

## **Registered varieties and Organic Heterogeneous Material (OHM) with resistance to common bunt in Europe**

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### **Abstract**

Breeding wheat varieties with resistance to common bunt is one of the most effective and cheap measures that can be used to reduce fungicide use for seed treatment in conventional agriculture and to prevent the risk of disease infections in organic agriculture. However, few varieties are brought to the market with resistance and few adapted varieties are available for future plant breeding.

In the LIVESEED, ECOBREED, DIVERSILIENCE and BOOST projects, and in the annual field trials by private breeders, some varieties have been identified with resistance to common bunt.

The purpose of this study is to bring an overview of varieties with resistance to common that has been confirmed to be resistant and are available for farmers, seed companies and plant breeders.

### **Keywords**

winter wheat, common bunt, organic agriculture, resistance breeding

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Figur 1: Wheat varieties listed in EU Seed Catalogue 2023

Variety	Type	Breeder	Year of release	Seed Company	Resistance Gene(s)	
Apostel	Winter	IG-Pflanzenzucht			Bt5	(*)
Aristaro	Winter	Landbauschule Dottenfelderhof eV	2016	Bioland Handelsgesellschaft	Bt9+	(**)
Axano JB Asano???	Winter	Saatzücht Donau	2020	RWA Austria	Bt5	(*)
Bosporus	Winter	Breun			Bt5	(*)
Brandex (OHM)	Winter	Landbauschule Dottenfelderhof eV	2022	Bioland Handelsgesellschaft	Bt7	(*)
Bussard	Winter	KWS	1990		Bt2	(***)
Butaro	Winter	Landbauschule Dottenfelderhof eV	2009	Bioland Handelsgesellschaft	Bt2	(***)
Curier	Winter	Landbauschule Dottenfelderhof eV	2019	Bioland Handelsgesellschaft		
Festival	Winter	Lantmännen			Bt8+Bt9?	(*)
Fiorina	Spring	Agroscope	2001	Delley Samen und Pflanzen AG	Bt7	(*)
Florian	Winter	SaatenUnion			??	(**)
Fritop	Winter	Cultivari		Nordic Seed	BtZ+?	(***)
Genius	Winter	SaatenUnion		Nordsaat Saatzüchtgesellschaft GmbH	Bt5	(*)
Grannosos	Winter	Landbauschule Dottenfelderhof eV	2020	Bioland Handelsgesellschaft	Bt2	(*) (**)
Graziaro	Winter	Landbauschule Dottenfelderhof eV	2016	Bioland Handelsgesellschaft	BtZ	(**)
Hallfreda	Winter	Lantmännen			Bt8+Bt9?	(*)
LG Initial	Winter	Limagrain Europe S.A.			Bt5	(*)
Liocharls (OHM)	Winter	Landbauschule Dottenfelderhof eV	2022	Bioland Handelsgesellschaft	Bt7	(*)
Mariagertoba (OHM)	Spring	Agrologica	2022	Landsorten	Bt7	(****)
Popkorn (OHM)	Winter	Agrologica	2022	Landsorten	Mixed resistance	(****)
Quarna	Spring	Agroscope	2002	Delley Samen und Pflanzen AG	Bt7	(*)
Roderik	Winter	Cultivari		Oeko-Korn-Nord, Germany	Bt7	(****)
Sailor	Winter	Agroscope	2015	Delley Samen und Pflanzen AG	Bt7	(*)
Sarastro	Winter	Cultivari		Oeko-Korn-Nord, Germany	BtZ	(****)
Segor	Spring	Agroscope	2002	Delley Samen und Pflanzen AG	Bt7	(***)
Spontan	Winter	Limagrain Europe S.A.			Bt5	(*)
Stava	Winter	Lantmännen	1990		Bt8+Bt9	(*)
SW Magnifik	Winter	Lantmännen			??	(*)
Thomaro	Winter	Landbauschule Dottenfelderhof eV	2018	Bioland Handelsgesellschaft	Bt7	(**)
Tillexus	Winter	Saatzücht Donau	2018	Saatbau Linz	Bt10	(*)
Tilliko	Winter	Cultivari		RWA Austria	BtZ	(*)
Tillsano	Winter	Saatzücht Donau	2020	Probstdorfer Saatzücht	Bt5	(*)
Tillstop	Winter	Saatzücht Donau		Probstdorfer Saatzücht	Bt10	(*)
Trebelir	Winter	Cultivari		Oeko-Korn-Nord, Germany	Bt7	(****)
WPB Calgary	Winter	Wiersum PB			Bt5	(*)

(\*) results from BOOST and DIVERSILIENCE projects (Borgen and Christensen 2023)

(\*\*) Results from the ECOBREED project.

(\*\*\*) Results from the LIVRESSED project (Borgen et al 2018)

(\*\*\*\*) Breeders information based on own results