Project title:	Bespoke on-line website to provide current information on pesticide approvals for ornamental crops
Project number:	CP 72
Project leader:	Dr Miles Thomas, Fera
Report:	Final
Previous reports:	None
Key workers:	Dr M Thomas (project co-ordinator) A Pote (website developer) D Hunt (consultation and feedback)
Location:	Fera
Project co-ordinators:	Nick Dunn, Frank P Matthews Ltd.
Date commenced:	07 December 2009
Date completion due:	07 April 2010
Key words:	Long Term Arrangements, pesticides, ornamental crops, LTAEU, HNS, BOF, PO

AUTHENTICATION

I declare that this work was done under my supervision according to the procedures described herein and that the report represents a true and accurate record of the results obtained.

Dr Miles Thomas

Fera, Sand Hutton, York, Yorkshire, YO41 1LZ

And pal Date 18 March 2010 Signature

Report authorised by:

Signature Date

Grower summary

Headline

Minefield of pesticide extensions for use in ornamental crops cleared by new HDC on-line tool.

Background

The long term arrangements for extension of use (LTAEU) of approved pesticides onto minor crops are slowly being phased out. Extensions of use onto edible crops ended some time ago but have been preserved on non-edible crops, subject to a complex set of rules.

For example, pesticides containing active substances which have been re-registered following placing on Annex 1 can no longer be extended to minor ornamental crops, unless they are also co-formulated within a product with an active substance which has not yet been through re-registration.

Summary

In order to provide an up-to-date listing of those products which are still permissible under the LTAEU, data within the pesticide approvals database *LIAISON*[®] have been reprocessed to provide an on-line tool, available via a link on the HDC website. This tool allows users to select a crop and knowing they require a particular pesticide type to solve their problem (fungicide, herbicide, insecticide etc.), they can search not only all those products currently approved for use on-label or off-label through SOLAs, but also list all those products that they could still legally use under the long term arrangements.

From the lists provided, product names provide hyperlinks to more detailed information on rates of application, maximum number of applications per season, application intervals, harvest intervals (still legally binding under extensions of use, even in non-edible crops) and a other important label information like handling, disposal and safety precautions environmental warnings, tank mix compatibility etc.

Additional features include the ability to sort pesticides by their modes of action, using the Fungicide, Herbicide and Insecticide Resistance Action Committees'

activity codes. This can be vital when preparing spray programmes to avoid the onset of pest or disease resistance, as products with different modes of action can be clearly displayed to allow choice of alternate or mixed spray programmes.

Further information on activity codes can be found at:

Insecticide Resistance Action Committee	-	www.irac-online.org
Fungicide Resistance Action Committee	-	www.frac.info
Herbicide Resistance Action Committee	-	www.hracglobal.com

In order to avoid confusion, the system also provides a button to allow users to display products no longer permitted for extension of use, to allow them to see clearly why something they might have used in the past is no longer allowed, rather than potentially missing from the system.

The database also contains biological and physical control agents not requiring registration to provide further options for pest and disease management without the use of registered pesticides.

Action points for growers

Use the system to check whether alternative products are available for use under the LTAEU which might solve your control problems.

Remember that extensions of use are undertaken at your own risk so always then check with your consultant or advisor as to the suitability of your choice.

ALWAYS READ THE LABEL.

How to use the database

To access the system, click on the link on the HDC website : www.hdc.org.uk You can search the database using any combination of parameters available on the search page below, **but** you must always include a crop. The crop list displays all crop classification categories. These categories are based on the 'crop hierachy' used for pesticide approvals, which includes edible crops. The hierarchy has evolved over time in response to changing classifications on product labels and has become rather complicated. However, if you perform a search against a specific crop the database will also extract relevant approvals data for any related general crop categories. For example, a search on 'Bedding plants (protected)' would extract approvals for:

- Bedding plants (protected)
- Bedding plants
- Edible and non-edible crops
- Non-edible crop (protected)
- Ornamental (protected)
- Ornamental plant production

You can exclude general crop category approval data appearing in your search results by selecting the 'yes' button where it states 'Check "yes" to exclude general crop categories'

For the overwhelming majority of ornamental crops, specific crops will not be listed. If a crop you are interested in is unlisted you will need to search the database by using the general crop categories such as 'Ornamental (outdoor)' and 'Ornamental (protected).

To test it out and get used to using it, select the crop and pesticide type from the drop-down lists of "Crop" and "Chemical group"

What does the 'Wildcard Search' mean?

If you are looking for a product but can't remember its full name, for example 'Landgold Piccant', you can enter part of its name (e.g. picc) into the 'Wildcard Search' box and run a search. It will find all products which contain "picc", not matter where it occurs in the word.

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1/	Tel: +44 (0)1904 462612 <u>Haisond</u> Built by <u>KM@Fera</u>	9fera.qzi.qov.uk			<u>Legal Notices</u> II <u>Terms & Condi</u> © Crown Copyright Fera J

For example, select Insecticides and Chrysanthemums (protected) then click on the Search button.

The output you should see is given on the next page. There are 76 results and the first 50 are shown, illustrated by the green background to the page 1 box above the table.

You can select the remaining 26 records by clicking on the Next box or the 2 box.

Note that all these products have a white background: this means they have on- or off-label approval for use on Chrysanthemums (protected).

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Gazelle	12000	Acetaminrid	20	Inserticide	
> Applaud	11522	Ruprofezin	05	Insecticide	
Shorpa 100 EC	12570	Cypermethrin	10	Insecticide	
Terrel 100 EC	10004	Cypermedium	10	Insecticide	
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Banuu	10994	Deitametrinin	2.0	Insecuciue	
Decis Protech	11502	Deitamethrin	1.5	Insecticide	
Agriguard Deltamethrin	10770	Deltamethrin	2.5	Insecticide	
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Cleancrop Decathlon	12834	Deltamethrin	2.5	Insecticide	
Pearl Micro	08620	Deltamethrin	6.25	Insecticide	
Sumi-Alpha	14023	Esfenvalerate	2.5	Insecticide	
	14859	Esfenvalerate	2.5	Insecticide	
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If you click on any of the products, for example Applaud, you will get further information on this approval, including the original level of crop approval, under which you selected crop is covered (in this case, Ornamental (protected)). Click on the product again to get detailed approval information.

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You will notice that the final use date for this product is given

If you click on the product again, you will get more detailed information on rates etc.

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Do not contaminate surface waters or ditches with chemical or u container	ısed
Store/keep in original container, tightly closed, in a safe place	
Do not re-use this container for any purpose	
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Pearl Micro	08620	Deltamethrin	6.25	Insecticide	
Sumi-Alpha	14023	Esfenvalerate	2.5	Insecticide	
Sven	14859	Esfenvalerate	2.5	Insecticide	
<u>Borneo</u>	13919	Etoxazole	11	Acaricide	
Matador 200 SC	11058	Fenazaquin	20	Acaricide	
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Note that these have a green background. This indicates that they are legal to use under the long term arrangements for extension of use under the situation (outdoor or protected) of the original crop you searched for (in this case protected).

Click on one of these products, for example Apollo 50 SC, and all the approvals for this product under this situation will be displayed:

	A/S	501		TAEU			WHITE - On/off GREEN - Permis arrangements. RED - No longe term arrangem	KEY label for product se ssible under existing r permissible under ents.	elect. g long term existing long
	W Search								
LIAISON	Product Search	h Results for Apol	lo 50 SC						
Produc	MAPP	Active	% Active	Chemical	Crop	Method of	Crop stage	Final use date	Replaced
Apollo 50	10590	Clofentezine	50	Acaricide	Raspberry (protected)	Ground spray	Field application	Off Label 31 December 2013	Dy
Apollo 50	10590	Clofentezine	50	Acaricide	Strawberries (protected)	Ground spray	Field application	Off Label 31 December 2013	
Apollo 50 SC	10590	Clofentezine	50	Acaricide	Blackberry (protected)	Ground spray	Field application	Off Label 31 December 2013	
Tel: +44 (0) Built by KM@	New Search 904 462612 <u>liais</u> Fera	:on@fera.qsi.qov.uk						Legal Notices :: © Crown C	<u>Terms & Condition</u> Copyright Fera 200

Once again, clicking on any of these products will give you the rates of application etc. as before;



In this case, the original approval on Strawberries (protected) was a SOLA, so you can access the SOLA document by clicking on the SOLA number in the Rates window.

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I		NOTICE OF APPROVAL Number: 2271/2001	<u>^</u>
	FOOD AND ENVIRONMENT F CONTROL OF PESTICIDES F APPROVAL FOR OFF-LABEI	PROTECTION ACT 1985 REGULATIONS 1986 (S.I. 1986 NO. 1510): L USE OF AN APPROVED PESTICIDE PRODUCT	
?	This approval provides for the and situations, other than those as it is known, is at all times do entirely his or hers.	use of the product named below in respect of crops e included on the product label. Such "off-label use", one at the user's choosing, and the commercial risk is	≡
	The conditions below are statu use occurs. Failure to abide by that approval, and a contraven amended). The conditions sho otherwise apply.	tory. They must be complied with when the off-label y the conditions of approval may constitute a breach of tion of the Control of Pesticides Regulations 1986 (as own below supersede any on the label <u>which would</u>	
	Level and scope:	Notice is hereby given that in exercise of the powers conferred by Regulation 5 of the Control of Pesticides Regulations 1986 (SI 1986/1510) (as amended) and of all other powers enabling them in that behalf, the Secretary of State and the Scottish Ministers (as regards Scotland) and the Welsh Ministers and the Secretary of State (acting jointly as regards Wales) have given full approval for the use of	
	Product name:	Apollo 50 SC containing	
	Active ingredient:	500 g / I clofentezine	
	Marketed by:	Makhteshim-Agan (UK) Ltd under MAPP Number 10590 subject to the conditions relating to off-label use set out below:	
	Date of expiry:	31 December 2013 (subject to the continuing approval of MAPP 10590).	
Ø	Use:		
5	Field of use:	ONLY AS A HORTICULTURAL ACARICIDE	~
Done			≙ ₽

If you decide you also want to include mode of action of the pesticide, click on the button shown below:



When you select this, you will then also be given the option to sort by mode of action. If you don't select this, the output will be sorted by on/off-label approved first followed by LTAEU-approved, and by alphabetical order of active substance within these categories.

	Include mode of action Yes O No O Sort by mode of action Yes O No O Search Clear		
	Tel: +44 (0)1904 462612 <u>liaison@fera.asi.oov.uk</u> Bullt by <u>KIM@Fera</u> © Crown Copyright Fera	<u>litions</u> 2009	
Done			₽

The output below shows part of the results of a search for fungicides approved for use on protected chrysanthemums, including mode of action and sorted by mode of action.

Intranet 🔄 RSS Feeds 🚞 Food	i sahety 🔝 FC24 🕅 MoniC	2A 🔎 Most Visited 📐 Latest Headlines 📋	The Long Term	n Arrang 🚵 FSA 📋] JRP 🔇 Plone 🧟 Henvinet 🔝 viewApp 🔯 LIAISON 📋 Eur-L
AEU ÷					
Clayton Tebucon	08707	Tebuconazole	25	Fungicide	Tebuconazole 3
Tebcon	14300	Tebuconazole	25	Fungicide	Tebuconazole 3
CHA 1640	14583	Tebuconazole	20	Fungicide	Tebuconazole 3
Amistar	10443	Azoxystrobin	25	Fungicide	Azoxystrobin 11
Stroby WG	08653	Kresoxim-methyl	50	Fungicide	Kresoxim-methyl
Kresoxy 50 WG	12275	Kresoxim-methyl	50	Fungicide	Kresoxim-methyl 11
Nando 500 SC	14372	Fluazinam	50	Fungicide	Fluazinam 29
Fubol Gold WG	14605	Mancozeb/metalaxyl-M	64/3.88	Fungicide	Macalaxyl-M 4
Fongarid Gold	12547	Metalaxyl-M	46.52	Fungicide	Met exyl-M
Subdue	12503	Metalaxyl-M	46.52	Fungicide	Metal V-M
Nimrod	13046	Bupirimate	25	Fungicide	Bupirim B
Switch	13185	Cyprodinil/fludioxonil	37.5/25	Fungicide	Cyprodin
<u>Scala</u>	11695	Pyrimethanil	40	Fungicide	Pyrimethar
<u>Switch</u>	13185	Cyprodinil/fludioxonil	37.5/25	Fungicide	Fludioxonil 12
Basilex	07494	Tolclofos-methyl	50	Fungicide	Tolclofos-methyl
<u>Paraat</u>	99999	Dimethomorph	50	Fungicide	Dimethomorph 40
Route One Fosetyl 80	13625	Fosetyl-aluminium	80	Fungicide	Fosetyl-aluminium
<u>Fosal</u>	13384	Fosetyl-aluminium	80	Fungicide	Fosetyl-aluminium
<u>Aliette 80 WG</u>	13130	Fosetyl-aluminium	80	Fungicide	Fosetyl-aluminium
Standon Fullstop	13571	Fosetyl-aluminium	80	Fungicide	Fosetyl-aluminium
Potassium Hydrogen Car	rbonate -	Potassium hydrogen carbonate	99	Fungicide	Potassium hydrogen carbonate
Cuprokylt FL	08299	Copper oxychloride	27	Fungicide	Copper oxychloride
Headland Inorganic Ligu	id Copper 13009	Copper oxychloride	43.5	Fungicide	Copper oxychloride
Solfa WG	11602	Sulphur	80	Sulphur	Sulphur M2
Thiovit Jet	10928	Sulphur	80	Sulphur	Sulphur M2
Microthiol Special	06268	Sulphur	80	Sulphur	Sulphur M2

The mode of action group for the active(s) within the product is given by the green hyperlink code in the right hand column. Each mode of action group has a different code and clicking on it illustrates what that group is (e.g. Fluazinam 29).

LIAISON Pesticide Resistance Information for Fluazinam

Code (based on FRAC)	29
Mode of Action	C. respiration
Target Code: Target Site	C5: Uncoupler of oxidative phosphorylation
Group Name	C5: uncouplers of oxidative phosphorylation
Comments	
Other Actives in Group	Binapacryl, Dinocap, Ferimzone, Meptyldinocap
Other UK-Approved Actives in Group	Meptyldinocap

This screen alone shows 13 different fungicide modes of action, with 17 being selected in total on both output screens.

Note: where a product is formulated from two active substances with different modes of action, it will appear twice, once for each active in its own mode of action group. For example, see Fubol Gold WG below:

+					
(resoxy 50 WG	12275	Kresoxim-methyl	50	Fungicide	Kresoxim-methyl
Nando 500 SC	14372	Fluazinam	50	Fungicide	Fluazinam 29
Fubol Gold WG	14605	Mancozeb/metalaxyl-M	64/3,88	Fungicide	Metalaxyl-M
Fongarid Gold	12547	Metalaxyl-M	46.52	Fungicide	Metalaxyl-M <u>4</u>
Subdue	12503	Metalaxyl-M	46.52	Fungicide	Metalaxyl-M <u>4</u>
Nimrod	13046	Bupirimate	25	Fungicide	Bupirimate 8
<u>Switch</u>	13185	Cyprodinil/fludioxonil	37.5/25	Fungicide	Cyprodinil 9
Scala	11695	Pyrimethanil	40	Fungicide	Pyrimethanil 9
<u>Switch</u>	13185	Cyprodinil/fludioxonil	37.5/25	Fungicide	Fludioxonil 12
Basilex	07494	Tolclofos-methyl	50	Fungicide	Tolclofos-methyl 14
Paraat	99999	Dimethomorph	50	Fungicide	Dimethomorph <u>40</u>
Route One Fosetyl 80	13625	Fosetyl-aluminium	80	Fungicide	Fosetyl-aluminium <u>33</u>
Fosal	13384	Fosetyl-aluminium	80	Fungicide	Fosetyl-aluminium <u>33</u>
Aliette 80 WG	13130	Fosetyl-aluminium	80	Fungicide	Fosetyl-aluminium <u>33</u>
Standon Fullstop	13571	Fosetyl-aluminium	80	Fungicide	Fosetyl-aluminium <u>33</u>
Potassium Hydrogen Carbonate		Potassium hydrogen carbonate	99	Fungicide	Potassium hydrogen carbonate <u>NC</u>
Cuprokylt FL	08299	Copper oxychloride	27	Fungicide	Copper oxychloride <u>M1</u>
Headland Inorganic Liguid Copper	13009	Copper oxychloride	43.5	Fungicide	Copper oxychloride <u>M1</u>
Solfa WG	11602	Sulphur	80	Sulphur	Sulphur <u>M2</u>
Thiovit Jet	10928	Sulphur	80	Sulphur	Sulphur <u>M2</u>
Microthiol Special	06268	Sulphur	80	Sulphur	Sulphur <u>M2</u>
Dithane 945 (12545)	12545	Mancozeb	80.00	Fungicide	Mancozeb <u>M3</u>
Fubol Gold WG	14605	Mancozeb/metalaxyl-M	64/3.88	Fungicide	Mancozeb
Manfil 80 WP	14766	Mancozeb	80	Fungicide	Mancozeb <u>M3</u>