nature Business Authority. You just need to make sure that the seed satisfies the minimum standards for certified seed, and the Danish standards for wild oats, gold oats and barren brome grass when you sell the seed, see section 6.

For conservation varieties of vegetable seed, it is sufficient that the seed meets minimum standards for standard seeds. Minimum standards for certified seed and standard seed, see requirements for field seeds, seed and vegetable seed, see paragraph 13.

You must make sure to select a representative sample of the lot under the provisions of sampling instructions for seeds, see section 13. The sample is going to be analysed for purity and germination, following current international methods and the Agency's instructions. By current international rules we, mean e.g. ISTA rules.⁹ The purpose is to make sure that the EU's minimum standards are met. Upon request, you must send a copy of the analysis result to the Nature Business Authority requests. You are obliged to store the sample for 2 years for the case of an eventual control.

⁸ Here you can read about the variety testing in Denmark: <u>http://www.tystofte.dk/</u>

⁹ For ISTA rules here: <u>https://www.seedtest.org</u>

Depending on the species, weight limits for lot sizes of agricultural plants and vegetable apply.

Lots must be sold in closed, labelled bags which are sealed so that the seal is destroyed by opening the bag. The existing quality standards, lot sizes and labelling requirements are to be looked up in the requirements of field seeds, seed and vegetable seed, see paragraph 13.

You must report produced batches of conservation varieties to Nature Business Authority within 14 days after the sealing of the lot. You must know the notification information, variety, quantity, reference number and date of sealing of the lot. Date of sealing the lot shall not be later than the latest of the batch germination.

9.2 Trade in amateur varieties of vegetable seed

An amateur variety is defined as a variety of vegetable seed which has no real commercial production value, but was developed for growing under particular conditions. Special considerations may include manual care, repeated harvesting throughout the growing season.

You can apply to have a variety registered as an amateur variety by Tystofte Foundation. Along with the notification, you must submit testing material for a possible identity check. The notification shall contain:

- A description of the variety characteristics and its variety name
- Any results of unofficial tests of the variety
- Information on practical experience during cultivation, reproduction and use of the variety
- Information on the variety of institutions responsible for plant genetic resources, e.g. NordGen.

For information on variety testing, go to AgriFish Agency website¹⁰. See also info box about Tystofte Foundation in section 9.1.

¹⁰ Here you can read about the variety testing in Denmark: <u>http://www.tystofte.dk/</u>

Nature Business Authority approves and records amateur varieties in the catalogue based on the estimation whether the variety is of no real commercial production value, whether the variety is developed for growing under particular conditions, and whether it adequately meets the requirements for distinctness, uniformity and stability of the identity checks. An identity check is not required if the information in the notification is sufficient to register the variety.

A variety cannot be approved as an amateur variety, if it is already on the variety list in Denmark or another EU Member State or if it was deleted from the catalogue within the last 2 years. A variety cannot be approved as a conservation variety if it is protected by a national variety right or of a Community plant variety right.

Seeds of a variety that is approved as an amateur variety may be sold as standard seed in small packages and must not exceed a maximum weight depending on the species. The weight is stated in the Order of vegetable seed, see section 13.

The restriction in package size is introduced instead of actual quantitative restrictions. Quantity limitations are used when there are exceptions to the normal rules on the marketing of seed. You can sell lots of amateur varieties without prior permission from Nature Business Authority. You just need to make sure that the seed meets EU quality standards for standard seed. You must make sure to select a representative sample of the lot under the provisions of the instruction for sampling of seeds, see section 13. The sample should be analysed in accordance with applicable international methods and the Agency's instructions. The purpose is to investigate whether the minimum standards for standard are met. You must send a copy of the test results, if AgriFish Agency requests. You must store the sample for 2 years for the use of an eventual control.

Depending on the species, weight limits for lot sizes of vegetable seed apply. Lots must be sold in closed, labelled packages which are sealed so that opening the bag destroys the seal. The existing quality standards, lot sizes and marking requirements are laid down in the notices on the marketing of field seeds, seed and vegetable seed, see paragraph 13.

You must report produced lots of amateur varieties to Nature Business Authority within 14 days after the sealing of the lot. You must keep books of the notification information, variety, quantity, reference number and date of sealing of the lot. The date of the sealing of the lot shall not be later than the latest of the batch germination.

10 Supply of seeds in a closed system

You can provide seeds, such as vegetable seeds, in a closed system, e.g. in the case of production of raw materials for industrial use. Raw materials for industrial use may include e.g. grain for the production of flour or vegetable peas for freezing.

The closed system's characteristic is that the cultivating material or harvested product does not acquire the title of seed. All rights remain with the company that owns the seed (for example, a mill or a producer of frozen peas). The cultivation takes place as a service. The farmer does not pay for the seed, and you do not pay for the raw material harvested. Instead, you pay for the service that you buy in the form of field capacity and cultivation. The closed system can be used for both varieties on the variety list, including the conservation varieties, amateur varieties and varieties / materials that are not on the variety list. There must be a contract between the two parties, the standards and requirements should appear. Nature Business Authority may request to see the contract, without financial terms.

You should be aware that there may be a requirement for a license fee if the variety is plant variety protected, see section 12.1 and 12.2. in these guidelines.

Examples of supply of seeds in a closed system

A miller experimenting with the material of the old varieties, which he obtained in exchange with millers in Denmark and other countries. When a variety is interesting in terms of taste and / or baking quality, a variety may be sown and propagated by farmers under contract. When there is an appropriate amount of seeds ready, it is also grown by farmers under contract. The Miller uses the grain for its own mills. The flour is supplied to grocery stores and traded to partners abroad, and there is also direct sales to consumers.

11 Populations of wheat, barley, oats and corn (heterogeneous material)

Denmark is part of an EU trial on the production and trade with populations of wheat, barley, oats and corn until December 31, 2017. The trial may be extended if considered necessary.

The purpose of the study is to gain experience with plant propagating material which does not meet the common variety definition for uniformity. The reason is that the new European research shows that there may be advantages in the use of heterogeneous material, especially in organic production and low input agriculture, for example in order to reduce the spread of diseases.

In the trial, populations are defined as populations of plants

- 1. they result from a given combination of genotypes;
- 2. they are considered as units with regard to their suitability for being reproduced unchanged once established in a given region of production with specific agroclimatic conditions;
- 3. they are generated by one of the following techniques:
 - a. crossing five or more varieties in all combinations followed by bulking of the progeny and exposing the stock to natural selection in successive generations;
 - b. growing together at least five varieties of a predominantly cross-fertilising species, bulking the progeny, repeatedly re-sowing and exposing the stock to natural selection until plants of the original varieties are no longer present;
 - c. inter-crossing varieties using crossing protocols different from those in (a) or (b) to produce a similarly diverse population that does not contain varieties

11.1 Trade in populations

You can apply with AgriFish Agency for approval of a population. Application deadline for spring cereals is November 1st and for winter May 1st.

The notification must include information about:

1) Name and address

2) Nature and description of the population,

3) A description of the type of technique used to produce the population, if appropriate,

4) Breeding Programme objectives,

5) Compensating and production: breeding program as defined in the respective protocols varieties used to refine and produce the population, as well as the company's production control program

6) A description of the population characteristics which the applicant considers is important in terms of yield, quality, performance, suitability for systems with low input, disease resistance, yield stability, taste and colour, as well as

7) Results of activities listed in no. 6 characteristics,

8) Production Area,

9) A statement of the applicant for the accuracy of the elements the meaning of no. 1-7,

10) A representative sample of the population, and

11) Name and address of the person responsible for breeding, production and maintenance.

Nature Business Authority approves populations to ensure a balanced representation of species and enterprises in the trial frame.

You can sell lots of populations without prior permission from Nature Business Authority. You just need to make sure that the seed meets EU quality standards for certified seed and the Danish standards for wild oats, gold oats and barren brome grass when you sell the seed. You must also make sure that a representative sample of the lot is taken under the provisions of the instruction of seed sampling, see section 13. The sample should be analysed in accordance with current international methods and Board instructions. You must send a copy of the analysis result, if the Nature Business Authority requests it. You must store the sample for 2 years for the eventual case of a control.

Depending on the species, weight limits for lot sizes apply. Lots must be sold in closed, labelled packages which are sealed so that the seal breaks by opening the package. The word "population" should be added at the end of each population name mentioned in no. 2. The existing quality standards, lot sizes and labelling requirements stated in the Order of seed, see paragraph 13.

You must report the produced batches of populations to Natural Business Authority within 14 days after the closure of the lot. You must keep books on the notification information, variety, quantity, reference number and date of closure of the lot. Date of closure of the lot shall not be later than the last of the batch germination.

You do not pay fees for notification and control of trade with populations during the trial period.

12 Other rules that apply to all seeds

You should be aware that there may also be other requirements for seed than the requirements described in sections 1 to 11. There can be requirements that also apply to seeds exempt from the provisions of this guide, e.g. private exchange of seeds.

For example, rules on plant health and plant variety rights apply. Sections 12.1 to 12.7 is a non-exhaustive list of requirements that may be applicable.

12.1 Who has rights to seeds and food?

Do **preyed** seeds of trees that are plant variety protected without paying license to the variety owner, when the seed is used for private use and not for commercial production. You can also freely exchange, trade and propagate varieties that are not plant variety protected, even if they are aimed at commercial production.

Plant breeders' rights¹¹ means that a variety owner can obtain intellectual property to his or her varieties (such as agricultural and vegetable plants) in Denmark and in the EU for up to 25 years. The variety owner must allow the use of the material of the variety when it is in commercial production, for example, for the production of bread grains. The variety owner determines conditions, including payment of license fee.

Variety owners do not have rights to the products that come out of the production, such as the flour produced and sold, subsequent to bread production. You should be aware that all genera and species may be subject to plant variety protection, it applies also species not listed in Annex 1 of this guide. This means that a variety may be plant variety protected, although the species is not covered by the rules on the marketing of seeds for commercial use in Section 6. You need to be aware of this if you sell seeds for commercial use.

Plants can be used freely for research and breeding activities without the permission from the variety owner and without payment of license.

12.2 Use of own sowing

If a variety is not plant variety protected by section 12.1, you can freely propagate it and use the seed obtained from it. You should be aware that if a variety is plant variety protected, there are special rules when you use your own seed of this variety. Use of own seed means that you use a

¹¹ You can see which species and varieties are protected by Danish plant variety protection here: <u>http://www.tystofte.dk/sorter-status/status-sortsliste-plantenyhedsbeskyttelse-database/</u>

You can see which species and varieties that are protected by European plant variety protection here: http://www.cpvo.europa.eu/main/en/home/databases/cpvo-variety-finder

part of your own harvest as seed in subsequent years. You must pay license fee to the variety owner. $^{\rm I2}$

When using their own seed of the varieties plant variety protection.

You should also be aware that the use of proper sowing is prohibited for all species when is a variety that is plant variety protection. In Annex 1 you can see the species you must use your own seed against payment of the license owner of the variety, if the variety has plant variety protection.

12.3 Plant Health Requirements

Seeds can be infected with serious plant diseases and pests, so-called harmful organisms can be spread by seed. The organisms that can infect the seed are often completely invisible.

Within the EU, healthy seeds can be traded freely. In order to avoid serious pests and their introduction into and spread in the EU, the EU has adopted a common set of rules. The rules apply to professional production and sale of vulnerable species within the EU. Particularly vulnerable plant species are the species that host the most serious pests. As the EU is a common market, there are different requirements for marketing of seeds within the EU and seed with countries outside the EU.

You must be registered as a supplier at AgriFish Agency if you produce seeds of fruit plants and ornamental plants for sale, or if you sell seeds of vegetables, fruit and ornamental plants for commercial resale and use. You should not be recorded in relation to plant health rules if you have total turnover of less than 50,000 kr¹³ annually and sell to consumers who do not use the seeds in business. However, you must in any event be registered if you are supplying seeds and plants with a plant passport, even if you have total turnover of less than 50,000 kr¹⁴.

¹² You can read more about the payment of licenses here: <u>http://www.sortsejere.dk</u>

¹³ [50.000 Danish Crowns corresponds to ~ 6.700 Euro ---- translator's note]

¹⁴ [50.000 Danish Crowns corresponds to ~ 6.700 Euro ---- translator's note]

In the decree on plants, § 3, you can see who is covered by the registration requirement¹⁵

Production and marketing of seeds in the EU

Seeds of vulnerable species which are traded in the EU must have a plant passport. The plant passport shows that the seeds were officially certified and comply with EU rules. The plant passport also makes it possible to trace the seed back to the manufacturer.

A plant passport with a tomato lot documents for example, that the seed is free of tomatgulbakteriose, a potato fee of spindle tuber viroid and Pepino mosaic virus. These pests can be otherwise easily transferred with tomato seeds from infected plants. Plant passport requirements apply only once seed is resold for commercial use, ie for horticulture and agriculture. Small packages in shops do not meet the requirement, but they must comply with other requirements for labelling of seeds for the plant species concerned.

Manufacturers of plants and seeds are approved by the plant health authority to issue passports under official supervision¹⁶ In Denmark, Nature Business Authority, is responsible for plant health protection.

The list of species subject to rules of plant passports, may give you an impression of the plant species of which can transmit serious pests, and you can take it in your consideration when you purchase, exchange, distribute or get seeds. You can see the pests selected vegetable species should be free trade in the EU in order on vegetable, view paragraph 13.

Import of seeds from countries outside the EU

It is possible to import seeds from countries outside the EU, for example through the purchase over the Internet, but please be aware that, that for certain kinds of seeds import requirements can be in place to ensure that unwanted organisms are not introduced with seed. There are import requirements for seed of certain genera and species, such as chili, tomato and beans. If you wish to import seeds, you must be aware of these requirements and ensure you have a phytosanitary certificate from the exporting country when the seed is imported into Denmark. The phytosanitary certificate is an official document issued by the plant health authority in the exporting country and certifying that the EU's import requirements were observed.

The requirements also mean that shipments of such seed must be reported to and controlled by Nature Business Authority, when imported to Denmark. Whether there are requirements or not depends on the country of origin and genus or species of the seed. For seeds that are covered by these import requirements, import rules apply, even if the seeds are to be used for private purposes, and no matter the quantity. The rules are described in the Order on imports of plants and plant products etc., see paragraph 13.

¹⁵ You will notice here:

http://naturerhverv.dk/virksomheder/gartneri/lovgrundlag/#c15235

¹⁶ You can see which plant species covered by the rules and therefore must have a plant here: <u>http://naturerhverv.dk/virksomheder/gartneri/produktion-og-salg-i-eu/#c16115</u>

On AgriFish Agency's website you will find lists of seeds which are covered by the above requirements, and here you can also find additional information on procedures for the import of seeds that have phytosanitary import requirements as well as on plant pests.¹⁷

12.4 Organic Requirements

Organic seeds must meet the same certification requirements as other types of certified seeds, see section 6.

You can **feel** the certified seed as organic in accordance with instructions on organic production.¹⁸ You will recognise Danish certified seeds by the Nature Business Authority organic control code DK-ECO-050 on the party label in the lower white field, which are intended for other information. If you produce organic products, you need to pay attention to section 7 of the Guidance of organic farming¹⁹ on the use of seeds, seedlings and vegetative propagating material. You must always have documentation at the holding of origin and status and processing of seeds and propagating material. The documentation can be the seed bags, delivery notes and invoices which, among other state that the seed is non-treated.

12.5 The compensation scheme for seed

Compensation rules governing the production and trade of certified seed: The rules mean that the seed producer, when applying to the compensation scheme for Seed, has undertaken to pay compensation to the buyer if the sold seed lot fails to meet the higher Danish standards. The compensation scheme does not apply to trade and exchange of seeds for non-commercial use, and conservation species and populations of seed, see Section 7, 9 and 11.

12.6 Rules for trade in genetically modified seeds

There are special rules for the marketing of seeds of genetically modified varieties.²⁰

¹⁷ Here you can read more:

⁻ Phytosanitary import requirements http://naturerhverv.dk/virksomheder/import-og-eksport/import-ind-i-eu-

plant health / what-products-require-health certificate /

⁻ Organisms http://naturerhverv.dk/virksomheder/gartneri/plantesundhed/#c14975

¹⁸ Here you will find instructions on ecology to agriculture utilities, etc:

http://naturerhverv.dk/tvaergaaende/oekologi/forsyningsvirksomheder/

http://naturerhverv.dk/tvaergaaende/oekologi/jordbrugsbedrifter/

²⁰ Here you will find instructions on the marketing of genetically modified seeds: <u>http://naturerhverv.dk/tvaergaaende/gmo/froe-plants /</u> and guidance for suppliers of genetically modified seeds:

http://naturerhverv.dk/fileadmin/user_upload/NaturErhverv/Filer/Indsatsomraader/GMO/Dyrkning_Vejledning/Vejledning_for_froevirksomheder_FVM_skabelon.pdf

12.7 The use of pesticides

There are special rules for the use of pesticides for seed treatment. Treated grains and seeds and potatoes must be labelled with the name of the pesticide, the active substance and relevant safeguards and restrictions on use of the pickled product. For more information on the approval and use of PPP by Environmental Protection Agency²¹

²¹ Find more information on the approval and use of PPP by the Environmental Protection Agency here: <u>http://mst.dk/virksomhed-myndighed/bekaempelsesmidler/</u>

13 Legislation

The rules on seeds include provisions of:

- Order no. 190 of 12 March 2009 of the Act on Plant news
- Order no. 195 of 12 March 2009 of the Act on seed potatoes and plants.
- The notices no. 701 of 22 July 1996 on the propagation of new plants for professional use on his own farm

• Order no. 941 of 11 August 2015 payment for control mm with seeds and seed

• Order no. 943 of 11 August 2015 establishing the list of approved varieties

of agricultural plant and vegetable species (variety list)

- Order no. 1285 of 16 November 2015 plants
- Order no. 1286 of 16 November 2015 on imports of plants and plant products etc.
- Order no. 1511 of 11 December 2015 field seeds
- Order no. 1549 of 11 December 2015 on seed
- Order no. 1550 of 11 December 2015 vegetable seed
- The instructions in the sampling of seeds²²

The provisions in the notices 2^{23} ; is elaborated in this manual and other manuals on the marketing of seeds²⁴ Frøreglerne not replace any other rules that govern Danish agricultural production. If an area is regulated by both frøreglerne and other rules that you must abide by all rules.

²² You will find instructions in the sampling of seeds here: <u>http://naturerhverv.dk/virksomheder/froe-og-</u> cereal / sampling / instruction-in-sampling-by-seed / ²³ You will find notices are here: <u>http://naturerhverv.dk/virksomheder/froe-og-korn/lovgrundlag/</u>

²⁴ You will find all the instructions here: <u>http://naturerhverv.dk/virksomheder/froe-og-korn/vejledninger/</u>

List of Annexes

Annex 1 Regulated species and varieties Appendix 2 Figures on trade and transfer of seeds

Anne	x 1	: R	egulate	d	species
		_			

Videnskabeligt navn	Dansk na	ivn	Krav om sort og certificeri		Brug af egen udsæd tillad for sorter, der er omfattet af plantenyheds beskyttelse
Bederoer af arten:					-
Beta vulgaris L.		Sukker- og foderroer		Х	
Olie- og spindplanter:					
Arachis hypogaea L.		Jordnød		Х	
<i>Brassica juncea (</i> L.) Czern.		Sareptasennep (brun	sennep)	Х	
<i>Brassica napus</i> L. (partim)	Raps		Х		Х
Brassica nigra (L.) W.D.J. Koch		Sort sennep		Х	
Brassica rapa L. var. silvestris	Rybs		Х		Х
(Lam.) Briggs					
Cannabis sativa L.		Hamp		Х	
Carthamus tinctorius L.		Saflor		Х	
Carum carvi L.		Kommen		Х	
<i>Glycine max</i> (L.) Merr.		Sojabønne		Х	
<i>Gossypium</i> spp.		Bomuld		Х	
Helianthus annuus L.		Solsikke		Х	
Linum usitatissimum L.	Hør (spind	lhør, oliehør)	Х		Х
Papaver somniferum L.		Opiatvalmue		Х	
Sinapis alba L.		Gul sennep		Х	
X					
Sædekorn:					
Avena nuda L.		Nøgen havre		Х	
A <i>vena sativa</i> L. (herunder <i>A.</i>	Almindelig	j havre	Х		Х
byzantina K. Koch)	_				
Avena strigosa Schreb.		Purhavre		Х	
Hordeum vulgare L.	Вуд		Х		Х
Oryza sativa L.	Ris		Х		Х
Phalaris canariensis L.	Kanariegr	æs	Х		Х

Videnskabeligt navn	Dansk na	ivn	Krav om sortsregis og certificering	strering	Brug af egen udsæd tilladt for sorter, der er omfattet af plantenyheds beskyttelse
Secale cereale L.	Rug		Х		X
Sorghum bicolor (L.) Moench		Durra		Х	
Sorghum sudanense (Piper) Sta	pf	Sudangræs		Х	
<i>xTriticosecale</i> Wittm. ex A.	Triticale (hybrider, der er	Х		Х
Camus		net ved krydsning af			
		slægten <i>Triticum</i>			
		rt af slægten			
	Secale)				
Triticum aestivum L.	Blød hved		X		X
Triticum durum Desf.	Hård hved	le	X		X
Triticum spelta L.	Spelt		X	V	Х
<i>Zea mais</i> L. (partim)		Majs, med undtagels	•	Х	
Foderplanter:		(popcorn) og almind	eng sukkermajs		
Poaceae (Gramineae):			Græsser		
Agrostis canina L.		Hundehvene	0123361	Х	
Agrostis gigantea Roth		Storstoppet hvene		X	
Agrostis stolonifera L.		Krybhvene		X	
Agrostis capillaris L.		Almindelig hvene		X	
Alopecurus pratensis L.		Engrævehale		X	
Arrhenatherum elatius (L.) P. B	eauv. ex	Draphavre		Х	
J. Presl & C. Presl		•			
<i>Bromus catharticus</i> Vahl		Amerikansk hejre		Х	
<i>Bromus sitchensis</i> Trin.		Alaska-hejre		Х	
Cynodon dactylon (L.) Pers.		Bermudagræs		Х	

Videnskabeligt navn Dans	k navn Krav on	n sortsregistrering ficering	Brug af egen udsæd tilladt for sorter, der er omfattet af plantenyheds beskyttelse
Dactylis glomerata L.	Hundegræs	Х	-
<i>Festuca arundinacea</i> Schreber	Strandsvingel	Х	
<i>Festuca filiformis</i> Pourr	Finbladet svingel	Х	
<i>Festuca ovina</i> L.	Fåresvingel	Х	
<i>Festuca pratensis</i> Huds	Engsvingel	Х	
Festuca rubra L.	Rød svingel	Х	
Festuca trachyphylla (Hack.) Krajina	Bakkesvingel	Х	
<i>Lolium multiflorum</i> Lam.	Italiensk rajgræs (herunder so westerwold)	orten X	
Lolium perenne L.	Almindelig rajgræs	Х	
<i>Lolium × boucheanum</i> Kunth	Hybrid rajgræs	Х	
Phalaris aquatica L.	Glansfrø	Х	
Phleum nodosum L.	Knoldrottehale	Х	
Phleum pratense L.	Timothe	Х	
Poa annua L.	Enårig rapgræs	Х	
Poa nemoralis L.	Lundrapgræs	Х	
Poa palustris L.	Sump-rapgræs	Х	
Poa pratensis L.	Engrapgræs	Х	
Poa trivialis L.	Almindelig rapgræs	Х	
Trisetum flavescens (L.) P. Beauv.	Guldhavre	Х	
xFestulolium Asch. & Graebn.	Festulolium (hybrider, der sta en krydsning af en art af slæg <i>Festuca</i> med en art af slægter	ten	

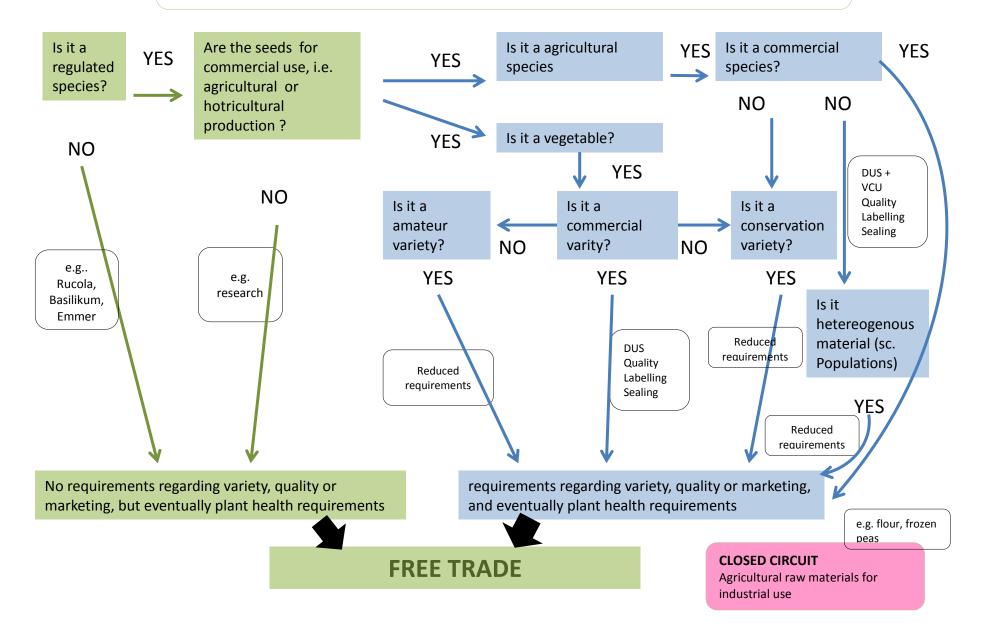
	om sortsregistrering rtificering Brug af egen udsæd tilladt for sorter, der er omfattet af plantenyheds beskyttelse
Fabaceae (Leguminosae): Bælg	planter
Galega orientalis Lam. Blå stregbælg	Х
Hedysarum coronarium L. Hanekløver	Х
Lotus corniculatus L. Kællingetand	Х
Lupinus albus L. Hvid lupin	Х
Lupinus angustifolius L. Smalbladet lupin	Х
Lupinus luteus L. Gul lupin X	Х
Medicago lupulina L. Humlesneglebælg	Х
Medicago sativa L. Lucerne X	Х
Medicago x varia T. Martyn Sandlucerne	Х
Onobrychis viciifolia Scop. Esparsette	Х
Pisum sativum L. (partim) Foderært X	Х
Trifolium alexandrinum L. Ægyptisk kløver X	Х
Trifolium hybridum L. Alsikekløver	Х
Trifolium incarnatum L. Blodkløver	Х
Trifolium pratense L. Rødkløver	Х
Trifolium repens L. Hvidkløver	Х
Trifolium resupinatum L. Omvendt kløver X	Х
Trigonella foenum-graecum L. Bukkehorn	Х
Vicia faba L. (partim) Hestebønne X	Х
Vicia pannonica Grantz Ungarsk vikke	X
Vicia sativa L. Fodervikke X	Х
Vicia villosa Roth Sandvikke	Х

		og certificering	for sorter, der er omfattet af plantenyheds beskyttelse
Andre arter af foderplanter:			•
<i>Brassica napus</i> L. var. <i>napobrassica</i> (L.) Rchb.	Kålroe	Х	
Brassica oleracea L. convar. acephala (DC.) Alef. var. medullosa Thell. + var. viridis L.	fodermarvkål	Х	
Phacelia tanacetifolia Benth.	honningurt	Х	
<i>Raphanus sativus</i> L. var. <i>oleiformis</i> Pers.	olieræddike	Х	
Grøntsager:			
Allium cepa L.		Х	
- <i>Cepa</i> Group	- Kepaløg	Х	
- Aggregatum Group	- Skalotteløg		
Allium fistulosum L.	Pibeløg	Х	
1	Porre	Х	
	Hvidløg	Х	
•	Purløg	Х	
	Havekørvel	Х	
	Bladselleri	Х	
	Knoldselleri	Х	
	Almindelig asparges	Х	
5	Rødbede	Х	
	Bladbede	Х	

Videnskabeligt navn Dans		rav om sortsregistrering g certificering	Brug af egen udsæd tilladt for sorter, der er omfattet af plantenyheds beskyttelse
Brassica oleracea L.	Grønkål	х	/
	Blomkål	Х	
	Broccoli	Х	
	Rosenkål	Х	
	Savojkål	Х	
	Hvidkål/Spidskål	Х	
	Rødkål	Х	
	Knudekål	Х	
Brassica rapa L.	Kinakål	Х	
	Majroe	Х	
Capsicum annuum L.	Spansk peber, herunde sød peber		
Cichorium endivia L.	Endivie, herunder kruse bredbladet endivie	et endivie og X	
Cichorium intybus L.	Almindelig cikorie, heru cikorierod og cikoriesala	-	
<i>Cirtullus lanatus</i> (Thunb.) Matsum. & Nakai		X	
Cucumis melo L.	Melon	х	
Cucumis sativus L.	Almindelig agurk, herur		
<i>Cucurbita maxima</i> Duchesne	Centnergræskar	X	
Cucurbita pepo L.	Mandelgræskar, herund squash		
Cynara cardunculus L.	Kardon	Х	
-,	Artiskok	X	
Daucus carota L.	Havegulerod	X	
Foeniculum vulgare Mill.	Almindelig fennikel	X	
Lactuca sativa L.	Havesalat	х	
Solanum lycopersicum L.	Tomat	X	
Petroselinum crispum (Mill.) Nyman e A. W. Hill		X	

Videnskabeligt navn	Dansk navn	Krav om sortsregistrering og certificering	Brug af egen udsæd tilladt for sorter, der er omfattet af plantenyheds beskyttelse
Phaseolus coccineus L.	Pralbønne	Х	•
Phaseolus vulgaris L.	Havebønne, herund	er stangbønne X	
Pisum sativum L. (partim)	Almindelig ært, heru skalært og sukkeræ	•	
Raphanus sativus L.	Radise	Х	
	Ræddike	Х	
Rheum rhabarbarum L.	Haverabarber	Х	
Scorzonera hispanica L.	Haveskorzoner	Х	
Solanum melongena L.	Aubergine eller ægp	lante X	
Spinacia oleracea L.	Spinat	Х	
Valerianella locusta (L.) Laterr	. Tandfri vårsalat	Х	
<i>Vicia faba</i> L. (partim)	Valsk bønne	Х	
<i>Zea mays</i> L. (partim) X	Sukkermajs og perle	emajs X	
Andre arter:			
Cicer arietinum L.	Kikært	Х	

Annex 2: Trade and exchange of seed



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