

# Organic VCU testing

Current status in 16 European countries



Foto: Inger Bertelsen, Videncentret for Landbrug

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## Introduction

In some countries organic farming area is developing fast, and there is a need to adapt to the increasing demand for organic varieties.

The overall aim of this report is to provide information on organic variety testing for national listing of cereals in different countries, providing breeders and seed companies with easy access to information for testing and marketing varieties as suited for organic conditions in another country. This may increase the marketing potential of specific varieties and thereby increase the range of varieties for organic farming.

The report may also serve as a helping hand for variety offices (the authorities in charge of variety testing) across Europe to get inspired by each other, and to have more easy access to relevant information. For every country involved contact persons are listed. For variety offices considering initiating an organic variety testing system, this report may serve as an inspirational tool. And those in progress of making changes in the prevalent system may also find new inspiration.

## Background

Organic products are becoming increasingly popular, and the organic agricultural area is correspondingly increasing according to consumers demand. Along with the increasing organic agricultural area and consumers demand follows the demand for more and better organic varieties.

So far, organic farming has to a large extent been depending on varieties bred for conventional farming, and this will most likely be the case for many years to come. Breeding is a costly and long term process, and so far the organic area in most countries has not been big enough for breeders to take the chance to invest in organic breeding programs. However, the continuously increasing area with organic agriculture expands the market for organic varieties.

Varieties bred for conventional farming may not possess important traits for organic farming such as weed competitiveness, nutrient efficiency and resistance to seed borne diseases, since these traits are not as important in conventional agriculture due to the use of pesticides, mineral fertilizer and chemical treatment of the seeds. For the same reason, these parameters are typically not a mandatory part of the conventional VCU-test (Value for Cultivation and Use).

Some varieties can be found useful in both organic and conventional farming. Varieties that have been accepted on the national list through conventional tests can subsequently be tested in organic variety trials for their performance under organic growing conditions, if this possibility is available. But if a breeder has a new variety on hand that might be especially suited for organic farming, it may not be able to pass the conventional test. It may only pass a test that is performed under organic conditions or a conventional test supplemented with organic trials, due to the inherent differences in the two cropping systems. Breeders may not find it worth the effort to breed or select varieties for organic farming, if it isn't possible to get a new variety tested under organic growing condition. This way, varieties that might be suited for

organic farming can be lost in the system if no organic VCU-testing is possible. Furthermore, traits that are valuable in organic cultivation may not be tested in conventional tests.

The dept. for organic agriculture at the Danish Knowledge Centre for Agriculture has conducted interviews on these subjects with the responsible institutions in each country in Northern and Central Europe. Some variety offices have responded to our question as to whether they perform organic VCU-testing, that they have not had any requests for this. But maybe if the possibility of organic VCU was there, it would inspire more breeders to pick up breeding for organic farming.

For a discussion on important issues of organic VCU testing refer to COST SUSVAR-ECOPB Proceedings 2008 – “Value for Cultivation and Use testing of organic cereal varieties *What are the key issues?*” from a Cost Action 860 – Susvar and ECO-PB workshop. One of the conclusions on these discussions was that there is a need for well-structured exchange of data to work out sustainable solutions.

This report seeks to give a status of the current possibility to have a variety VCU-tested under organic conditions.

## EU legislation

According to the EU seed legislation, new varieties of agricultural crops in Europe must be tested for distinctability, uniformity and stability (DUS) and for their value for cultivation and use (VCU) before they can be accepted on the National List of Varieties and the Common European Catalogue of Varieties. VCU tests are carried out nationally to evaluate the local value for cultivation and use in the concerning member state. DUS tests can be performed locally or in another country.

The European legislation for VCU approval says that “The value of a variety for cultivation or use shall be regarded as satisfactory if, compared to other varieties accepted in the catalogue of the Member State in question, its qualities, taken as a whole, offer, at least as far as production in any given region is concerned, a clear improvement either for cultivation or as regards the uses which can be made of the crops or the products derived therefrom. Where other, superior characteristics are present, individual inferior characteristics may be disregarded” (Council directive 2002/53/EU art. 5, 4).

In short, a new variety must be an improvement compared to the accepted varieties in a given region, or - if a variety possesses a specific valuable trait - it may also be approved, disregarding inferior traits.

Characteristics as regards the examination of the value for cultivation and use:

- Yield
- Resistance to harmful organisms
- Behavior with respect to factors in the physical environment
- Quality characteristics

(Commission Directive 2003/90/EC)

Within these frames there is national freedom regarding the testing protocols and financing.

The EU seed legislation is under revision. In the current proposal it is suggested that the VCU testing of varieties must focus more on the sustainability of varieties. If future varieties must possess traits as improved disease resistance, utilization of resources, reduced content of unwanted substances and climate adaptation, these combined with high and stable yields to pass VCU-testing may challenge breeding programs in general to move in a more “organic” direction.

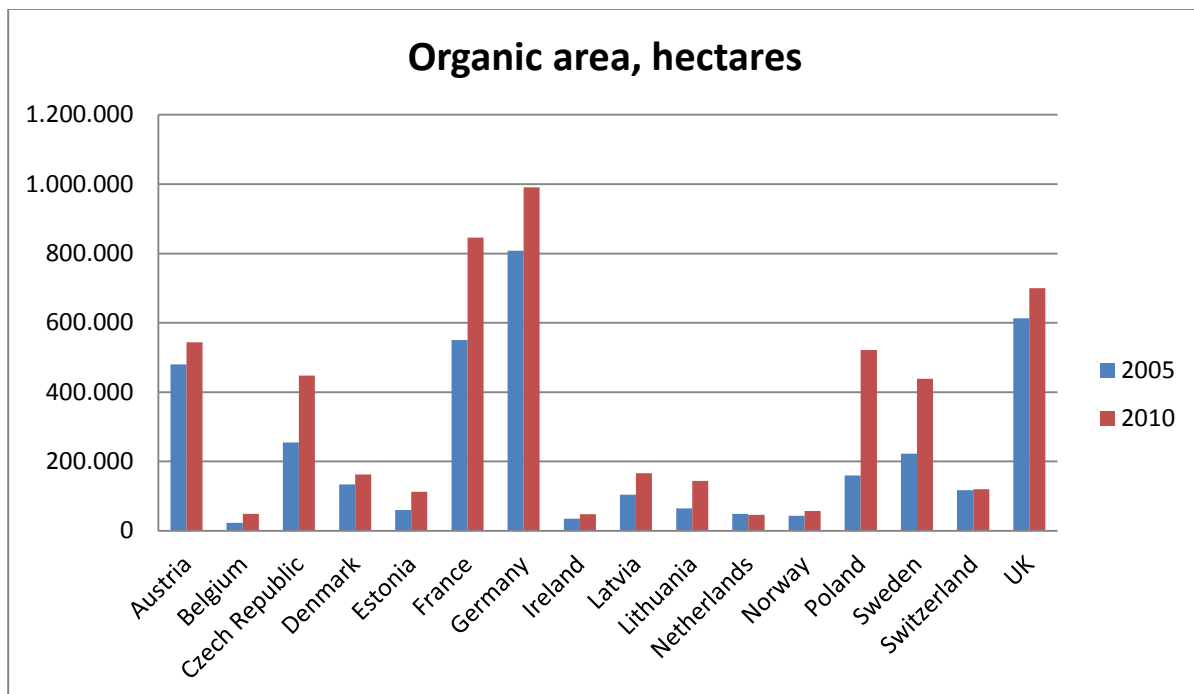
The CPVO is intended to play a much larger role, to maintain the common catalogue instead of the Commission, to give recommendations for naming varieties, to harmonize VCU testing, to approve national variety offices and to advise, teach and give technical support.

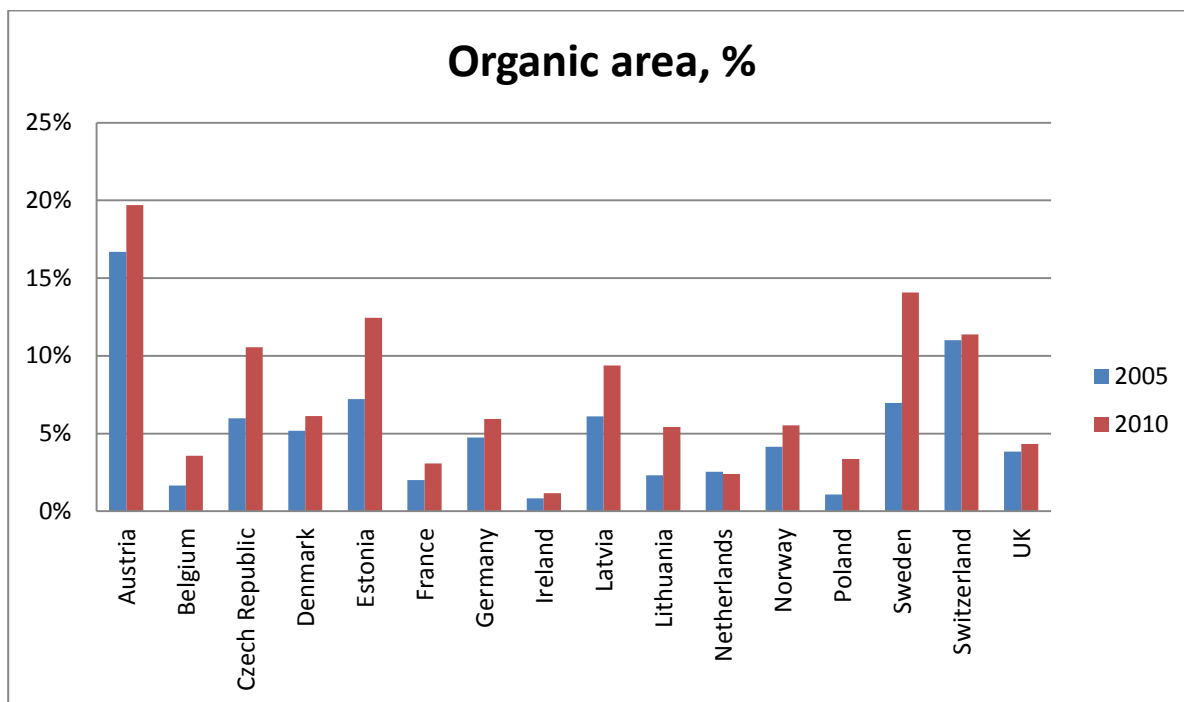
Moreover, fees are to be harmonized in all member states.

**Development in the organic area**

In this report representatives from 16 different European countries have contributed with information on the status of organic variety testing in their country.

The general picture over a five year period in the participating countries, and in Europe as a whole, is that the organic agricultural area is increasing. In Austria the organic area covered around 20 % of the agricultural area at the end of 2010 (including organic alpine pastures) and in Germany alone there was around 1 million hectares of organic agricultural land. In other words, the demands for organic varieties are continuously increasing.





Development of organic area (including in-conversion areas) over 5 years (2005-2010) in hectares (above) and percentage of total agricultural area (below).

Source: Research Institute of Organic Agriculture (FiBL) and International Federation of Organic Agriculture Movements (IFOAM) (<http://www.organic-europe.net/statistics-eurostat.html>).

The total organic area in EU (including in-conversion areas):

	Organic agricultural area	% of total agricultural area
2005	6.240.301 ha	3,5 %
2010	9.016.097 ha	5,1 %

Source: Research Institute of Organic Agriculture (FiBL) and International Federation of Organic Agriculture Movements (IFOAM) (<http://www.organic-europe.net/statistics-eurostat.html>).

The total organic area in EU has increased with almost 50 % over a period of five years.



Participating countries in this study are marked with a flag.

In the following chapters information from 16 European countries are listed (countries are listed alphabetically). Representatives from each country have answered a questionnaire concerning the status of organic VCU testing in their country. Practical information on the VCU testing is listed in tables and some countries have provided information on the testing parameters used and the varieties that have been listed based on organic testing results, this information is also listed in tables. At the end of each chapter some information about organic variety trials not intended for national listing is provided.

This edition of the report is a first version, and we would like to expand the level of information, so please let us know if you can provide more information.

## Austria

In Austria around 20 % of the agricultural land is organic and a VCU testing system of varieties for organic agriculture has existed since 2002.

It is possible to have varieties of winter wheat VCU-tested under organic conditions. In these trials the new variety is compared to varieties, which are used in organic farming. Winter wheat varieties can be registered without conventional results.

For spring barley there has been a similar system between 2002 and 2010. There are no longer requests by the breeders for organic VCU-testing for barley and therefore these special trials have stopped. For winter rye, winter triticale, winter spelt, spring wheat and spring oat there exist supplementary trials in organic farming, but with the same assortment as on the conventional ones. From these species candidates in process of registration are tested on organic locations, too. But the applicant can't ask for exclusively organic tests.

Important testing criteria are weed competitiveness and nitrogen efficiency in winter wheat in addition to the same criteria as in conventional farming (yield, quality, resistance against diseases, etc.).

Concerning conventional trial testing for specific organic traits, there are trials of artificial infection of common bunt on winter wheat on conventional fields.

According to Clemens Flamm, the most important information for farmer's choice of variety is the "Austrian descriptive list of varieties" of BAES/AGES.

(Source: Clemens Flamm, Austrian Agency for Health and Food Safety - AGES)

Variety Office (VCU)	The Federal Office for Food Safety (BAES) <a href="http://www.baes.gv.at/pflanzensorten/">http://www.baes.gv.at/pflanzensorten/</a>
Contact person	Clemens Flamm <a href="mailto:clemens.flamm@ages.at">clemens.flamm@ages.at</a>
National Catalogue of Varieties	<a href="http://www.baes.gv.at/pflanzensorten/oesterreichische-sortenliste">http://www.baes.gv.at/pflanzensorten/oesterreichische-sortenliste</a>
Descriptive or Recommended List of Varieties	There is a descriptive list of varieties. A special chapter for organic farming is included. <a href="http://www.baes.gv.at/pflanzensorten/oesterreichische-beschreibende-sortenliste/">http://www.baes.gv.at/pflanzensorten/oesterreichische-beschreibende-sortenliste/</a> Results of organic trials are published under <a href="http://www.baes.gv.at/uploads/media/12_Biolandbau_Getreide.pdf">http://www.baes.gv.at/uploads/media/12_Biolandbau_Getreide.pdf</a> If a variety is listed on the Austrian list of varieties it is listed on the descriptive list, too. Based on the VCU-trials and other variety trials the list is actualized every year.
Recognition of organic varieties	Those varieties which are tested exclusively under organic conditions (wheat and spring barley) are provided with a footnote (4 at winter wheat and 3 at spring barley) in the Austrian descriptive list of varieties. ( <a href="http://www.baes.gv.at/pflanzensorten/oesterreichische-beschreibende-sortenliste">http://www.baes.gv.at/pflanzensorten/oesterreichische-beschreibende-sortenliste</a> )
Application form	<a href="http://www.baes.gv.at/formulare/saatgutgesetz/sortenzulassung/">http://www.baes.gv.at/formulare/saatgutgesetz/sortenzulassung/</a> Send to: Federal Office for Food Safety (BAES) Spargelfeldstraße 191 1220 Vienna



	Austria.
Application date	In 2012 application date was August 16 <sup>th</sup> to 23 <sup>rd</sup> for organic winter wheat. The exact date is sent to the Austrian applicants. Normally they cooperate with other breeders in Europe.
Fees	2012: <a href="http://www.baes.gv.at/uploads/media/SOR_2012_Sortenordnungsgeb%C3%BChrentarif.pdf">http://www.baes.gv.at/uploads/media/SOR_2012_Sortenordnungsgeb%C3%BChrentarif.pdf</a> Application (one time): 217 € VCU-testing (per year): 603 € (for organic winter wheat and spring barley) Maintenance fee for listing a variety: 22,46 €/year After 10 years the applicant can ask for prolongation: application fee: 88,84 € + DUS application 285,11 €
Seed requirements	Requirement for the first year of VCU-testing (small changes every year) Organic testing (seed grown on organic sites if possible, if not then only untreated): Winter common wheat – 10 kg Winter rye – 3 kg Winter triticale – 5 kg Spring barley – 11 kg Spring common wheat – 2,5 kg Spring oat – 4 kg
Address for shipping seed	Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH (AGES) Institut für Nachhaltige Pflanzenproduktion Saatguttechnikum Spargelfeldstraße 191 A-1220 Wien AUSTRIA 2-3 days before a covering letter must be fulfilled and sent to <a href="mailto:michael.oberforster@ages.at">michael.oberforster@ages.at</a>
Years and number of locations for testing	2 years: rye, spelt wheat, spring common wheat and spring oat 3 years: all other cereal species (barley, triticale, winter common wheat, durum wheat) <hr/> Min. number of testing locations: Organic winter wheat: 5 locations Winter rye: 1 organic + 4 conventional Winter triticale: 2 organic + 6 conventional Winter spelt wheat: 3 organic + 2 conventional Spring oat: 2 organic + 5 conventional
Testing results	Not public, only submitted to applicants, if the variety is registered, the summarized results are published in the descriptive list and results of organic trials are published under <a href="http://www.baes.gv.at/uploads/media/12_Biolandbau_Getreide.pdf">http://www.baes.gv.at/uploads/media/12_Biolandbau_Getreide.pdf</a>
Testing protocols	Weed competitiveness, see below
Variety Board	The „Sortenzulassungskommission (SZK)“ or Variety Registration Commission gives a proposal to the variety registration authority. The authority (BAES = Federal Office

	for Food Safety) normally registers the variety according to the proposal. Members: 2 experts (University of life science Vienna, Austrian seed association) 9 deputies of the agricultural chambers 1 deputy of the ministry of agriculture, forest, environment and water (is not voting) 1 deputy of BAES (is not voting)
Useful links	Regulations: <a href="http://www.baes.gv.at/pflanzensorten/gesetzliche-grundlagen/">http://www.baes.gv.at/pflanzensorten/gesetzliche-grundlagen/</a> Austrian Agency for Health and Food Safety (AGES), the Institute for Sustainable Plant Production: <a href="http://www.ages.at/ages/landwirtschaftliche-sachgebiete/sorte/">http://www.ages.at/ages/landwirtschaftliche-sachgebiete/sorte/</a>

## Organic VCU testing criteria, Austria.

Species: Testing parameter:	Winter Wheat	Spring Wheat	Winter Barley	Spring Barley	Spring Oat	Winter Rye	Winter triticale
Cultivation/quality data	X	X	X	X	X	X	X
Grain yield (hkg/ha)	X	X	X	X	X	X	X
Water content	X	X	X	X	X	X	X
Specific weight (kg/hl)	X	X	X	X	X	X	X
Lodging	X	X	X	X	*X	X	X
Crude protein, % in dry matter	X	X	X	X	X	X	X
Weed competition-index	X			X			
Ripening /Earing date	X	X	X	X	X	X	X
Straw length	X	X	X	X	X	X	X
Ear breaking			X	X			
Straw breaking			X	X	X	X	
Winter hardiness	X		X			X	X
Preharvest sprouting	X	X			X	X	X
Susceptibility to diseases.							
BYDV and WDV	X		X		X		
Mildew coverage	X	X	X	X	X	X	X
Barley Rust coverage			X	X			
Scald coverage			X	X		X	X
Net and Spot blotch			X	X			
Septoria coverage	X	X					X
Yellow Rust coverage	X	X					X
Tan Spot (Yellow Leaf Spot)	X	X					
Brown Rust coverage	X	X				X	X
Ramularia leaf spot coverage			X	X			

Black Rust coverage	X	X				X	
Fusarium head blight	X	X					
Crown Rust					X		
Microdochium nivale (snow mould)			X			X	X
Typhula sp. (snow rot)			X				
Other testing parameters							
Baking quality	X	X					
Feed value			X	X	X		
Malting			(X)	X			
Thousand kernel weight	X	X	X	X	X	X	X
Grain size			X	X			
Falling number	X	X				X	X
Amylogram						X	

In the organic trials the following supplementary traits are tested (BBCH refers to plant stage):

At BBCH 28 the rate of coverage (percentage scale) is estimated the first time. There only the covering due to the crop should be estimated. The covering of weed should not be included in this estimation.

At BBCH 31-32 the rate of coverage is estimated the second time. Furthermore the “canopy height during shooting” (cm) is measured the first time.

Additionally radiation tests have been shown to give a good correlation between these indirect parameters of the shading capacity and the photosynthetically active radiation (PAR) below the canopy. The PAR was measured between 2002 and 2009 by a SunScan Canopy Analysis System of Delta-T. With this system the radiation below the canopy is compared with incident light above the crops at the same time. The transmitted fraction, data of the beam fraction sensor, data of the location, date and time takes the work-about and calculates the leaf area index (LAI).

At BBCH 37-47 all measurements and estimations of BBCH 32 are undertaken one more time. Furthermore the frequency of plants with recurved flag leaves is judged with the scale 1-9.

- 1 all flag leaves are rectilinear
- 3 about ¼ of the plants with recurved flag leaves
- 5 about ½ of the plants with recurved flag leaves
- 7 about ¾ of the plants with recurved flag leaves
- 9 all flag leaves are recurved

In addition to these parameters, variety rank orders are established. The competition potency is defined by a number of characteristics. The reaction of the genotypes has been similar in different environments. However, genotype x environment interactions have appeared.

The parameters described above could be used in future in order to establish an index of inhibiting weeds (IIW).

So concerning weed competitiveness in Austria the following parameters are investigated:

Rate of coverage (BBCH 28)	%
Rate of coverage (BBCH 31-32)	%
Canopy height (BBCH 31-32)	cm
Photosynthetically active radiation (BBCH 31-32)	%
Leaf area index (BBCH 31-32)	LAI
Rate of coverage (BBCH 37-47)	%
Canopy height (BBCH 37-47)	cm
Photosynthetically active radiation (BBCH 34-47)	%
Leaf area index (BBCH 34-47)	LAI
Frequency of plants with recurved flag leaves (37-47)	1-9

Varieties of Winter Wheat and Spring Barley VCU-tested under organic growing conditions in Austria.

Species	Variety	Years of testing	Year of inclusion on the National List
<b>Winter Wheat</b>	Pireneo*	2002-2004	2004-
	Aurolus*	2002-2004	2004-2006
	Stefanus*	2003-2005	2005-
	Bitop*	2004-2006	2006-
	Eriwan*	2004-2006	2006-
	Indigo*	2004-2006	2006-
	Blasius*	2006-2007	2007-
	Donnato*	2006-2008	2008-
	Peppino*	2006-2008	2008-
	Arnold	2009	2009-
	Tobias*	2009-2011	2011-
	Ekolog*	2008-2011	2011-
	Rosso*	2008-2011	2011-
Skorpion*	2009-2011	2011-	
<b>Spring Barley</b>	Eliseta	2005	2005-
	Armada*	2004-2006	2006-
	Elfina	2007	2007-2010
	Vienna	2005-2007	2007-
	Mona	2008-2010	2010-

\*These varieties were registered with exclusively organic results.

For **winter rye** each variety registered after 2004 was registered with additional results of organic trials.

For **winter triticale** each variety registered after 2003 was registered with additional results of organic trials.

For **spring oat** each variety registered after 2004 was registered with additional results of organic trials.

**Organic variety trials not intended for national listing.**

If applicants want to have their varieties within the VCU trials to be compared with a new variety, they must pay for the registered variety which is in the VCU-trials as.

Application for VCU-testing after registration: 22,47 €/year,

VCU-Testing after registration: between 188 € (oat) and 364 € (winter wheat)/year.

Organic variety trials for organic farming are also performed by research organizations like HBLFA Raumberg-Gumpenstein, contact information: [waltraud.hein@raumberg-gumpenstein.at](mailto:waltraud.hein@raumberg-gumpenstein.at)

FIBL Austria, contact information: [andreas.kranzler@fibl.org](mailto:andreas.kranzler@fibl.org)

Testing results of variety trials are available on the following websites.

[http://www.raumberg-](http://www.raumberg-gumpenstein.at/c/index.php?option=com_content&view=article&id=831&Itemid=358&lang=de)

[gumpenstein.at/c/index.php?option=com\\_content&view=article&id=831&Itemid=358&lang=de](http://www.raumberg-gumpenstein.at/c/index.php?option=com_content&view=article&id=831&Itemid=358&lang=de)

<http://www.bio-net.at/transferversuche/ackerbau/index.html>

[http://www.lako.at/de/versuche/?lang=de&a=179&a\\_urlname=versuche&versuche\\_a=1](http://www.lako.at/de/versuche/?lang=de&a=179&a_urlname=versuche&versuche_a=1)

Each species marked: "Edelhof biologisch", are the results of organic trials.

Some seed companies and breeders also conduct organic variety trials:

Saatzucht Edelhof, contact: [elisabeth.zechner@edelhof.at](mailto:elisabeth.zechner@edelhof.at))

Kärnter Saatbau, contact: [r.frank@saatbau.at](mailto:r.frank@saatbau.at)

[http://www.saatbau.at/uploads/media/Versuchsbericht\\_2011.pdf](http://www.saatbau.at/uploads/media/Versuchsbericht_2011.pdf)

Results of the location "Weindorf" are organic.

(Source: Clemens Flamm, Austrian Agency for Health and Food Safety - AGES)

## Belgium

In Belgium there are currently no VCU tests specific for organic agriculture. However, the national Belgian Varieties Committee (composed of the members of the Walloon and the Flemish Varieties Committees) is currently exploring the possibility to organize official tests for varieties intended for organic farming. The official tests for conventional varieties are always carried out without plant health treatments (no insecticides, no fungicides, only use of herbicides).

The information below is divided with respect to the two Belgian regions, when not divided the information is valid for both regions. The information is valid for conventional VCU testing only, but since there may be a possibility to do organic VCU in near future the information is listed below.

(Source: Dr. ir. Małgorzata Verleyen Szulc, policy advisor organic farming, Flemish Government, Department of Agriculture and Fisheries, Sustainable Agricultural Development Division)

Variety Office (VCU)	<p><u>Wallonia</u>, Public service of Wallonia <u>Flanders</u>, Flemish Government, Agency for Agriculture and Fisheries</p>
Contact person	<p><u>Wallonia</u>: Joel Rung <a href="mailto:joel.rung@spw.wallonie.be">joel.rung@spw.wallonie.be</a> <u>Flanders</u>: Gilbert Crauwels <a href="mailto:gilbert.crauwels@lv.vlaanderen.be">gilbert.crauwels@lv.vlaanderen.be</a> Dr. ir. Małgorzata Verleyen Szulc <a href="mailto:malgorzata.szulc@lv.vlaanderen.be">malgorzata.szulc@lv.vlaanderen.be</a></p>
National Catalogue of Varieties	<p><u>Wallonia</u>: Portail de l'Agriculture Wallonne <a href="http://agriculture.wallonie.be/apps/spip_wolwin/article.php?id_article=68">http://agriculture.wallonie.be/apps/spip_wolwin/article.php?id_article=68</a> <a href="http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/Cat_BE_A_en_H_2012_03_19_FR.pdf">http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/Cat_BE_A_en_H_2012_03_19_FR.pdf</a> <u>Flanders</u>: Landbouw en Visserij <a href="http://lv.vlaanderen.be/nlapps/docs/default.asp?fid=133">http://lv.vlaanderen.be/nlapps/docs/default.asp?fid=133</a> <a href="http://lv.vlaanderen.be/nlapps/data/docattachments/Cat_BE_A_en_H_2012_06_07_NL.pdf">http://lv.vlaanderen.be/nlapps/data/docattachments/Cat_BE_A_en_H_2012_06_07_NL.pdf</a></p>
Descriptive or recommended List	<p><u>Wallonia</u>: No <u>Flanders</u>: In Flanders there is a list with descriptive and recommended varieties for conventional varieties.</p>
Application form	<p><u>Wallonia</u>: Joël Rung Public service of Wallonia (SPW-DGARNE) Direction of Quality Chaussée de Louvain, 14</p>

	<p>B-5000 NAMUR (Belgique)          Tel: +32(0)81/64.95.97 - Fax: +32(0)81/64.95.44          E-mail: <a href="mailto:joel.rung@spw.wallonie.be">joel.rung@spw.wallonie.be</a>  <u>Flanders:</u>          Gilbert Crauwels          Flemish Government, Agency for Agriculture and Fisheries          Koning Albert II-laan 35 bus 41   1030 Brussel          Tel. 02 552 74 43   Fax 02 552 74 01   GSM 0475 30 19          20          E-mail : <a href="mailto:gilbert.crauwels@lv.vlaanderen.be">gilbert.crauwels@lv.vlaanderen.be</a></p>
Application date	<p><u>Wallonia:</u>  <a href="http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/2009catannexe2.pdf">http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/2009catannexe2.pdf</a>  <u>Flanders:</u>  <a href="http://lv.vlaanderen.be/nlapps/data/docattachments/Uiterste%20data%20ontvangst.pdf">http://lv.vlaanderen.be/nlapps/data/docattachments/Uiterste%20data%20ontvangst.pdf</a></p>
Fees	<p><u>Wallonia:</u>          Application fee: 220 €          Maintenance fee: 110-330 €  <a href="#">Conventional VCU tests</a>  <u>Flanders:</u>          Application fee: 220 €          Maintenance fee: 110-330 €  <a href="#">Conventional VCU tests</a></p>
Address for shipping seed	<p><u>Wallonia:</u>          Ir Guillaume Jacquemin          Walloon Agricultural Research Centre (CRA-W)          Production and Sectors Department          Crops Production Systems Unit          Address: Bâtiment Arthur Peterman, 4 rue du Bordia          5030 Gembloux (Belgium)          Telephone: (+32) (0) 81 625027          Mobile: (+32) (0)474961289          E-mail : <a href="mailto:g.jacquemin@cra.wallonie.be">g.jacquemin@cra.wallonie.be</a>          Website : <a href="http://www.cra.wallonie.be">http://www.cra.wallonie.be</a>  <u>Flanders:</u>          Dr. Joke Pannecoucq          The Institute for Agricultural and Fisheries Research          Unit: Plant          Address: Burg. Van Gansberghelaan 109 bus 1          9820 Merelbeke          Telephone: (+32) (0) 92722687          Fax: (+32) (0) 92722701</p>

	<p>E-mail : <a href="mailto:joke.pannecoucq@ilvo.vlaanderen.be">joke.pannecoucq@ilvo.vlaanderen.be</a></p> <p>Website : <a href="http://www.ilvo.vlaanderen.be">www.ilvo.vlaanderen.be</a></p>
Years and number of locations for testing	<p>Min. 2 years</p> <p>There are 7 locations for barley and 9 locations for wheat in Belgium.</p>
Variety Board	<p>“National Belgian Varieties Committee” (interregional technical working group, composed of experts from Wallonia and Flanders) decides whether a variety shall be registered in the national catalogue or not. The decisions are based on the experimental results of the official tests.</p>
Testing results	<p><u>Wallonia</u></p> <p>Testing results:  <a href="http://agriculture.wallonie.be/apps/spip_wolwin/article.php3?id_article=68">http://agriculture.wallonie.be/apps/spip_wolwin/article.php3?id_article=68</a></p> <p><u>Flanders</u></p> <p>Testing results:  <a href="http://lv.vlaanderen.be/nlapps/docs/default.asp?fid=146">http://lv.vlaanderen.be/nlapps/docs/default.asp?fid=146</a></p>
Test protocols	<p><u>Wallonia</u></p> <p>Testing procedures:  <a href="http://agriculture.wallonie.be/apps/spip_wolwin/article.php3?id_article=205">http://agriculture.wallonie.be/apps/spip_wolwin/article.php3?id_article=205</a></p> <p><u>Flanders</u></p> <p>Testing procedures (DUS and VCU):  <a href="http://lv.vlaanderen.be/nlapps/docs/default.asp?id=949">http://lv.vlaanderen.be/nlapps/docs/default.asp?id=949</a></p>
Useful links	<p><u>Wallonia:</u></p> <p>Regulations  <a href="http://agriculture.wallonie.be/apps/spip_wolwin/article.php3?id_article=68">http://agriculture.wallonie.be/apps/spip_wolwin/article.php3?id_article=68</a>  <a href="http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/2009catannexe1.pdf">http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/2009catannexe1.pdf</a>          (Currently re-examining the circular or procedure of deposit of the new applications for Walloon region)  <a href="http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/circulaire_demandeur_2010.pdf">http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/circulaire_demandeur_2010.pdf</a>).</p> <p><u>Flanders:</u></p> <p>Regulations: <a href="http://lv.vlaanderen.be/nlapps/docs/default.asp?id=946">http://lv.vlaanderen.be/nlapps/docs/default.asp?id=946</a>          Application procedure: <a href="http://lv.vlaanderen.be/nlapps/docs/default.asp?id=947">http://lv.vlaanderen.be/nlapps/docs/default.asp?id=947</a></p>



**Organic variety trials not intended for national listing:**

Organic variety testing in Wallonia is performed by:

Organic Study Centre: <http://www.cebio.be/membres/vetabio.html> . Contact person: Eddy Montignies  
[eddy.montignies@cebio.be](mailto:eddy.montignies@cebio.be)

In Flanders there are test centers specific for organic agriculture. Inagro runs tests of cereals  
<http://www.inagro.be/Professioneel/Biologische%20Teelt/Paginas/Advies.aspx> Contact person: Lieven  
Delanote [lieven.delanote@inagro.be](mailto:lieven.delanote@inagro.be)

These are not VCU tests for new varieties to be put on the national list but rather post-registration tests  
e.g. <http://www.ccbt.be/sites/default/files/files/Rassen%20zomertarwe%202011.pdf>

In Flanders information about test results on organic varieties is disseminated via the Coordination of Applied Research and Extension on Organic Farming ([CCBT vzw](#))

(Source: Dr. ir. Małgorzata Verleyen Szulc, policy advisor organic farming, Flemish Government, Department of Agriculture and Fisheries, Sustainable Agricultural Development Division)

## Czech Republic

Organic farming in Czech Republic is becoming increasingly popular with around 10 % of the agricultural land being organic. Organic VCU-testing may well be a task in the near future in the Czech Republic, but so far there is no possibility to have a variety VCU-tested under organic growing conditions, and there have been no applications so far. (Source: Radmila Šafaříková, ÚKZÚZ)

Variety Office (VCU)	ÚKZÚZ - Central Institute for Supervising and Testing in Agriculture <a href="http://www.ukzuz.cz/">http://www.ukzuz.cz/</a>
Contact person	Radmila Šafaříková <a href="mailto:radmila.safarikova@ukzuz.cz">radmila.safarikova@ukzuz.cz</a>
National Catalogue of Varieties	<a href="http://www.ukzuz.cz/Folders/8331-1-National+List+of+Plant+Varieties.aspx">http://www.ukzuz.cz/Folders/8331-1-National+List+of+Plant+Varieties.aspx</a>
Application form	<a href="http://www.ukzuz.cz/Folders/8331-1-National+List+of+Plant+Varieties.aspx">http://www.ukzuz.cz/Folders/8331-1-National+List+of+Plant+Varieties.aspx</a>
Variety Board	ÚKZÚZ, Národní odrůdový úřad

### Organic variety trials not intended for national listing:

According to Ing. Petr Konvalina, PhD, Department of Applied Plant Biotechnology, Faculty of Agriculture, University of South Bohemia in České Budějovice there have been some long term variety testing under organic growing conditions at the Czech University of Live Science (contact Ivana Capouchová).

But mostly organic farmers in the Czech Republic have to orientate themselves according to descriptions of variety properties available in the Recommended list of conventional varieties or in other information sources. The pertinence of their choice have to be verified in practice.

There is a current proposal for a research project to improve the system for organic bread wheat varieties for organic farming. (Source: Ing. Zdeněk Stehno, CSc., Gene Bank, Crop Research Institute)

## Denmark

Since 2006 it has been possible to have a variety VCU tested with supplementary organic trials in Denmark.

In Denmark new varieties are always tested according to a standard VCU protocol under conventional growing conditions. If the applicant at the time of application claims, that the variety has specific characteristics not covered by the standard protocol, it is possible to ask for supplementary investigations. This can be malting or baking qualities or suitability for growing under organic conditions. When organic growing conditions are requested the standard conventional VCU protocol is supplemented with organic field trials in cooperation between the Department of Variety Testing and the Knowledge Centre for Agriculture. The organic field trials are part of the Danish National Field Trials and are carried out by the Knowledge Centre for Agriculture.

The VCU testing is performed in 2 growing seasons at four or five different locations depending on species, where the new variety is compared to all other varieties on the Danish market including new applications. In addition there are 20 chemically untreated observation parcels, where diseases and a few other traits are assessed (see table below). The organic field trials are performed in two growing seasons in four locations and in addition to the standard testing parameters yield, diseases, percentage of weed ground-cover, lodging, winter hardiness and other relevant parameters are assessed under organic growing conditions (for more details see next chapter). When the new variety is evaluated, performance under organic growing conditions is taken into consideration.

Two varieties of spring barley are in testing for inclusion on the Danish National List as suited for organic growing conditions. These are the first varieties being VCU-tested with supplementary organic growing conditions in Denmark.

(Source: Gerhard Deneken, Head of Variety Testing Department, Danish AgriFish Agency)

Variety Office (VCU)	Department of Variety Testing. The authority administrating the legislation regarding listing and plant variety protection of plant varieties in Denmark is the <a href="#">Danish AgriFish Agency</a> under the Ministry of Food, Agriculture and Fisheries. Testing is carried out in collaboration with The Danish Farmers Union and some Plant Breeders.
Contact person	Gerhard Deneken <a href="mailto:gde@naturerhverv.dk">gde@naturerhverv.dk</a>
National Catalogue of Varieties	In the <a href="#">Danish Gazette for Plant Varieties</a> the Official List of Varieties is published.
Descriptive or Recommended List of Varieties	A <a href="#">descriptive list</a> is also available. In addition to the above mentioned official lists, Danish farmers, consultants and companies use the webpage <a href="http://www.sortinfo.dk">http://www.sortinfo.dk</a> . At SortInfo the varieties from the official variety testing, the national field trials (conventional and organic) and supplementary trials are listed and described as soon as testing results are ready. English version is available. At <a href="http://pdsdb.pdir.dk/">http://pdsdb.pdir.dk/</a> there is a Database for Variety Testing, and here it is possible to search for varieties on the Danish National List and varieties in testing for inclusion on the list.
Recognition of or-	If an organic variety is accepted for inclusion on the National List it will be clearly

ganic varieties	evident on the descriptive list.
Application form	<a href="http://1.naturerhverv.fvm.dk/anmeld_til_afproevning.aspx?ID=9452">http://1.naturerhverv.fvm.dk/anmeld_til_afproevning.aspx?ID=9452</a> Application form and Technical Questionnaire must be sent to the following address: NaturErhvervstyrelsen Afdeling for Sortsafprøvning Teglværksvej 10, Tystofte DK-4230 Skælskør Or by e-mail to <a href="mailto:Tystofte@naturerhverv.dk">Tystofte@naturerhverv.dk</a> If you are not domiciled in Denmark the application can be sent through a representative domiciled in Denmark. The representative may be a person, a firm or a patent agency.
Application date	Survey of Closing dates for Application and submission of Plant Material for Trials is listed at the bottom of the same webpage as the application forms.
Fees, 2012	Application 4500 DKK (approx. 604 €) VCU testing per year 13.100 – 15.100 DKK (approx. 1758 – 2026 €) With additional cost for supplementary testing and testing under organic growing conditions, 2012 prices: 14.000 DKK (approx. 1880 €) for spring varieties or 24.000 DKK (approx. 3200 €) for winter varieties. The price depends on the number of varieties in the trials and the extend of testing. Testing fees will be calculated and the applicant confirms the additional costs before the testing starts. Maintenance fee 4800 DKK (approx. 644 €) for maintaining standard sample. <a href="http://1.naturerhverv.fvm.dk/sortsafproevning.aspx?ID=11819">http://1.naturerhverv.fvm.dk/sortsafproevning.aspx?ID=11819</a>
Seed requirements	Survey of Closing dates for Application and submission of Plant Material for Trials is listed at the bottom of the same webpage as the application forms.
Years and number of locations for testing	The testing is performed in 2 growing seasons at five conventional locations, and supplementary organic trials in four locations.
Testing results	<a href="http://agrifish.dk/vcu-testing.aspx?ID=46557">http://agrifish.dk/vcu-testing.aspx?ID=46557</a> <a href="http://www.sortinfo.dk">http://www.sortinfo.dk</a>
Variety Board	A Variety Testing Board is appointed by the Danish AgriFish Agency for a period of five years. The board consists of 4 members from the Danish AgriFish Agency, 3 members from Breeders Associations, 2 members from the Danish Advisory service and 1 member from the Danish Organic Association.

VCU testing criteria in Denmark. In principle all species of cereals can be tested in the trials. In addition to the parameters listed in the table below are the registrations made in the organic trials, described in the next chapter.

Species: Testing parameter:	Spring Barley	Oat	Winter Wheat	Spring Wheat	Winter triticale	Spring Triticale
Grain yield (hkg/ha)	X	X	X	X	X	X
Water content	X	X	X	X	X	X
Hectoliter weight (kg/hl)	X	X	X	X	X	X
Lodging, if it occurs	X	X	X	X	X	X
Crude protein, % in dry matter	X		X	X	X	
Starch, % in dry matter	X		X	X		
Susceptibility to diseases						
Mildew coverage	X	X	X	X	X	X
Barley Rust coverage	X					
Scald coverage	X	X				
Net and Spot blotch	X					
Septoria coverage			X	X	X	X
Brown Rust coverage			X	X		X
Ramularia leaf spot coverage	X					
Cultivation data (observation parcels)						
Ripening date	X	X	X	X	X	X
Straw length	X	X	X	X	X	X
Ear breaking	X	X	X	X	X	X
Straw breaking	X	X	X	X	X	X
Lodging	X	X	X	X	X	X
Winter hardiness			X		X	
Optional testing:						
Baking quality (gluten content, falling number, protein content in flour, flour yield, loaf volume, loaf height, stickiness)			X	X		
Feed value (feed units, amino acid composition..)	X	X	X	X	X	X
Malting	X					

### Organic variety testing not intended for national listing

Apart from being used as a supplement to the conventional VCU, the organic variety trials in the Danish National Field Trials are used by breeders and seed companies to have a variety tested for its suitability for organic cultivation, if e.g. the variety is already VCU tested under conventional conditions in Denmark or if it is listed in the European Common Catalogue.

The price (2012) for signing up a variety for testing is 14.000 DKK (approx. 1880 €) for spring varieties and 24.000 DKK (approx. 3200 €) for winter varieties. It is an impartial and reliable testing system beneficial for breeders, seed companies, advisors and not least farmers. All results are made public - not only results that are beneficial for companies. The results are made available for use shortly after the results are collected in the field. First data are made available in harvest. Results are actively used in the advisory service and for the decision making process of variety choice. Testing results can be viewed in the database [www.sortinfo.dk](http://www.sortinfo.dk). Testing protocols are limited in order to keep the price down.

Information on yield, weed competition and disease assessment under organic growing conditions are important features of the tests.

Testing parameters in the Danish organic variety trials.

	Sping barley	Oat	Winter wheat	Spring wheat	Winter triticale	Spring triticale
Plant density	X	X	X	X	X	X
Grain yield (hkg/ha)	X	X	X	X	X	X
Water content, %	X	X	X	X	X	X
Hectoliter weight (kg/hl)	X	X	X	X	X	X
Starch, % in dry matter	X		X			
Crude protein, % in dry matter	X	X	X	X	X	X
Gluten, %			X			
Lodging	X	X	X	X	X	X
Weed competition (% coverage)	X	X	X (extended protocol)	X	X (extended protocol)	X
Winter hardiness			X		X	
Disease assesments, coverage:						
Mildew	X	X	X	X	X	X
Net and Spot blotch	X	X				
Rust		X				
Barley rust	X					
Yellow rust			X	X	X	X
Brown rust			X	X	X	
Scald	X				X	X
Tan spot				X		X
Septoria			X	X	X	X

Additional registrations can be arranged by extra cost.

From conventional observation parcels, which are not chemically treated, assessment of diseases, straw length and straw breaking and other relevant information is collected

A project is now in progress to experimentally expand the present organic variety trials, especially concerning weed competition and nutrient uptake.

There are four testing locations for organic variety trials. Between 2006 and 2012 there were no winter varieties in the trials, but in 2012 and 2013 there have been few varieties of winter wheat and winter triticale.

Contact person for organic variety trials is Inger Bertelsen, Knowledge Centre for Agriculture, [inb@vfl.dk](mailto:inb@vfl.dk).

## Estonia

Estonia started with VCU testing supplemented with organic trials in 2010. There have been two varieties in the trials, one variety of spring barley and one variety of oat. These varieties were listed at the end of 2011. The breeder of both varieties is Jõgeva Plant Breeding Institute. Conventional VCU tests are supplemented with a test in one organic location.

The main testing criteria in these organic VCU-tests are grain yield, lodging, quality and susceptibility to diseases. In addition to these main criteria ground cover (1-9 points), number of shoots (No/plant) and for winter cereals winter hardiness is assessed.

(Source: Laima Puur, Head of Variety Department of Estonian Agricultural Board and Ivi Loper, Estonian Agricultural Board)

Variety Office (VCU)	Estonian Agricultural Board (EAB), Variety department VCU tests are carried out by Viljandi Testing Centre of Estonian Agricultural Research Center (not part of EAB): <a href="http://pmk.agri.ee/index.php?valik=1331&amp;keel=1&amp;template=template2arc.html">http://pmk.agri.ee/index.php?valik=1331&amp;keel=1&amp;template=template2arc.html</a>
Contact person	Laima Puur, Head of Variety department of EAB <a href="mailto:Laima.Puur@pma.agri.ee">Laima.Puur@pma.agri.ee</a>
National Catalogue of Varieties	<a href="http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=375">http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=375</a>
Descriptive or Recommended List of Varieties	Estonia has a list for recommended varieties, but not for organic varieties. On the following link there is more information about the Recommended List. <a href="http://www.pma.agri.ee/index.php?id=104&amp;sub=130">http://www.pma.agri.ee/index.php?id=104&amp;sub=130</a>
Recognition of organic varieties	Variety with symbol M for organic farming
Application form	<a href="http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=191&amp;sub3=549">http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=191&amp;sub3=549</a> Mrs Eha Kunberg Variety Department Estonian Agricultural Board Vabaduse sq 4 71020 Viljandi Estonia e-mail: <a href="mailto:eha.kunberg@pma.agri.ee">eha.kunberg@pma.agri.ee</a>
Application date	Spring crops March, 15 Winter crops July, 15
Fees	Application fee: 12,78 € <a href="http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=383">http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=383</a> VCU testing fee: 190 € per variety per location per year (triticale, rye) other varieties 220 €. For oat the price is 150 €. These prices are valid for organic conditions. <a href="http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=185">http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=185</a> or <a href="http://pmk.agri.ee/viljandi/enghinnakiri.php">http://pmk.agri.ee/viljandi/enghinnakiri.php</a> (Viljandi Testing Centre)



	<p>Maintenance fee, National List:            Entry fee National List 9,58 €            Annual fee 1-4 years 12,78 €            Annual fee 5-10 years 15,98 €  <a href="http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=383">http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=383</a></p>
Seed requirements	6 kg of cereal for 2 years of testing for one testing location.
Address for shipping seed	<p>Send to Head of Value Testing Department Mrs Ülle Soorm            Agricultural Research Centre            Value Testing Department            Viljandi testing Centre            71065 Viljandi            Estonia +372 43 34 406            e-mail: <a href="mailto:viljandi@pmk.agri.ee">viljandi@pmk.agri.ee</a></p>
Years and number of locations for testing	<p>2 years for annual crops            2-3 years for perennial crops            Min. number of testing places for cereals is 4            There is one organic location.</p>
Testing results	<p>The testing results are available on the webpage of Viljandi Testing Centre of Agricultural Research Center on the following link:  <a href="http://pmk.agri.ee/viljandi/engkatsed.php">http://pmk.agri.ee/viljandi/engkatsed.php</a></p>
Testing protocols	<p>At the moment Estonia has a testing protocol only for organic cereals.            This protocol is available on the webpage of Agricultural Board (not from the page of Agricultural Research Center), but only in Estonian language.</p>
Variety Board	<p>Variety Listing Board.            The Board consists of 7 members - 5 members from the Estonian Agricultural Board (from Variety Department and from Seed Department) and 2 from the Agricultural Research Center.</p>
Useful links	<p>Ministry of Agriculture, Estonian Agricultural Board  <a href="http://www.pma.agri.ee/index.php?id=102&amp;sub=174">http://www.pma.agri.ee/index.php?id=102&amp;sub=174</a>            Information about Variety Listing Estonia:  <a href="http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=185">http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=185</a>            Regulations:  <a href="http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=186&amp;sub3=374">http://www.pma.agri.ee/index.php?id=104&amp;sub=130&amp;sub2=186&amp;sub3=374</a></p>

## Organic VCU testing criteria in Estonia.

Species: Testing parameter:	Winter Wheat	Spring Wheat	Spring Triticale	Spring Barley	Oat
Cultivation/quality data					
Grain yield (hkg/ha)	X	X	X	X	X
Water content	X	X	X	X	X
Specific weight (kg/hl)	X	X	X	X	X
Lodging	X	X	X	X	X
Crude protein, % in dry matter	X	X	X	X	X
Ripening date	X	X	X	X	X
Straw length	X	X	X	X	X
Ear breaking				X	
Straw breaking				X	
Winter hardiness	X				
Susceptibility to diseases.					
Mildew coverage	X	X	X	X	
Barley Rust coverage Leaf rust of barley	X	X		X	
Scald coverage				X	
Net and Spot blotch	X	X		X	
Septoria coverage	X	X			
Yellow Rust coverage	X	X			
Tan Spot (Yellow Leaf Spot)	X	X			
Optional testing:					
Baking quality	X	X			
Feed value			X	X	X

## Varieties VCU-tested under organic growing conditions in Estonia.

Species	Variety	Years of testing	Year of inclusion on the National List
<b>Spring Barley</b>	Maali	2010-2011	2011
<b>Oat</b>	Kalle	2010-2011	2011

**Organic variety trials not intended for national listing.**

Jõgeva Plant Breeding Institute has performed organic cereals trials for wheat, barley and oat (coordinator: Ilmar Tamm). Listed varieties of spring cereals (oat, spring wheat and barley) has been tested since 2005, winter cereals (rye, winter wheat) and winter turnip rape since 2009. Recommendations to farmers have been published in Estonian. Cereal performance under organic and conventional conditions has been compared (Tamm, I., Tamm, Ü., Ingver, A. (2009) [Spring cereals performance in organic and conventional cultivation](#). *Agronomy Research*, Volume 7, pp. 522-527).

The financing of this nationally applied research project will end by 2013 and the future of the variety testing in organic trials in Estonia is unclear.

(Source: Pille Ardel, Deputy Director, Jõgeva Plant Breeding Institute)

**France**

In France it is possible to have winter wheat varieties VCU tested with supplementary organic trials. Two winter wheat varieties suitable for organic agriculture were registered on the national variety list for the first time in 2011, but within an experimental frame. These two varieties were evaluated in the classic conventional trials network (to get information for conventional farming, not to test specific organic traits) and, at the same time, in a specific trials network under organic growing conditions.

The description contains the classical criteria as the other “classical” conventional varieties and a special description in organic agriculture (Yield, protein and ability to make bread, weed competition, sensibility to common bunt).

Discussions are currently underway to determine a permanent (no more experimental) network for the registration for organic farming. The plan is to have it effectuated next autumn.

For organic farming, there are expectations for one or two new requests for winter wheat next spring.

(Source: Aurélie MAILLIARD, GEVES and Lawrence Fontaine, ITAB)

Variety Office (VCU)	GEVES is the official coordinator of VCU, but ITAB is assisting GEVES in setting up a VCU system for organic farming.
Contact person	Aurélie Mailliard, GEVES, T 02.41.22.86.89
National Catalogue of Varieties	Link to the National Variety List (or the Gazette): <a href="http://cat.geves.info/Page_en/ListeNationale">http://cat.geves.info/Page_en/ListeNationale</a> <a href="http://cat.geves.info/WD140AWP/WD140Awp.exe/CTX_124232-12-MiyXSLuVEP/Cat_Pag_Pwd_Admin_Categorie/SYNC_454674736?WD_ACTION =ME NU&amp;ID=M42">http://cat.geves.info/WD140AWP/WD140Awp.exe/CTX_124232-12-MiyXSLuVEP/Cat_Pag_Pwd_Admin_Categorie/SYNC_454674736?WD_ACTION =ME NU&amp;ID=M42</a> (requires password)
Descriptive or Recommended List of Varieties	ITAB coordinates a network in organic farming for registered varieties and publish recommendations of varieties for organic farming.
Recognition of organic varieties	There is a special mention in the French catalogue “variety tested in organic farming”, but no mention on the European catalogue.
Application form	Explanations about how to register: <a href="http://www.geves.fr/index.php?option=com_content&amp;view=article&amp;id=157&amp;Itemid=456&amp;lang=en">http://www.geves.fr/index.php?option=com_content&amp;view=article&amp;id=157&amp;Itemid=456&amp;lang=en</a>  Applications for Varieties registration: <a href="http://www.geves.fr/index.php?option=com_content&amp;view=article&amp;id=404&amp;Itemid=431&amp;lang=en">http://www.geves.fr/index.php?option=com_content&amp;view=article&amp;id=404&amp;Itemid=431&amp;lang=en</a>  Site to download and files to download : <a href="http://cat.geves.info/Page_en/DemandeInscription">http://cat.geves.info/Page_en/DemandeInscription</a> [Formulaire Déno] - Proposition de dénomination variétale [Formulaire n°1] - Demande d'inscription [Formulaire n°2 (DHS)] [Formulaire n°2Bis (VATE)]

	<p>[Formulaire Special] - Demande d'expérimentation</p> <p>Address to send the files:                  Secrétariat du CTPS                  GEVES – 25 rue Georges Morel                  CS 90024                  FR – 49071 BEAUCOUZE Cedex</p>
Application date	<p>Winter varieties: August 15th                  Summer varieties: December 31th  <a href="http://cat.geves.info/Page_en/DemandeInscription">http://cat.geves.info/Page_en/DemandeInscription</a>                  [Règlement Technique] - Céréales à paille  <a href="http://cat.geves.info/page/demandeinscription">http://cat.geves.info/page/demandeinscription</a>                  [Règlement Technique] - Céréales à paille</p>
Fees	<p>Normal fees for conventional farming are: 3500 € for the first year and 1750 € for the 2<sup>nd</sup> year.                  For organic farming, it's still under discussion.  <a href="http://cat.geves.info/Page_en/DemandeInscription">http://cat.geves.info/Page_en/DemandeInscription</a>                  [Bareme] Tarifs des prestations Ctps 2012</p>
Seed requirements	<p><a href="http://cat.geves.info/Page_en/DemandeInscription">http://cat.geves.info/Page_en/DemandeInscription</a>                  [Règlement Technique] - Céréales à paille =&gt; annexe 21</p>
Address for shipping seed	<p>GEVES du Magneraud – Saint Pierre d'Amilly – BP N° 52 - 17700 SURGERES</p>
Years and number of locations for testing	<p>2 years                  16 locations in conventional and 8 locations in organic farming by year were settled up for the evaluation of the 2 varieties tested so far.                  Number of locations for the next trials are currently being discussed.</p>
Testing results	<p>The results are published in the “plaquette” October 2011.  <a href="http://cat.geves.info/Page/RECAPDOC/51_Plaqu">http://cat.geves.info/Page/RECAPDOC/51_Plaqu</a></p>
Testing protocols	<p>The protocol isn't yet available.</p>
Variety Board	<p>CTPS proposes to agriculture ministry to register or not the variety.</p>

VCU testing criteria in France.

Species: Testing parameter:	Winter Wheat <i>Organic trials</i>	Winter Wheat <i>classical trials</i>
Cultivation/quality data		
Grain yield (hkg/ha)	x	x
Specific weight (kg/hl)	x	x
Lodging		x
Crude protein, % in dry matter	x	x
Weed competition-index	x	
Earing date		x
Straw length	x	
Ear breaking		
Straw breaking		
Winter hardiness		
Susceptibility to diseases.	Only if present (x)	
Mildew coverage	(x)	x
Septoria coverage	(x)	x
Yellow Rust coverage	(x)	x
Brown Rust coverage	(x)	x
Fusarium	(x)	x
Eyes spot		x
Common bunt		x
Optional testing:		
Baking quality (falling number, protein content in flour, loaf volume, loaf height, stickiness)	x	

Varieties VCU-tested under both organic and conventional growing conditions in France.

Species	Variety	Year of inclusion on the National List
<b>Winter wheat</b>	Hendrix Skerzzo	2011 2011

### **Organic variety trials not intended for national listing**

There is a network that conducts screening for organic cereals. The network was settled between the following partners:

GEVES, Variety and Seed Study and Control Group: <http://www.geves.fr/index.php?lang=en>.

ITAB, Technical institute for organic farming, which helps to implement the organic network of VCU testing.

ARVALIS, conventional institute for arable crops, which have several trials in organic farming, in partnership with GEVES (part of the official network).

INRA, research institute, which have some trials in organic farming, in partnership with GEVES (part of the official network).

Coordinator of this French network is Laurence Fontaine from ITAB, [laurence.fontaine@itab.asso.fr](mailto:laurence.fontaine@itab.asso.fr)

The particularity of ITAB is to work (in network) with numerous organizations which have research actions in organic farming.

There are only winter trials, since the demand for spring varieties is not big enough to have a network.

Testing results are available, but only in French. There is an internet page with annual results:

<http://www.itab.asso.fr/itab/varietes-gc-pot.php> (synthesis of trials; individual trials may be published by organizations running the trials).

And another page with first synthesis (2012) by variety (in 2013 there will be around 14 new variety leaflets): <http://www.itab.asso.fr/itab/varietes-bles.php>

Foreign breeders can ask to have a variety in the trial network. During the last years, numerous varieties from different European countries (Switzerland, Germany, Austria, Hungary..) have been tested.

Until last year the trials were free of charge, but this was changed because of an increased number of varieties from abroad with very limited information about potential performance in France. Therefore varieties with no reference in France must now pay to be in the trials. The price of such trials is under evaluation.

## Germany

In Germany there is also a possibility to have a variety VCU-tested with supplementary trials carried out on organic fields. The VCU tests of the Federal variety office are combined with the variety trials under organic conditions done by the federal states. There are 14 trial sites distributed over Germany. For harvest 2013 there have been applications for winter wheat varieties only. The trials are carried out with seed from organic production (if possible) without chemical treatment. (Source: Uta Schnock, Bundessortenamt)

Variety Office (VCU)	Federal Plant Variety Office (Bundessortenamt - Division 2, VCU-testing) <a href="http://www.bundessortenamt.de/internet30/index.php?id=3&amp;L=1">http://www.bundessortenamt.de/internet30/index.php?id=3&amp;L=1</a>
Contact person	Uta Schnock <a href="mailto:Uta.Schnock@bundessortenamt.de">Uta.Schnock@bundessortenamt.de</a>
National Catalogue of Varieties	<a href="http://www.bundessortenamt.de/internet30/index.php?id=22&amp;L=1">http://www.bundessortenamt.de/internet30/index.php?id=22&amp;L=1</a> <a href="http://www.bundessortenamt.de/internet30/?id=32&amp;L=0">http://www.bundessortenamt.de/internet30/?id=32&amp;L=0</a>
Descriptive or Recommended List of Varieties	See „Beschreibende Sortenliste Getreide 2012“ (pdf in internet). Results from organic trials page 130. There is no recommended list. The German federal states are each responsible for recommendation in their territory.
Recognition of organic varieties	It is indicated with a footnote.
Application form	<a href="http://www.bundessortenamt.de/internet30/?id=66&amp;L=0">http://www.bundessortenamt.de/internet30/?id=66&amp;L=0</a> (online application requires password)
Application date	Publication in :“Blatt für Sortenwesen“ (official gazette) „Bekanntmachung über Bestimmungen für den Beginn des Prüfungsanbaues und die Vorlage des Vermehrungsmaterials“.
Fees	The application fee for listing is 370 € VCU: The applicant is charged a normal fee (in winter wheat for VCU 2.900 € per year) Maintenance fee: refer to respective publication in the internet <a href="http://www.bundessortenamt.de/internet30/index.php?id=63&amp;L=0">http://www.bundessortenamt.de/internet30/index.php?id=63&amp;L=0</a> <a href="http://www.bundessortenamt.de/internet30/fileadmin/Files/PDF/Bekanntm/BNr_1909.pdf">http://www.bundessortenamt.de/internet30/fileadmin/Files/PDF/Bekanntm/BNr_1909.pdf</a>
Seed requirements	Publication in „Blatt für Sortenwesen“ (official gazette) „Bekanntmachung über Bestimmungen für den Beginn des Prüfungsanbaues und die Vorlage des Vermehrungsmaterials.“
Address for shipping seed	Publication in „Blatt für Sortenwesen“ (official gazette) „Bekanntmachung über Bestimmungen für den Beginn des Prüfungsanbaues und die Vorlage des Vermehrungsmaterials.“
Years and number of locations for testing	In winter wheat and other small grained cereals VCU testing is done in three years, in other species it is a two year testing.
Testing results	Not available online
Testing protocols	The trial protocol follows the technical guideline for conventional production.



	<p>Additionally the mass in beginning is notified as well as the ground coverage. In quality the milling and baking characters are tested. Additionally the gluten content is tested.</p> <p>The testing frame for other species than winter wheat has not been set. It would have to be discussed with the applicant as well as with the interested circles.</p>
Variety Board	Variety committee of federal plant variety office.
Useful links	<p>Federal Ministry of Food, Agriculture and Consumer Protection:  <a href="http://www.bmelv.de/EN/Homepage/homepage_node.html">http://www.bmelv.de/EN/Homepage/homepage_node.html</a></p> <p>VCU-guidelines  <a href="http://www.bundessortenamt.de/internet30/fileadmin/Files/PDF/Richtlinie_LW2000.pdf">http://www.bundessortenamt.de/internet30/fileadmin/Files/PDF/Richtlinie_LW2000.pdf</a></p>

Varieties VCU-tested under organic growing conditions in Germany.

Species	Variety	Years of testing	Year of inclusion on the National List
<b>Winter wheat</b>	Aszita	2006-2008	2005
	Butaro	2006-2008	2009
	Naturastar	2006-2008	2002
	Wenga	2006-2008	2004

**Organic variety trials not intended for national listing.**

As described above, in Germany the Bundessortenamt is responsible for VCU testing and registration. After registration the federal states are responsible for further testing of the registered varieties to examine the regional performance. This system of organic trials is carried out by the federal states. They issue the recommendations to the farmers. These organic trials are the same trials in which new applications for organic VCU is included – so the trial protocol is the same as for the trials in VCU testing. Beside nationally registered varieties also possibly interesting EU varieties from the EU catalogue are included in the trials.

The results of the trials (Landessortenversuche) are available on the internet pages of each of the federal states. In the descriptive list of varieties “Beschreibende Sortenliste Getreide 2012” it is possible to find, beginning from page 285, the web-addresses of the institutions in the federal states, where the results can be found. Example: Landwirtschaftskammer Niedersachsen – [www.lwk-niedersachsen.de](http://www.lwk-niedersachsen.de) – Pflanze – ökologischer Landbau.

Beside the official trials of the federal states most of the agricultural universities have trial fields in organic production.

(Source: Uta Schnock, Bundessortenamt)

## Ireland

In Ireland there is no organic VCU testing.

Variety Office (VCU)	Crop Variety Evaluation Division <a href="http://www.agriculture.gov.ie/">http://www.agriculture.gov.ie/</a>
Contact person	Josephine Brennan <a href="mailto:Josephine.Brennan@agriculture.gov.ie">Josephine.Brennan@agriculture.gov.ie</a>
National Catalogue of Varieties	<a href="http://www.agriculture.gov.ie/farmingsectors/crops/cropvarietyevaluationcve/cvepublicationsinformation/">http://www.agriculture.gov.ie/farmingsectors/crops/cropvarietyevaluationcve/cvepublicationsinformation/</a>

### Organic variety trials not intended for national listing

Organic variety trials are carried out on a limited basis only. There are two testing sites and the data obtained are limited and the information is not published. The testing is carried out as a gesture to interested parties. The information generated is made freely available to interested parties, but the testing does not qualify for acceptance on the National List of Varieties.

Crops include Winter Wheat, Winter Oats, Triticale, Spring Wheat & Spring Oats.

Protocols are identical to conventional trials.

(Source: Josephine Brennan, Crops Evaluation and Certification Division, Department of Agriculture, Food and the Marine, Backweston Farm)

## Latvia

It is possible to have VCU-testing supplemented with organic trials for cereal species done in Latvia, but since 2010 there have not been any applications. VCU tests are performed in both conventional and organic locations, with the same testing protocols.

(Source: Velta Evelone, State Plant Protection Service, Director of Seed Control Department)

Variety Office (VCU)	Since 1st of August 2012 the responsible institution for organic VCU is Agriculture University of Latvia, before that date - State Plant Protection Service.
Contact person	Anda Rutenberga <a href="mailto:anda.rutenberga@llu.lv">anda.rutenberga@llu.lv</a>
National Catalogue of Varieties	<a href="http://www.vaad.gov.lv/english/plant-variety.aspx">http://www.vaad.gov.lv/english/plant-variety.aspx</a>
Descriptive or Recommended List of Varieties	A recommended list of varieties will be made.
Recognition of organic varieties	Remark "Bio" is attached on the national list.
Application form	Application form is still available at: <a href="http://www.vaad.gov.lv/english/plant-variety-testing/value-for-cultivation-and-use-testing-of-plant-varieties.aspx">http://www.vaad.gov.lv/english/plant-variety-testing/value-for-cultivation-and-use-testing-of-plant-varieties.aspx</a> But it is going to be at another website for the next year due to institution changes.
Application date	The application shall be submitted to the University of Agriculture of Latvia: -for spring cereals – until 1 <sup>st</sup> of March; -for winter cereals – until 1 <sup>st</sup> of August If the application regarding the variety assessment of spring cereals is registered after 20 <sup>th</sup> of March, and the application regarding variety assessment of winter cereal after 20 <sup>th</sup> of August, the variety assessment shall be carried out next year.
Fees	Application fee: No more, since 01.08.2012. VCU testing for one variety, one place, one year: 170 – 180 LVL (approx. 244 – 258 €) State duty for including the variety in National Variety List: 12 LVL (approx. 17 €) Maintenance fee: 9 LVL for each year (approx. 13 €) Extension of the period: 12 LVL (approx. 17 €)
Seed requirements	Usually approx. 5 kg
Address for shipping seed	University of Agriculture of Latvia
Years and number of locations for testing	Spring cereals - 2 years Winter cereals - 2 years + 1 year in case of mild winter For cereals there are 3 testing places in different regions. Min. 2 testing locations for organic trials.
Testing results	Only varieties to be registered on National Variety List: <a href="http://www.vaad.gov.lv/sakums/aktualitates/iespieddarbi.aspx">http://www.vaad.gov.lv/sakums/aktualitates/iespieddarbi.aspx</a>

<p>Variety Board</p>	<p>The decision of inclusion on the National List is made by State Plant Protection Service, but a proposal comes from National Council of Plant Varieties and its expert groups.</p>
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## Organic VCU testing criteria in Latvia.

Species: Testing parameter:	Winter Wheat	Spring Wheat	Winter Rye	Winter Triticale	Spring Barley	Oat	Buck-wheat
Cultivation/quality data							
Grain yield	X	X	X	X	X	X	X
Water content	X	X	X	X	X	X	X
Volume weight,	X	X	X	X	-	-	-
Lodging	X	X	X	X	X	X	X
Crude protein, % in dry matter	X	X	X	X	X	X	X
Starch, % in dry matter	X	X	X	X	X	X	X
Ripening date	X	X	X	X	X	X	X
Straw length	X	X	X	X	X	X	X
Winter hardiness	X	-	X	X	-	-	-
*Falling number	X	X	X	X	-	-	-
Crop yield (%), in comparison with standard	X	X	X	X	X	X	X
Crude fat content (%)	-	-	-	-	-	X	-
Husk (%)	-	-	-	-	-	X	X
Vegetation period days	X	X	X	X	X	X	X
Thousand seed weight	X	X	X	X	X	X	X
Diseases.	Resistance against some diseases are tested on separate trials performed by Latvian Plant Protection research Centre.						
Mildew coverage ( <i>Blumeria graminis</i> )	X	X	X	X	X	X	
Tan Spot (Yellow Leaf Spot)	X	X	-	X	-	-	
Root rot ( <i>Fusarium spp.</i> , <i>Bipolaris sorokiniana</i> )	X	X	X	X	X	X	
Leaf blotch of oat ( <i>Drechslera avenae</i> )	-	-	-	-	-	X	
Glume blotch ( <i>Leptosphaeria nodorum</i> )	X	X	-	X	X	-	
<i>Septoria</i> leaf blotch	X	X	X	X	-	-	
Leaf blotch of cereals ( <i>Rhynchosporium graminicola</i> )	-	-	X	X	X	-	
Cereal rust ( <i>Puccinia spp.</i> )	X	X	X	X	X	X	
Leaf spot of barley ( <i>Helminthosporium sativum</i> )	-	-	-	-	X	-	
Leaf blotch of oat ( <i>Pyrenophora avena</i> )	-	-	-	-	-	X	
<i>Fusarium spp.</i>	X	X	X	X	X	X	

For wheat also gluten content, % and sedimentation (Zeleny Index), cm<sup>3</sup>

Varieties VCU tested under organic growing conditions in Latvia.

Species	Variety	Years of testing	Years of inclusion on the National List (the entire period is listed)
<b>Winter Wheat</b>	Banga S	2006 – 2008	
	Sakta	2006	
<b>Spring Wheat</b>	Uffo	2008 – 2009	21.05.2008 - 31.12.2018
<b>Buckwheat</b>	Aiva	2006 – 2007	01.01.2004 - 31.12.2023
<b>Spring Barley</b>	Rubiola	2007 – 2008	23.03.2011 - 31.12.2021
	Austris (G-131)	2007 - 2008	01.01.2009 - 31.12.2018
	Kristaps	2006 - 2007	01.01.2006 - 31.12.2015
	Abava	2004 standard	01.01.2001 - 31.12.2020
	Rasa	2004 – 2005	01.01.2001 - 31.12.2020
<b>Oat</b>	S-156	2006-2007	
	Stendes Darta	2006	01.01.2005 - 31.12.2014
	Arta	2004-2005	01.01.200 - 31.12.2020
	Laima	2004 standard	01.01.2001 - 31.12.2020
<b>Winter Rye</b>	Kaupo	2005-2006	01.01.2001 - 31.12.2020

**Organic variety trials not intended for national listing.**

Organic cereal variety trials in Latvia are mostly performed by research institutions in frames of research projects and breeding programs.

State Priekuli Plant Breeding Institute - spring barley, winter triticale and rye.

State Stende Cereal Breeding Institute - spring barley, oat, wheat.

Study and Research farm of Latvia University of Agriculture "Vecauce" (VCU and other trials).

Agricultural Research Institute (agency of Latvia University of Agriculture, located in Skriveri).

Information and contact persons can be found on the homepages of the institutions.

(Source: Dr. Linda Legzdina, State Priekuli Plant Breeding Institute)

**Lithuania**

In Lithuania the Plant Variety Division of the State Plant Service under the Ministry of Agriculture is responsible for VCU testing. There are seven Plant Varieties Testing Divisions for the performance of VCU tests. Testing of varieties is conducted at normal fertilizer and pesticide levels. There is no official VCU testing for organic farming in Lithuania.

(Source: Sigita Juciuviene, Head of Plant Variety Division [sigita.juciuviene@vatzum.lt](mailto:sigita.juciuviene@vatzum.lt) )

Information about official variety testing can be found in the website – [www.vatzum.lt](http://www.vatzum.lt).

**Organic variety trials not intended for national listing.**

At the Institute of Agriculture at the Lithuanian Research Centre for Agriculture and Forestry they have a Department for cereal breeding. Although there is no special organic breeding programmes, there have been organic variety trials of promising winter and spring breeding lines since 2004 in certified organic fields. But because of limited capacity, only Lithuanian varieties are tested. Contact person is Dr. Alge Leistrumaite [alge@lzi.lt](mailto:alge@lzi.lt), Lithuanian Institute of Agriculture.

(Source: Dr. Alge Leistrumaite, Lithuanian Institute of Agriculture)

## Norway

In Norway VCU-testing is performed under conventional conditions, but can be supplemented with organic field trials if requested.

(Source: Pia Borg, Tor Erik Jørgensen, Mattilsynet).

Information below is from relevant webpages.

Variety Office (VCU)	Mattilsynet is responsible for administrating the VCU-testing.
Contact person	Mauritz Åsveen <a href="mailto:Mauritz.Aassveen@bioforsk.no">Mauritz.Aassveen@bioforsk.no</a>
National Catalogue of Varieties	<a href="http://www.plantesortsnemnda.no/media/5251/norwegian%20national%20list%20of%20varieties%202012.07.15.pdf">http://www.plantesortsnemnda.no/media/5251/norwegian%20national%20list%20of%20varieties%202012.07.15.pdf</a>
Application form	<a href="http://www.mattilsynet.no/skjema/planter/skjemaer_s_varer_8315">http://www.mattilsynet.no/skjema/planter/skjemaer_s_varer_8315</a> Send to: Mattilsynet Regionkontoret for Oslo, Akershus og Østfold Felles postmottak Postboks 383, N-2381 Brumunddal
Fees	For conventional testing: <u>Application fee 1500 NOK</u> <u>Maintenance fee per year 1800 NOK</u> <u>VCU per year 8985 NOK</u> <a href="http://www.mattilsynet.no/planter/sortsgodkjenning/offisiell_registrering_av_plantesorter_10655">http://www.mattilsynet.no/planter/sortsgodkjenning/offisiell_registrering_av_plantesorter_10655</a>
Years of testing	3 years
Variety Board	Plant Variety Board - Plantesortsnemnda (Seksjon Nasjonale Godkjenninger -SNG), 7 members makes recommendations. Mattilsynet makes final decision. <a href="http://www.plantesortsnemnda.no/sammensetning">http://www.plantesortsnemnda.no/sammensetning</a>
Useful links	<a href="http://www.mattilsynet.no/mattilsynet/multimedia/archive/00019/Retningslinjer_f_o_19049a.pdf">http://www.mattilsynet.no/mattilsynet/multimedia/archive/00019/Retningslinjer_f_o_19049a.pdf</a> (Bl.a. testparametre) <a href="http://www.bioforsk.no/ikbViewer/page/fagomrader/fagomrade/omrade/tema/tema?p_dimension_id=16620&amp;p_dimension_under=16620">http://www.bioforsk.no/ikbViewer/page/fagomrader/fagomrade/omrade/tema/tema?p_dimension_id=16620&amp;p_dimension_under=16620</a>

### Organic variety trials not intended for national listing

The Norwegian Institute for Agricultural and Environmental Research (Bioforsk) and Norwegian Agricultural Extension Service (NLR) perform organic variety trials. The trials are financed through The Norwegian Institute for Agricultural and Environmental Research (Bioforsk) and Norwegian Agricultural Extension Service own budgets.

It may be possible for a foreign breeder to have an organic variety tested in the organic variety trials, the price is not established.

Results from the trials are published in Norwegian for the farmers:

<http://www.kornforum.no/fagartikler/5827/>

Contact person: Einar Strand [einar.strand@bioforsk.no](mailto:einar.strand@bioforsk.no) (coordinator cereals Bioforsk and NLR).

(Source: Einar Strand, Bioforsk, The Norwegian Institute for Agricultural and Environmental Research)



**Poland**

In Poland there are no trials for organic VCU testing. For future inquiries, see listed contact information below.

Variety Office (VCU)	COBORU, Research Centre for Cultivar Testing <a href="http://www.coboru.pl/English/index_eng.aspx">http://www.coboru.pl/English/index_eng.aspx</a>
Contact person	Andrzej Najewski <a href="mailto:a.najewski@coboru.pl">a.najewski@coboru.pl</a>
National Catalogue of Varieties	<a href="http://www.coboru.pl/Polska/Rejestr/ListyOdmian/lista_rolnicze_2012.pdf">http://www.coboru.pl/Polska/Rejestr/ListyOdmian/lista_rolnicze_2012.pdf</a>
Useful links	Regulations: <a href="http://www.coboru.pl/English/Podstawy_prawne_eng/podstawy_prawne_eng.aspx">http://www.coboru.pl/English/Podstawy_prawne_eng/podstawy_prawne_eng.aspx</a>

**Organic variety trials not intended for national listing**

Contact persons in organic farming can be found on the webpage of CDR, the national agricultural advisory service: <http://www.cdr.gov.pl/index.php/o-instytucji-mainmenu-54/kontakt-mainmenu-72>

## Sweden

There is no official organic VCU-testing in Sweden, and there have not been any requests about organic VCU tests so far. Varieties used in organic farming are conventional varieties from the National List or the Common European Catalogue of Varieties. Numerous conservation varieties (bevarandesorter) have been accepted on the National List of Plant Varieties. On the National List of Plant Varieties, 2012 there are 14 conservation varieties of wheat, 7 barley and 5 oat. These varieties are used by organic farmers. The specific demands for acceptance of these varieties are described in the directives linked below.

(Source: Anna Pettersson, Swedish Board of Agriculture, Plant and Environment Department)

Variety Office (VCU)	Swedish Board of Agriculture (Jordbruksverket), Plant and Environment Department <a href="http://www.jordbruksverket.se/swedishboardofagriculture.4.6621c2fb1231eb917e680002462.html">http://www.jordbruksverket.se/swedishboardofagriculture.4.6621c2fb1231eb917e680002462.html</a> Swedish University of Agricultural Sciences, Department of Crop Production Ecology <a href="http://www.slu.se/en/faculties/nl/about-the-faculty/departments/department-of-crop-production-ecology/other-activities/">http://www.slu.se/en/faculties/nl/about-the-faculty/departments/department-of-crop-production-ecology/other-activities/</a>
Contact person	Anna Pettersson <a href="mailto:anna.pettersson@jordbruksverket.se">anna.pettersson@jordbruksverket.se</a>
National Catalogue of Varieties	<a href="http://www.jordbruksverket.se/download/18.29a582d01364dc665738000808/Meddelande+2012+2.pdf">http://www.jordbruksverket.se/download/18.29a582d01364dc665738000808/Meddelande+2012+2.pdf</a>
Application form	<a href="http://www2.jordbruksverket.se/blanketterochtrycksaker.4.29d7ece3112034569ed800049.htm?category=ODB1&amp;item=V71#iiV71">http://www2.jordbruksverket.se/blanketterochtrycksaker.4.29d7ece3112034569ed800049.htm?category=ODB1&amp;item=V71#iiV71</a> Send to: Jordbruksverket Växtodlingsenheten 551 82 Jönköping
Application date	<a href="http://www.jordbruksverket.se/download/18.44bedb3513533e95e618000978/Datum+fr%C3%B6r+sortprovning+fr%C3%A5n+SLU.pdf">http://www.jordbruksverket.se/download/18.44bedb3513533e95e618000978/Datum+fr%C3%B6r+sortprovning+fr%C3%A5n+SLU.pdf</a>
Fees	Conventional varieties: 3000 SEK application fee and 2000 SEK yearly maintenance fee. Conservation varieties ("bevarandesorter and amatörsorter"): 800 SEK application fee and no yearly maintenance fee.
Seed requirements	<a href="http://www.jordbruksverket.se/download/18.44bedb3513533e95e6180001010/Uts%C3%A4desm%C3%A4ngd+till+referensprov+fr%C3%B6r+fr%C3%B6rs%C3%B6ksuts%C3%A4de.pdf">http://www.jordbruksverket.se/download/18.44bedb3513533e95e6180001010/Uts%C3%A4desm%C3%A4ngd+till+referensprov+fr%C3%B6r+fr%C3%B6rs%C3%B6ksuts%C3%A4de.pdf</a>
Years for testing	Min. 2 years
Useful links	Regulations: <a href="http://www.jordbruksverket.se/download/18.1d7062ed133ee6f94868000448/2011-047.pdf">http://www.jordbruksverket.se/download/18.1d7062ed133ee6f94868000448/2011-047.pdf</a> Conservation varieties and varieties developed for growing under particular conditions: <a href="http://www.jordbruksverket.se/amnesomraden/odling/utsadeochsorter/forutsadesforetag/bevarandesorter.4.160b021b1235b6bb8618000212.html">http://www.jordbruksverket.se/amnesomraden/odling/utsadeochsorter/forutsadesforetag/bevarandesorter.4.160b021b1235b6bb8618000212.html</a>

**Organic variety trials not intended for national listing.**

There are organic variety trials in Sweden.

Contact person for cereals and pulses is Staffan Larsson at the Swedish University of Agricultural Sciences (SLU), Department of Crop Production Ecology ([staffan.larsson@slu.se](mailto:staffan.larsson@slu.se)).

<http://www.slu.se/sv/fakulteter/nl-fakulteten/om-fakulteten/institutioner/institutionen-for-vaxtproduktionsekologi/ovrigt/sortprovning/>

For northern Sweden the contact person is Kent Dryer, SLU, Department of Agricultural Research for Northern Sweden ([kent.dryler@slu.se](mailto:kent.dryler@slu.se)).

<http://www.slu.se/sv/fakulteter/nl-fakulteten/om-fakulteten/institutioner/institutionen-for-norrlandskt-jordbruksvetenskap/>

The seeds used in the organic variety trials are conventional, not chemically treated seed.

SLU is responsible for the organic variety trials, but the trials are usually located at organic farms and performed by the Agricultural society (<http://www.hush.se/>) in different regions.

The results from the organic variety trials are used in advisory service in organic farming, by the County administrative board ([www.lst.se](http://www.lst.se)) and also by Agricultural society, the extension Service Division at the Swedish Board of Agriculture and different Agricultural schools.

The organic variety trials for cereals and pulses have been going on since 1997 and were until 2006 financed as a refund to an application for organic trial and development-projects. From 2006 the organic variety trials have been financed by procurement, where the Swedish Board of Agriculture states the conditions for the trials. The organic variety trials for cereals and pulses (incl. trials in northern Sweden) cost about 1.200.000 SEK per year. (approx. 138.000 €)

(Source: Anna Pettersson, Swedish Board of Agriculture, Plant and Environment Department)

## Switzerland

In Switzerland there is an official trial network consisting of a total of 10 sites [9 sites managed according to an Extenso-Program and one site is managed at conditions of organic farming]. For the listing in the national list, the mean values of the sites of two years are used, but there is no registration possible for organic conditions exclusively.

In the appendix of the decree of seeds (SR 916.151: <http://www.admin.ch/ch/d/as/2010/2763.pdf>) the criteria used for the registration of wheat varieties are listed.

There have been discussions in Switzerland about the need for a separate official trial network for the testing of varieties at conditions of organic farming. For that reason a comparison of an organic and the official trial network was conducted. From the results it was concluded, that there was no need for a separate organic testing network (“Winterweizensorten im biologischen und extensiven Anbau”, Schwärzel, R. *et al.*, AGRAR Forschung 13 (2): 68-73, 2006 and “Backqualität von Winterweizen in Bio- und Extenso-Zulassungsprüfungen”, Kleijer, G. & Schwaerzel, R., AGRAR Forschung 13 (2): 74-79, 2006). As a result the presently existing network (9 Extenso sites + 1 organic site) was established.

But since the criteria evaluated may be important for the final evaluation of the strengths and weaknesses of a variety, and specially the quality seems to be an important issue at less intense growing conditions with the use of organic fertilizers/farmyard manure, according to Jürg Hiltbrunner, there are investigations right now (and already for the last two years) to improve the database to have more precise facts for the discussion, that will probably also take place in Switzerland in the near future.

(Source: Jürg Hiltbrunner, Agroscope)

Variety Office (VCU)	Federal Office for Agriculture - FOAG (Bundesamt für Landwirtschaft - BLW), Plant Variety Office (Büro für Sortenschutz).
Contact person	Peter Latus <a href="mailto:peter.latus@blw.admin.ch">peter.latus@blw.admin.ch</a>
National Catalogue of Varieties	<a href="http://www.admin.ch/ch/d/sr/9/916.151.6.de.pdf">http://www.admin.ch/ch/d/sr/9/916.151.6.de.pdf</a>
Application form	<a href="http://www.blw.admin.ch/dienstleistungen/01165/index.html?lang=de&amp;suche_0_14=sortenkatalog&amp;kat1_0_14=&amp;kat3_0_14=189">http://www.blw.admin.ch/dienstleistungen/01165/index.html?lang=de&amp;suche_0_14=sortenkatalog&amp;kat1_0_14=&amp;kat3_0_14=189</a> Bundesamt für Landwirtschaft Dienst für Saat- und Pflanzgut Mattenhofstrasse 5 CH-3003 Bern
Useful links	Regulations: <a href="http://www.admin.ch/ch/d/sr/index.html">http://www.admin.ch/ch/d/sr/index.html</a> Landwirtschaftsgesetz, SR 910.1 Saatgut-Verordnung des Bundesrates, SR 916.151 Saat- und Pflanzgut-Verordnung des EVD, SR 916.151.1

**Organic variety trials not intended for national listing**

Variety trials at conditions of organic farming are organized by Swiss Federal Research station [Agroscope](#) (field experiments and quality testing) in collaboration with DSP.

The list with the recommended varieties for organic farming is based on results from these organic trials - small plot experiments (approx. 15 m<sup>2</sup>) with 3 reps at 9 sites (coordinated by Agroscope) and strip experiments (6 x200m) without replication on 7 farms (conducted by the FiBL - Research Institute of Organic Agriculture). For a strip experiment approx. 275 kg of seed per variety is needed. Therefore the first place to have a new variety tested is Agroscope.

Contactperson Agroscope: Jürg Hiltbrunner [juerg.hiltbrunner@art.admin.ch](mailto:juerg.hiltbrunner@art.admin.ch)

Contactperson FiBL: Hansueli Dierauer [hansueli.dierauer@fibl.org](mailto:hansueli.dierauer@fibl.org)

List of recommended varieties for organic farming:

<https://www.fibl.org/fileadmin/documents/shop/1034-biogetreide.pdf>

Testing results are available on the following webpages:

<http://www.agroscope.admin.ch/cereales/03270/index.html?lang=de> with the title "Bio-Winterweizen Sortenversuch" (year).

For 2012:

<http://www.bioaktuell.ch/fileadmin/documents/ba/pflanzenbau/ackerbau/WWSortenResultate2012.pdf>

(Source: Jürg Hiltbrunner, Agroscope Reckenholz-Zürich and Hansueli Dierauer, FiBL)

## The Netherlands

In the Netherlands there is no organic VCU testing at the moment.

If there should be future tests in cereals in the Netherlands, it would be according to the recommendations of the joint Dutch/Danish COST project carried out in 2006: **Handbook: Cereal variety testing for organic and low input agriculture.**

(Source: Kees van Ettehoven, Head of Variety Testing Department, Naktuinbouw)

Variety Office (VCU)	In the Netherlands VCU falls under the responsibility of the Board for Plant Varieties ( <a href="http://www.plantenrassen.nl">www.plantenrassen.nl</a> ). Naktuinbouw ( <a href="http://www.naktuinbouw.nl/">http://www.naktuinbouw.nl/</a> ) is carrying out DUS trials and supervises on behalf of the Board the VCU trials.
Contact person	Kees van Ettehoven <a href="mailto:c.v.ettekoven@naktuinbouw.nl">c.v.ettekoven@naktuinbouw.nl</a>
National Catalogue of Varieties	<a href="http://www.naktuinbouw.nl/sites/naktuinbouw.eu/files/Nationale%20RL2011.pdf">http://www.naktuinbouw.nl/sites/naktuinbouw.eu/files/Nationale%20RL2011.pdf</a> <a href="http://www.naktuinbouw.nl/en/article/gazette">http://www.naktuinbouw.nl/en/article/gazette</a>
Variety Board	Raad voor plantenrassen: Independent members from the academic community and inspections bodies.

### Organic variety trials not intended for national listing.

Organic variety trials are carried out by the Louis Bolk Institute (LBI) ([www.louisbolk.org](http://www.louisbolk.org)) - contact (field trials cereals): Edwin Nuijten ([e.nuijten@louisbolk.nl](mailto:e.nuijten@louisbolk.nl))

There are no public funded organic field trials anymore in the Netherlands. Field trials to compare varieties are sometimes organized by farmer's organizations in cooperation with researchers (for instance LBI) or agricultural advisors (for instance DLV). They have to organize funding themselves. Dutch seed companies who are often active in both conventional and organic varieties, test on their own organic test fields or on organic farms. Besides that, there are several organic demonstration fields where new varieties are demonstrated every year.

(Source: Maaïke Raaijmakers, Bionext)

## United Kingdom

In UK there are no official VCU trials for organic varieties. Organic candidates would be subjected to the standard UK National listing VCU trialing system. So far there have not been any requests for organic VCU trials.

If an applicant would like to see if a candidate is suitable for an organic system, they could make a request for a special test on the application form and note the candidate's organic traits in the TQ (technical questionnaire). BSPB (British Society of Plant Breeders), who organise VCU trials in the UK on behalf of the National Authorities, may be able to arrange a separate trial.

(Source: Rob Warlow, The Food and Environment Research Agency)

Variety Office (VCU)	BSPB, British Society of Plant Breeders <a href="http://www.bspb.co.uk/">http://www.bspb.co.uk/</a>
Contact person	Robert Jackson <a href="mailto:Robert.Jackson@bspb.co.uk">Robert.Jackson@bspb.co.uk</a>
National Catalogue of Varieties	<a href="http://www.fera.defra.gov.uk/plants/publications/gazette.cfm">http://www.fera.defra.gov.uk/plants/publications/gazette.cfm</a>
Application form	<a href="http://www.fera.defra.gov.uk/plants/forms/nationalListingForms.cfm">http://www.fera.defra.gov.uk/plants/forms/nationalListingForms.cfm</a>
Testing procedure (conventional)	<a href="http://www.fera.defra.gov.uk/plants/plantVarieties/nationalListing/documents/procedureCereals0212.pdf">http://www.fera.defra.gov.uk/plants/plantVarieties/nationalListing/documents/procedureCereals0212.pdf</a>
Variety Board	Fera, Varieties and Seeds <a href="http://www.fera.defra.gov.uk/plants/plantVarieties/">http://www.fera.defra.gov.uk/plants/plantVarieties/</a>
Useful links	Guide to National Listing (links within document): <a href="http://www.fera.defra.gov.uk/plants/plantVarieties/nationalListing/documents/nlGuideSept10.pdf">http://www.fera.defra.gov.uk/plants/plantVarieties/nationalListing/documents/nlGuideSept10.pdf</a>

### Organic variety trials not intended for national listing.

Organic variety trials are carried out by farmer's organizations, research institutions and seed companies, but on a limited scale only. The Organic Research Centre (ORC) is currently trying to increase the number of sites and run some variety trials with the help of the Soil Association and others.

Organic Seed Producers (OSP) conducts replicated trials for varieties for marketing and sale in UK. There is no published result on the internet. According to John Bradwell the normal procedure for foreign breeders is that there are no charges, if they are granted the marketing rights in UK. John Bradwell can provide further information. Contact: [organicseeduk@gmail.com](mailto:organicseeduk@gmail.com)

(Source: Thomas Döring, The Organic Research Centre, Elm Farm and John Bradwell, Organic Seed Producers)

## Final remarks

From the questionnaires that are the basis of this report, it is evident that holders of possible new varieties for organic farming are confronted with quite different possibilities, fees and conditions for organic VCU testing. Hopefully this report can be used as an informational tool to navigate across borders.

Some countries have no organic VCU testing at all and some of these have no organized organic variety trials either. Here farmers must rely mostly on exclusively conventional tests for variety choice, and the ultimate “test” is in the farmer’s organic field. Other countries supplement the conventional tests with organic variety trials. And some have exclusively organic VCU-tests.

The organic VCU-tests performed in the different countries have a range of different testing protocols. Some have comprehensive registrations for e.g. weed competitiveness and some countries don’t have any registrations of weed competitiveness.

The application fees range from 0 in Latvia and to around 600 € in Denmark. Also the price for VCU testing is quite different. The below listed examples are for spring barley. In Estonia and Latvia the price is 220-258 € per locality per year, in Austria the price is 603 € for one year of trials for an organic variety. In Austria the fees for conventional varieties are higher than for organic varieties. In Denmark the price is higher for organic varieties since the supplementary organic trials must be paid in addition to the conventional VCU testing fee and adds up to 3900 €. Also maintenance fees are quite different: from around 10 € in Latvia and Estonia to 643 € in Denmark (in Germany the maintenance fee increases from 250 to 900 € over a ten year period).

Many people have kindly provided information for this report, and we would like to thank all of you. The report is distributed to national variety offices, ECO-PB, CPVO, some breeding companies, institutes and organic organizations, and to project partners in the Solibam and Cobra projects. You are most welcome to pass it on, if you know of someone else who has an interest in the information contained in the report. And you are also welcome to contact us, if you have any comments. The content will be kept updated whenever new information arrives.

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