

Denmark – Sugar beets – revision 91/414 EEC

Impact on available plant protection products in sugar beets in Denmark of the ‘cut-off criteria’ and substitution provisions in the proposed Regulation of the European Parliament and of the Council concerning the placing of plant protection products in the market

November 5th 2008

Jens Nyholm Thomsen
NBR Nordic Beet Research Foundation
E-mail: Jens Nyholm Thomsen <aljnt@danisco.com>
Højbygaardvej 14
DK-4960 Holeby
Denmark
Tel: +45 54 69 14 40
Fax: +45 54 69 14 58
<http://www.nordicbeet.nu/>

Background

In Annex II to the proposed Regulation, the Commission sets out criteria for approval of active substances and candidates for substitution. The Parliament proposed a range of amendments and additions to these criteria.

Objective

The paper should give an indicative picture of the impact for crop protection in Denmark as a consequence of the proposal of the European Commission and the amendments of the European Parliament.

Methodology

For approval criteria and methodology we refer to reference 1.

Result

The results are presented in appendix 1 and summarized in table 1.

	Available 2008	Commission cut off		Commission substitution*		Parliament cut off		Parliament substitution*	
		gone	left	gone	left	gone	left	gone	left
Insecticides seed treatment	1	-	1	1	0	0	0	0	0
Fungicides seed treatment	3	1	2	1	2	1	2	3	0
Herbicides non selective	1	-	1	-	1	-	1	1	0
Herbicides selective	6	1	5	1	5	3	3	4	2
Graminicides selective	4	0	4	1	3	1	3	4	0
Insecticides foliar application	4	0	4	2	2	4	0	4	0
Fungicides foliar application	5	2	3	2	3	2	3	2	3
Molluscicides	1	-	1	-	1	-	1	-	1
Total	25	4	21	8	17	11	13	18	6

* Possible cut off products included

Discussion

Denmark has during the past two decades implemented strong regulation on plant protection products and active ingredients. In consequence only limited numbers of active ingredients are available for use in sugar beets and only in very limited amounts as can be concluded from table 1, 2 and appendix 1.

Table 2. Number of active ingredients registered in DK, SE and the UK 2008

	Denmark	Sweden	UK
Insecticides	4	8	7
Fungicides	5	3	13
Herbicides – total	1	1	4
Herbicides – dicot	6	7	9
Herbicides – grass	4	3	7

Commission cut-off

From the known assessment (ref 1) the cut-off of the Commission proposal would risk removal of further four active ingredients, the herbicide triflusaluron-methyl, the fungicide thiram used for seed dressing and the fungicides epoxiconazol and propiconazol.

The herbicide triflusaluron-methyl is of key importance for the control of many important dicot weeds such as GALAP (burrennerre), AETCY (hundepersille), POLAV (vejpileurt), BRSNN (raps), other crucifers (korsblomstrede) and GERSP (storkenæb). There is no actual substituent for the product which under many conditions may lead to severe difficulties controlling the weeds when access to higher dosages of the herbicides is limited as under Danish regulation.

The fungicide thiram controls most of fungi attack from the soil and the seed on the germinating seedlings. The fungicide epoxiconazol is the only available efficient fungicide towards the common widespread and severe foliar disease Ramularia.

Commission substitution

The active ingredients falling under risk for substitution of the Commission proposal are in addition one grass herbicide, and three insecticides, in total 8 substances of 25 available. Of those falling under the risk imidacloprid is essential controlling attacks from not only soil borne insects but also attacks from other insects, which in the previous years since the registration has lead to almost none other application with foliar insecticides in DK. In addition the selective insecticide pirimicarb that could substitute imidacloprid concerning attacks from aphids also is of risk to be removed

Assessed consequences:

- **The Commission proposal would generally lead to lower profitability for the Danish beet growers.**
- **It will also lead to higher variation in yield and profitability between years as amounts due to regulation of necessary substitutes are not available.**
- **Actually the use of the herbicide triflusaluron-methyl has to be replaced by use of other less effective products which by limited access are not available under Danish conditions at the moment.**
- **Removal of the insecticides imidacloprid, the fungicides thiram and epoxiconazol must be substituted by other products which at the moment are not available.**

Parliament cut-off

Cut off following the Parliament amendments would lead to a loss of 11 substances of 25 available, which in addition to previous mentioned are one herbicide for dicot control and two insecticides. This would include all available insecticides also these used for seed treatment.

Parliament substitution

When substances at risk for substitution according to the Parliament are added only six of 25 substances would be left. Removed is almost all the essential substances for sufficient or necessary plant protection.

Assessed consequences:

- **Loss of seed treatment products both in terms of insecticides and fungicides would put adequate plant establishment at a significantly high risk.**
- **Weed control would become significantly expensive and as difficult as 40 years back including expensive and in many cases not available hand labour.**
- **There are no available insecticides for foliar control.**
- **Sugar beet production would not continue in any for the moment known context if the Parliament amendments are passed.**
- **Only substantial increase on price and products could compensate and create possibility for continuation.**
- **Production efficiency will significantly be reduced and consequently community supply.**

References

1. PSD Pesticides Safety Directorate. 2008. Assessment of the impact on crop protection in the UK of the “cut-off criteria” and substitution provisions in the proposed Regulation of the European Parliament and of the Council concerning the placing of plant protection products in the market.
2. BBRO, the British Beet Research Organisation. 2008. The impact of proposed EU regulations for the approval of plant protection products on the sugar beet crop in the United Kingdom.
3. Olsson, R. 2008: Impact on available plant protection products in sugar beets in Sweden of the ‘cut-off criteria’ and substitution provisions in the proposed Regulation of the European Parliament and of the Council concerning the placing of plant protection products in the market - <http://www.nordicbeet.nu/>
4. <http://www.lr.dk/middeldatabasen/>

Active ingredients approved for use in sugar beets in Denmark in 2008

	Active ingredient	Active ingredient g/l (kg)	No of products	Max annual dose product ltr/hect/ha	Dose product / TI ltr-g/kg	Commission		Parliament	
						cut off	substitution	cut off	substitution
Non selective herbicides	glyphosate **	360	16		3,5				Gw
Insecticides	alpha cypermethrin	50	1		0,25			Bees	
	cypermethrin	100	1		0,32			Bees	
	lambda cyhalotrin	25	1		0,25		2 PBT, ARfD<0,01	1 POP, Bees	
	pirimicarb	500	2	1 treatm/y	0,3		2 PBT	Bees	
Selective herbicides	desmedipham	360	0		4,5				1 PBT
	ethofumesate	500	5	0,142	0,8				1 PBT/Gw
	phenmedipham	360	4	6	4,5				
	metamitron	700	6	3 (3x1)	3				
	clopyralid	100	5	0,25	1,5			1 POP	
	triflusaluron-methyl	500	1	20-30	90	End?		End?	
Selective graminicides	clethodim	240	1		1				Gw
	cycloxydim	100	1		5				1 PBT/Gw
	propaquizafob	100	2		1,5				1 PBT
	tepraloxym	50	1		2		2 PBT	1 POP	
Molluscicides	Iron(III)fosfate		2						
Fungicides	azoxystrobin	25	1						
	epoxiconazol	125	7		1	Endocrine?	2 PBT	1 POP + endocrine	
	propiconazol	250	1		0,5	Endocrine?	2 PBT	1 POP + endocrine	
	pyraclostrobin	50-133	1		(1)				
	sulphur	800	1		7				
Insecticides and fungicides for seed treatment	imidacloprid						2 PBT	1 POP, Bees	
	fludioxonil								1 PBT/Gw
	hymexazol								1 PBT
	thiram					End?		End?	
Not approved seed treatment products	clothianidin							Bees	1 PBT/Gw
	thimethoxam							Bees	

** spring, before emergence

Glossary

ADI	acceptable daily intake (for consumers)
ARfD	acute reference dose
Gw	groundwater
ha	hectare
PBT	persistent, bioaccumulating, toxic
POP	persistent organic pollutant
TI	Treatment index

November 5 2008