



# **Technical Circular 443**

## **March 2010**

**Agrochemicals Accepted by the  
British Beer and Pub Association  
and  
Brewing Research International  
for use on **Cereals****

Issue Date: 29<sup>th</sup> March 2010

## **Agrochemicals Accepted by the BBPA (British Beer and Pub Association) and BRI (Brewing Research International) for use on Cereals for malting and brewing**

### **The Purpose of the BBPA / BRI List**

The BRI and BBPA aim to test agrochemicals which, because of their chemical nature or timing of application to barley could potentially affect either the malting, brewing or fermentation processes, or could cause undesirable off-flavours in the finished beer. In the EU, Council Directive 93/71/EEC (Annex III) requires the effects of pesticides on transformation processes to be taken into account and requires an evaluation of the possible occurrence of adverse effects on transformation processes, such as brewing and malting, or on the quality of their products.

In order for a chemical to be included on the list of accepted chemicals, BRI will carry out an initial assessment of factors including; chemical nature; mode of action; time of application; available test data. Following this initial assessment, BRI will conduct any further additional malting or brewing trials necessary to come to a decision. These further trials do not replace or duplicate the toxicological or efficacy testing required by the Pesticides Safety Directorate (PSD) before the chemical can be registered, but are designed to test the suitability of treated crops for processing specifically within the malting and brewing industry.

Since this document is issued in the UK by the BBPA as a Technical Circular, it provides a comprehensive list of all active ingredients **registered in the UK** for barley. **Products are withdrawn from the list if they are no longer registered in the UK by PSD even though they do not cause problems in terms of processing.** BRi members not in the UK will need to check whether listed chemicals are approved for use in their own countries.

Listed agrochemicals are classed as ACCEPTED for use on malting barley for brewing, or NOT ACCEPTED. Agrochemicals accepted for barley are also accepted for wheat for malting and brewing, provided that they are registered for that use by the national authorities. Note that a few pesticides registered for use on wheat are not registered for barley; these have not been evaluated for potential effects in malting or brewing and are therefore not included in this list.

The list is **NOT exhaustive with regard to Trade Names**, and products which are not listed are accepted if they contain the same active ingredient, and are used at the same growth period at the same dose as products which are listed.

**Maximum Residue Levels (MRLs).** These are as given in EU legislation. An MRL is the maximum concentration of a pesticide residue (expressed as mg/kg), permitted in or on food commodities and animal feeds. MRLs are primarily a check that Good Agricultural Practice is being followed and to assist international trade in produce treated with pesticides. MRLs are **not** safety limits. MRLs are established using toxicological and dietary exposure evidence concerning the safety to humans of the resulting residues and this means that MRLs represent residue levels which are toxicologically acceptable. They are generally well below safety limits, thus exposure to residues in excess of an MRL does not automatically imply a hazard to health.

For more details concerning the chemicals listed contact Denise Baxter, Ian Slaiding, or Ian Ormrod

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## Agrochemicals accepted by the BRI & BBPA for use on cereals

The list has been extended to the extent that chemicals accepted for barley are also accepted for use on wheat or other cereals for malting and or brewing. However, this should not be taken to imply that there is a current registration for that chemical on that cereal. The MRLs given are for barley.

MRLs are updated from EU MRL harmonised database, released Sept 2008,

### Changes made to the list since Technical Circular 434 (Mar 2009)

Type	Active Ingredient	Trade Name	Changes
Insecticide	Pirimiphos-methyl	Actellic 50EC	Registration for use on empty stores withdrawn from Jan 2010
Herbicide	linuron	Several mixtures	Deleted (registration for barley expired)
Herbicide	isoproturon	Several mixtures	Deleted (registration in UK expired)
Herbicide	pinoxaden	Axial	Registration period now extended (was due to expire in Sept 2009)
Seed treatment	ipconazole	Rancona	Previous Trade name "Crusoe" changed to "Rancona"
Seed treatment	triazoxide	Raxil S, Raxil Pro	Revoked from Dec2009 Approval for sale expires May 2010. Approval for use expires May 2011
Fungicide	carbendazim	Contrast, Punch	Note added, EU registration expires Dec 2010.
Fungicide	bromuconazole	Tote	Note added: Approval expires May 2010
Fungicide	Copper salts	various	MRL added (10mg/kg)
Fungicide	isopyrazam	Bontima	added
Insecticide	bifenthrin	Brigade 80, Starion Flo	Note added: Approval expires May 2011
Herbicide	trifluralin	Mixtures	Approval expired

## Barley (full list)

Active ingredient	Trade names (not exhaustive)	BBPA Status	Barley MRL (mg/kg)	
			EU	Codex
<b>Insecticides for Admixture with grain or in empty grain stores</b> * Denotes MRL set at limit of determination				
Aluminium phosphide	Degesch Fumigation Tablets, Detia Gas-Ex-T, Phostoxin	Accepted	0.1	0.1
Chlorpyrifos-methyl	Reldan 22	Accepted Store for 90 days before malting	3.0	-
Deltamethrin (with piperonyl butoxide)	K-OBiol EC25 and ULV6 formulations	Accepted for grain admixture and empty stores	2.0	2 (delt) 30 (pip)
Diatomaceous Earth	Demeter, SilicoSec, DiaMite	Accepted subject to continued UK and EU registration	No MRL	-
Magnesium phosphide	Detia Gas-Ex-B-Forte Degesch Plates	Accepted	0.1	0.1
Pirimiphos-methyl	Actellic 50EC, PAN PMT	Accepted for grain admixture. <b>No longer allowed for empty stores, transport or handling equipment.</b>	5.0	7.0
	Actellic Smoke Generator	Accepted for EMPTY STORES only.		
<b>Insecticides and fungicides for Seed treatment only (note that some field chemicals are also approved as seed treatments)</b> * Denotes MRL set at limit of determination				
Carboxin	Anchor	Accepted	0.01*	-
Clothianidin	Deter, NipsIT INSIDE	Accepted	0.02*	-
Fludioxonil	Austral Plus, Beret Gold	Accepted	0.05 *	0.05
Fuberidazole	Baytan Flowable	Accepted	0.2	-
Guazatine	Ravine	Accepted	0.2	-
Imazalil	Fungazil 50 LS	Accepted	0.02*	-
Imidacloprid	Baytan Secur Tripod Plus	Accepted	0.1	0.05
Ipconazole	Rancona 15ME	Accepted	0.01*	-
Silthiofam	Latitude	Accepted	0.05*	-
Tefluthrin	Austral Plus	Accepted	0.05 *	-

## Barley (continued)

Active ingredient	Trade names (not exhaustive)	BBPA Status	MRL (mg/kg)	
			EU	Codex
<b>Insecticides and fungicides for Seed treatment only (note that some field chemicals are also approved as seed treatments) CONTINUED</b> * Denotes MRL set at limit of determination				
Thiram	Anchor	Accepted	0.1* as thiram 2 Total DTC	1 total DTC
Triazoxide	Raxil Pro, Raxil S	Accepted Revoked from Dec 2009 Approval for sale expires May 2010. Approval for use expires May 2011	Not yet set	
Triticonazole	Kinto	Accepted	0.01 *	-
<b>Insecticides for Pre-harvest (field) use</b> * Denotes MRL set at limit of determination				
Alphacypermethrin	Alert, Fastac	Accepted	2 <sup>1</sup>	0.5
Bifenthrin	Brigade 80 SC	Accepted Approval expires May 2011	0.5	
Chlorpyrifos	Dursban 480, Pyrinex 48EC	Accepted	0.2	-
Cypermethrin	Cyperkill, Permasect C	Accepted	2 <sup>1</sup>	0.5
Deltamethrin	Decis, Bandu	Accepted	2	2.0
Esfenvalerate	Sumi-alpha, SVEN	Accepted	RR, SS isomers, 0.2 RS, SR isomers, 0.05	-
Lambda - cyhalothrin	Clayton Groove, Dovetail	Accepted	0.05	-
Methiocarb	Draza Forte, Decoy Wetex	Accepted	0.1 *	0.05
Pirimicarb	Aphox	Accepted	0.5	0.05
Tau-fluvalinate	Greencrop Malin, Mavrik	Accepted; Not included in EU positive list, authorisation expires Dec2013	0.5	-
Zetacypermethrin	Angri, Fury 10EW	Accepted	2 <sup>1</sup>	0.5

## Barley (continued)

Active ingredient	Trade names (not exhaustive)	BBPA Status	MRL (mg/kg)	
			EU	Codex
<b>Fungicides</b>				
* Denotes MRL set at limit of determination				
Azoxystrobin	Amistar Pro	Accepted	0.3	-
Boscalid	Deuce, Maitre	Accepted BEFORE ear emergence only	3	-
Bromuconazole	Tote	Accepted for use BEFORE ear emergence only. Approval expires May 2010	0.2	-
Carbendazim	Contrast, Punch C	Accepted. (Registration to expire Dec 2012)	2.0	0.5
Chlorothalonil	Apache, Bravo 500	Accepted	0.1	0.1
Copper salts	Croptex Fungex, Murphy Traditional Copper Fungicide	Accepted	10	
Cyflufenamid	Cyflamid	Accepted	0.1	-
Cyproconazole	Alto Xtra, Furlong	Accepted	0.1	-
Cyprodinil	Barclay Amtrak, Unix	Accepted	3	3.0
Epoxiconazole	Cloister, Opus, Epic, Landmark, Mantra	Accepted BEFORE ear emergence only	1	-
Famoxadone	Charisma, Medley	Accepted	0.02*	0.2
Fenpropidin	Cleancrop Fulmar, Patrol	Accepted	0.5	-
Fenpropimorph	Allegro Plus, Corbel	Accepted	0.5	0.5
Fluoxastrobin	Fandango, Bayer UK831	Accepted	0.5	-
Fluquinconazole	Baron, Foil	Accepted BEFORE ear emergence only.	0.05 *	-
Flusilazole	Genie 25, Sanction 25	Accepted	0.2	0.1
Flutriafol	Beret Multi, Consul	Accepted (also for seed treatment).	0.5	-
Isopyrazam	Bontima	Accepted (before ear emergence only)	-	-

## Barley (continued)

Active ingredient	Trade names (not exhaustive)	BBPA Status	MRL (mg/kg)	
			EU	Codex
<b>Fungicides CONTINUED</b>				
* Denotes MRL set at limit of determination				
Kresoxim-methyl	Allegro, Ensign,	Accepted (mixtures with epoxiconazole BEFORE ear emergence only)	0.05 *	0.1
Mancozeb	Micene 80	Accepted Expires Dec 2011	2.0 <sup>2</sup>	1.0
Maneb	Trimangol 80	Accepted Expires Dec 2011	2.0 <sup>2</sup>	1.0
Metconazole	Caramba	Accepted	0.1	-
Metrafenone	Attenzo, Flexity	Accepted BEFORE ear emergence only	0.5	-
Picoxystrobin	Acanto	Accepted	0.2	-
Prochloraz	Sportak 45EW, Agate (also used in seed treatments)	Accepted.	1	2.0
Propiconazole	Alto Xtra, Bounty	Accepted	0.2	0.05
Proquinazid	Justice, Vareon	Accepted	0.02 *	-
Prothioconazole	Clayton Edge, Proline	Accepted (also for seed treatment)	0.3	-
Pyraclostrobin	Bas 500 06, Comet,	Accepted BEFORE ear emergence only	0.3	0.5
Quinoxifen	Apres, Fortress, Orka	Accepted BEFORE ear emergence only	0.2	-
Spiroxamine	Draco, Torch	Accepted	0.3	-
Sulphur	Headland Sulphur	Accepted	50	-
Tebuconazole	Aurigen, Bayer UK226	Accepted	2	0.2
Triadimenol	Bayfidan	Accepted (also for seed treatment)	0.2 (sum of triadimenol + triadimefon)	0.5 for each
Trifloxystrobin	Jaunt, Martinet, Twist	Accepted	0.3	0.5

## Barley (continued)

Active ingredient	Trade names (not exhaustive)	BBPA Status	MRL (mg/kg)	
			EU	Codex
<b>Growth Regulators</b>				
* Denotes MRL set at limit of determination				
Chlormequat	various	Accepted	2.0	2.0
2 Chloroethyl-phosphonic acid (ethephon)	Barclay Banshee, Cerone,	Accepted	0.5	1.0
Imazaquin	Satellite	Accepted	0.05 *	-
Mepiquat	Stronghold, Terpal	Accepted	3	-
Prohexadione calcium	Canopy	Accepted before GS 32 only (max. dose, 1litre/ha).	0.2	-
Trinexapac-ethyl	Moddus	Accepted	0.5	-
<b>Dessicants</b>				
* Denotes MRL set at limit of determination				
Diquat	Reglone	NOT ACCEPTED	10	5
Glufosinate-ammonium	Harvest	Accepted	0.1 *	-
Glyphosate <sup>3</sup>	Barclay Gallup 360, Roundup,	Accepted	20	30
Trisulphonium cation resulting from the use of glyphosate		Accepted	10	-
<b>Herbicides</b>				
* Denotes MRL set at limit of determination				
Amidosulfuron	Barclay Cleave	Accepted	0.05 *	-
Bifenox	Aspire, Oram	Accepted	0.1	-
Bromoxynil	Mixtures	Accepted	0.05 *	-
Carfentrazone-ethyl	Aurora, Harrier	Accepted	0.05 *	-
Chlorotoluron	Mixtures	Accepted	0.1	-
Clodinafop-propargyl	Auxiliary, Traxos	Currently only registered for wheat in the UK	0.1	
Clopyralid	Dow Shield	Accepted	2	-
Cinidon-ethyl	Lotus	Accepted	0.1*	-

**Barley (continued)**

Active ingredient	Trade names (not exhaustive)	BBPA Status	MRL (mg/kg)	Codex
			EU	
<b>Herbicides (continued)</b>				
* Denotes MRL set at limit of determination				
2,4-D	Mixtures	Accepted	0.05 *	-
2,4-DB	Mixtures	Accepted	0.05 *	-
Dicamba	Mixtures	Accepted	0.5	-
Dichlorprop-P	Headland Link	Accepted	0.2	-
Diclofop-methyl	Corniche, Tigress Ultra	Accepted (Not included in EU positive list, Authorisation must to withdrawn by Dec 10	0.05 *	-
Diflufenican	Agena, Capture	Accepted	0.05 *	-
Fenoxaprop-P-ethyl	Corniche	Accepted	0.1	-
Florasulam (DE 570)	Boxer	Accepted	0.01 *	-
Flufenacet	Crystal, Firebird	Accepted	0.05 *	-
Fluroxypyr	Fluxyr 200 EC	Accepted	0.1	-
Flurtamone	Movon, Bigon	Accepted	0.02 *	-
Glufosinate-ammonium	Challenge, Harvest	Accepted	0.1 *	-
Glyphosate <sup>3</sup>	Roundup, Touchdown Quattro, Barclay Gallup 360	Accepted	20	30
Iodosulfuronmethyl	Chekker	Accepted	0.02 *	-
loxynil	Mixtures	Accepted	0.05 *	-
Isoxaben	Flexidor	Accepted,	0.1	-
MCPA	Agritox 50, Mixtures	Accepted	0.05 * (for sum of both)	-
MCPB	Mixtures	Accepted Expires 2011		-
Mecoprop-P	Mixtures	Accepted	0.05 *	-
Metsulfuron-methyl	Ally Max SX, Biplay SX	Accepted	0.05 *	-
Pendimethalin	Stomp 400 SC	Accepted	0.05 *	-

**Barley (continued)**

Active ingredient	Trade names (not exhaustive)	BBPA Status	MRL (mg/kg)	
			EU	Codex
<b>Herbicides (continued)</b>				
* Denotes MRL set at limit of determination				
Pinoxaden	Bunker	Accepted	1	-
Prosulfocarb	Defy, Arcade	Accepted	0.05 *	-
Thifensulfuron-methyl	Calibre SX	Accepted	0.05 *	-
Tralkoxydim	Grasp 400SC	Accepted	0,02 *	-
Tri-allate	Avadex BW Granular	Accepted	0.1 *	-
Triasulfuron	Teal	Accepted Expires Sept 2010	0.05 *	-
Tribenuron-methyl	Nuance, Quantum SX	Accepted	0.01 *	-

Active ingredient	Trade Name	Use	BBPA /BRi status	MRL (mg/kg)	
				EU/UK	Codex
<b>Miscellaneous</b>					
* Denotes MRL set at limit of determination					
Metaldehyde	various	Slug bait	Accepted.	0.05 *	-
Methiocarb	Decoy Wetex, Draza	Slug bait	Accepted	0.1 *	0.05

**Footnotes:**<sup>1</sup> Sum of isomers<sup>2</sup> Sum of bisdithiocarbamates expressed as CS<sub>2</sub><sup>3</sup> Including glyphosate trimesium salts