

Merit Analysis for top 45 Global Minor Use Priorities Summer 2020

Use 1 form per crop/pest priority

(To be conducted by a committee of global proponents for the priority)

Temperate					
Raspberry (Field), Spotted-wing Drosophila, 76 (total of 2 forms)					
Hannah Burrack, USA & Erica Pate, Canada : John Wise, USA wisejohn@msu.edu					
Criteria*	Points				
1. Is the crop-pest combination a situation with no available products? <i>2 points</i>					
	Solution 1	Solution 2	Solution 3	Solution 4	Solution 5
2. Are there potential solutions?	Bifenthrin	Cyantraniliprole	Cyclaniliprole	MBI-203 SC2 (Chromobacterium subtsugae)(same active ingredient as Grandevo)	Malathion (8F formulation)
3. Company name	FMC	FMC	ISK Biosciences Corp. (Summit Agro)	Marrone Bio Innovations	FMC
4. Company contact name and e-mail	Sheldon Sumpter sheldon.sumpter@fmc.com	Sheldon Sumpter sheldon.sumpter@fmc.com	Mike Leggett leggettM@iskbc.com	Tim Johnson tjohnson@marronebio.com	Sheldon Sumpter sheldon.sumpter@fmc.com
5. Level of registrant support globally – list of countries registrant is willing to supply GLP test substance, standards and pursue a label (A)	Material is registered in US, Canada, China, EU, Japan, Korea, UK. MRL is same in all but Korea. FMC supports developing residue data for 1 day PHI and submission to CODEX.	Material is registered in US, Canada, China, EU, Japan, Korea, UK. MRL is unworkably low in EU, Japan, Korea, and UK. FMC is working to submit caneberries to JMPR/Codex; expect EU and UK will adopt	US MRL is higher than all other registered countries. ISK expects adoption of a CODEX MRL of 0.08 ppm for caneberries.	USA, Canada, EU, Australia Yes registrant support	US MRL is higher than all other important target countries (EU, Korea, UK). FMC supports developing residue data for submission to CODEX.
6. List of countries having field and analytical ability and willing to conduct trials (B)	USA, CA	USA, CA	USA, CA	Expects to be exempt from GLP residue data requirement	USA, CA
7. <i>Insert 1 point for each match between countries that registrant supports, and countries willing (A + B)</i>	2	2	2	4	2
8. Is efficacy already established against the target pest or can it be bridged via rationale from other labeled uses? <i>Insert 1point</i>	Yes, 1	Yes, 1	Yes, 1	1 – yes Trials underway. Some data may be available by Marrone Bio Innovations. Efficacy may be bridged via Grandevo	Yes - 1

9. Are there any residue data already available for the crop/pest combination and if so, from where?	Yes, 1	Yes, 1	Yes - 1	Grandevo data may already be available to IR-4	Yes - 1
10. Are project champions identified?(Insert names) <i>Insert 1point</i>	1 - Driscolls Jimmy Klick 847-650-1224 Jimmy Klick Jimmy.Klick@driscolls.com				
11. Will a uniform GAP (rate, application pattern, PHI, formulation, premix be able to be established across all countries? Yes = <i>Insert 1point</i> ; No = 0	1 - yes	1 - yes	1 - yes	Yes - 1	1 - yes
12. Does the product replace old technology with reduced risk technology? (1 point per old product replaced with reduced risk defined as a more favorable environmental or human health risk assessment)	no	1 - yes	1 - yes	Yes - 1	no
13. Does the potential solution fit into IPM systems, i.e. low risk to beneficials <i>Insert 1point</i>	1 - The pre-harvest timing for this product is low risk to pollinators and beneficials	1 – Diamides are low risk to beneficials	1 – Diamides are low risk to beneficials	1 - Yes, it is reduced risk product and fits into IPM systems	1 - The pre-harvest timing for this product is low risk to pollinators and beneficials

<p>14. Does the project complement current technologies to address pesticide resistance and/or control resistant pest/disease/weed or provide an alternative mode of action? <i>Insert 1point</i></p>	<p>1 - Yes. There are at least 3 modes-of-action registered in caneberries, thus good for resistance management</p>	<p>1 - Yes. There are at least 3 modes-of-action registered in caneberries, thus good for resistance management</p>	<p>1 - Yes. There are at least 3 modes-of-action registered in caneberries, thus good for resistance management</p>	<p>1- Yes, it provides a rotational partner with spinosad to reduce the number of Spinosad applications which will reduce the risk of Spinosad resistance, a major issue in CA and a growing concern of organic berry growers nationally</p>	<p>1 - Yes. There are at least 3 modes-of-action registered in caneberries, thus good for resistance management</p>
<p>15. Are there any crop grouping MRL opportunities? <i>(1 point per crop group)</i></p>	<p>1 – yes 13A Berries crop group</p>	<p>1 – yes 13A Berries crop group</p>	<p>1 – yes 13A Berries crop group</p>	<p>1 – yes 13A Berries crop group</p>	<p>1 – yes 13A Berries crop group</p>
<p>16. Comments (Please use this space to make a memo of any other information that might be points of consideration such as JMPR cycle, CODEX, EPA, EU registration/MRL status, ability of a product to control multiple pest priorities, can be used across multiple crops, one formulation or premix combination used in one part of the world, regulatory needs, etc. No specific points, but useful information</p>	<p>PHI is 3 days, which is unworkable for the target pest. MRL is harmonized across countries already, so this is more workable pyrethroid to target than others (fenpropathrin, for example)</p>	<p>MRL must be harmonized to make material more useful for export focused growers.</p>	<p>MRL must be harmonized. All other trading partners are significantly less than US. ISK's target of 0.08 MRL for CODEX 10x of US tolerance.</p>	<p>There is lack of effective products for organic management of SWD that can be rotated with spinosad to control SWD in berry production systems. Grandevo has been used in some regions but prelim data indicate that this liquid formulation may be easier to apply with commonly used spray equipment and may have better efficacy than Grandevo.</p>	<p>US MRL is higher than all other important target countries (EU, Korea, UK).</p>
<p>TOTAL POINTS</p>	<p>9</p>	<p>10</p>	<p>10</p>	<p>11</p>	<p>9</p>

GRAND TOTAL	49
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*if not specified otherwise in the 'criteria' box, assign 1 point per solution in gray boxes only.

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(To be conducted by a committee of global proponents for the priority)

Temperate					
Raspberry, Spotted wing drosophila and 27					
Adam Doxford, UK, adam_dox@hotmail.co.uk and John Wise, USA wisejohn@msu.edu					
Criteria*					
1. Is the crop-pest combination a situation with no available products? 2 points	0				
	Solution 1	Solution 2	Solution 3	Solution 4	Solution 5
2. Are there potential solutions?	Cyantraniliprole	Spinosad	Chromobacterium subsuugae	Bait sprays	Trapping and monitoring
3. Company name	FMC	Corteva	Marone	Andermatt	NIAB EMR
4. Company contact name and e-mail	<u>Justine Thornton</u>	<u>Sheridawn Schoeman</u>	<u>Tim Johnson</u>	<u>Andrew Brown</u>	<u>Michelle Fountain</u>
5. Level of registrant support globally – list of countries registrant is willing to supply GLP test substance, standards and pursue a label (A)	<p style="text-align: center;">UK and EU USA</p> <p>FMC supports all soft fruit uses, but awaiting a greater level of detail on residues data available a support for generation of additional detail.</p>	<p style="text-align: center;">UK and EU USA</p> <p>Corteva supports extension of lifespan currently.</p>	<p style="text-align: center;">USA UK and EU uncertain</p> <p>Last conversation with Marrone representatives indicated they were still supporting registration of the active and product in Europe despite regulatory barriers.</p>	<p style="text-align: center;">UK and EU</p> <p>Already registered and supported in the UK, uncertain of registration status in EU and US. Registrant is keen to support expansion and collaboration.</p>	<p style="text-align: center;">UK and EU</p> <p>No commercial developments currently. Potential to develop improved lures through Bayer 'Decis Trap' system, but collaboration in early days.</p>
6. List of countries having field and analytical ability and willing to conduct trials (B)	<p style="text-align: center;">UK and EU USA</p> <p>Need to discuss with EU MUCF to establish willingness and capacity.</p>	<p style="text-align: center;">UK and EU USA</p> <p>Not relevant for this crop.</p>	<p style="text-align: center;">USA UK and EU</p> <p>Will depend on residues exemption</p>	<p style="text-align: center;">UK and EU</p>	<p style="text-align: center;">UK and EU</p>

7. <i>Insert 1 point for each match between countries that registrant supports, and countries willing (A + B)</i>	2	2	2	1	1
8. Is efficacy already established against the target pest or can it be bridged via rationale from other labeled uses? <i>Insert 1point</i>	1	1	1	1	0
9. Are there any residue data already available for the crop/pest combination and if so, from where?	Yes UK and USA	Yes UK and USA	Yes USA	N/A	N/A
10. Are project champions identified?(Insert names) <i>Insert 1point</i>	Adam Doxford	Adam Doxford	Adam Doxford	Michelle Fountain	Michelle Fountain
11. Will a uniform GAP (rate, application pattern, PHI, formulation, premix be able to be established across all countries? <i>Yes = Insert 1point ; No = 0</i>	0 Potential for great variability between countries and zones. Some may be protected/outdoor depending on climate.	0 Potential for great variability between countries and zones. Some may be protected/outdoor depending on climate.	0 Too early to tell.	1 Application via tank mix should be uniform throughout EU. Individual GAPs of co-mix may vary.	1 Species biology dependent, may vary based on climate and habitat of off-crop areas.
12. Does the product replace old technology with reduced risk technology? (<i>1 point per old product replaced</i>	0 Technically new technology, though has been use for the past 3-4 years	0 Potential for resistance, though effectiveness is better	1	1	1

<i>with reduced risk defined as a more favorable environmental or human health risk assessment)</i>	through 'emergency authorisation'	than other available actives.			
13. Does the potential solution fit into IPM systems, i.e. low risk to beneficials <i>Insert 1point</i>	0	0	1	1	1
14. Does the project complement current technologies to address pesticide resistance and/or control resistant pest/disease/weed or provide an alternative mode of action? <i>Insert 1point</i>	1	0 Addition of bait sprays could compliment use/improve effectiveness.	1	1	1 When incorporating 'attract and kill' principle, could be combined with suitable lures to improve effectiveness.
15. Are there any crop grouping MRL opportunities? (<i>1 point per crop group</i>)	1 (all cane/bush fruit with representatives of group)	1 Already available	1	N/A	N/A
16. Comments (Please use this space to make a memo of any other information that might be points of consideration such as JMPR cycle, CODEX, EPA, EU registration/MRL status, ability of a product to control multiple pest priorities, can be	Gaining permanent registration for cyantraniliprole in the UK (and EU) for use on soft fruit crops is challenging due to the environmental profile of the substance. Furthermore commercial agreements have hampered the use of alternative (registered) products.	Active substance provides effective control, but nearing the end of it's lifespan. Registrant agreed to extend lifespan pending registration of replacement molecule. Already registered but Efficacy/safety could be improved through target sprays	Shown to provide effective control but faced with setbacks in the EU registration process. Recent discussion with the company indicates that registration in Europe is still desirable, but may be another 2-3 years away.	UK SWD research has shown promise through attract-and-kill research for SWD. This method uses a registered adjuvant (Combi Protec) which is sprayed in conjunction with effective PPP active substances at half rate in tank mix.	UK SWD research has considered various trapping and monitoring methods. Further development of work is required to identify an effective trapping strategy for winter morphs in off-crop areas. In crop trapping does not give accurate forecasts due to fruit

<p>used across multiple crops, one formulation or premix combination used in one part of the world, regulatory needs, etc.</p> <p>No specific points, but useful information</p>	<p>Product is effective and broad spectrum, may have limited lifespan depending on how quickly resistance develops.</p>	<p>and use of bait sprays</p>	<p>Residues will depend upon EU exemption.</p>	<p>Flies are driven to consume residues, ingestion improves lethality.</p> <p>Still in early stages – raspberries represents phase two crop.</p>	<p>being more attractive to egg-laying females.</p> <p>Potential for research collaboration to share results and develop experimental methods.</p>
<p>TOTAL POINTS</p>	<p>5</p>	<p>4</p>	<p>7</p>	<p>6</p>	<p>5</p>