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					
Tomato,*Tuta absoluta*, 53 **(15 pts solution 1; 9 pts solution 2; 10 pts solution 3; 11 pts solution 4; 8 pts Solution 5)**					
Verónica Picado Pomar, Costa Rica, vpicado@sfe.go.cr					
Criteria*	**Points**				
1. Is the crop-pest combination a situation with no available products? ***2 points***					0
	Solution 1 High Priority	**Solution 2** High Priority	**Solution 3** High Priority	**Solution 4** Low Priority	**Solution 5** Low Priority
2. Are there potential solutions?	Yes; P214 Lure (Mass Trapping) TETRADECATRIENYL ACETATE AND E3,Z8-TETRADECENYL ACETATE	Yes: Tutavir™ / (Baculovirus-*Phthorimaea operculella* granulovirus (PhopGV))	Yes: Spinetoram	Yes: MBI-306 SE1 (*Burkholderia rinojensis* strain A396)	Yes: Dipel/ Xentari (Bt)
3. Company name	Chemtica	Andermatt Biocontrol	Corteva	Marrone Bio Innovations	Valent BioSciences
4. Company contact name and e-mail	Francisco Gonzalez francisco_gonzalez@chemtica.com	Felix Dubach Felix.dubach@andermattbiocontrol.com	Carmen Tiu carmen.tiu@corteva.com	Maryna Serdani mserdani@marronebio.com	James Eldridge James.Eldridge@valentbiosciences.com
5. Level of registrant support globally – list of countries registrant is willing to supply GLP test substance, standards and pursue a label (A)	Nigeria, Colombia, Honduras, Nicaragua, Guatemala, Ghana, Costa Rica, Morocco, Zimbabwe	Turkey, Morocco, Ghana	Bolivia, Peru, Malaysia, Thailand, Ghana, Uganda, Tanzania	Brazil, Argentina, Chile, Peru, Colombia, Ecuador, Uruguay, Paraguay, Bolivia, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, and Mexico, South Africa, Kenya, Morocco, Tunisia	Guatemala, Dominican Republic, Honduras, Costa Rica, Panama, Colombia, Ecuador Valent also considered Guatemala, El Salvador, Honduras or other CA countries, however to our knowledge the pest had not been reported. With a registration in Costa Rica They can use the same trial data for most other CA countries.
6. List of countries having field and analytical ability and willing to	Nigeria, Colombia, Honduras, Nicaragua, Costa Rica, Guatemala, Ghana, Morocco, Zimbabwe	Turkey, Morocco, Ghana	Bolivia, Peru, Malaysia, Thailand, Ghana, Uganda, Tanzania	Brazil, Argentina, Mexico, South Africa, Costa Rica	1.Colombia 2.Costa Rica 3.Panama 4.Ecuador 5.All others if pest is present

conduct trials (B)					(in order of priority)
7. Insert 1 point for each match between countries that registrant supports, and countries willing (A + B)	9	3	7	5	4
8. Is efficacy already established against the target pest or can it be bridged via rationale from other labeled uses? *Insert 1point*	1, Yes in some cases	1; Yes in some cases	1; Yes in some cases approved efficacy on tomato (1x20 + 4x70 g ai/ha, RTI = 4 days, PHI = 1 day).	1 Suppression	1, Yes in some case
9. Are there any residue data already available for the crop/pest combination and if so, from where?	Product is exempt from residues	Product is exempt from residues	Corteva has a rather robust residue data-set for spinetoram on tomatoes (including control of Tuta Absoluta) and MRLs have already been established by Codex (0.06 ppm) and 33 other countries (0.05-0.5ppm). Australia (0.1), Brazil (0.01), Canada (0.4), China (0.06 Temporary), Codex (0.06)*, Costa Rica (0.06), EU (0.5, 0.06 future (Sante Proposal 10706/2020 (Annex II))), Hongkong (0.06), Indonesia (0.06), Israel (0.01), Japan (0.7), Korea (0.5),	Product is exempt from residues	Product is exempt from residues

			Mexico (0.4), Morocco (0.5), New Zealand (0.06 (Codex)), Norway (0.5), Russia (0.06), Saudi Arabia (0.06), South Africa (0.02), Switzerland (0.5), Taiwan (0.2), Turkey (0.5), USA (0.40), Vietnam (0.06). *Note Codex MRL of 0.06 mg/kg was set based on 6 US trials on tomato (1x20 + 4x70 g ai/ha, RTI = 4 days, PHI = 1 day), **Thus, no additional residue data should be needed.**		
10. Are project champions identified?(Insert names) *Insert 1point*	1; Francisco Gonzalez	1; Felix Dubach	0; No	1; Maryna Serdani (MBI)	1; Dan Zommick (VBS)
11. Will a uniform GAP (rate, application pattern, PHI, formulation, premix be able to be established across all countries? *Yes = Insert 1point ; No = 0*	1	1	1	1	1
12. Does the product replace old technology	1	1	0	1	0

with reduced risk technology? (*1 point per old product replaced with reduced risk defined as a more favorable environmental or human health risk assessment)*					
13. Does the potential solution fit into IPM systems, i.e. low risk to beneficials *Insert 1point*	1	1, ; Yes. The product is species specific. It is effective against *Tuta absoluta* and *Phthorimaea operculella*. Other organisms are not affected by the product.	0	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? *Insert 1point*	1	1, ; Yes. The MoA of Tutavir is different from all products against *Tuta absoluta* which are currently available. (IRAC MoA Class 31: https://irac-online.org/modes-of-action/)	0	1	0
15. Are there any crop grouping MRL opportunities?	N/A	N/A	1, Tomato is one of the representative crops of Group 012 Fruiting vegetables, other than Cucurbits,	N/A	N/A

(1 point per crop group)			from document CXG 84-2012 PRINCIPLES AND GUIDANCE ON THE SELECTION OF REPRESENTATIVE COMMODITIES FOR THE EXTRAPOLATION OF MAXIMUM RESIDUE LIMITS FOR PESTICIDES TO COMMODITY GROUPS		
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.	The basis of this project is the scientifically proven technology of Tuta absoluta mass trapping which has been widely used in some countries. Published studies have shown that by combining mass trapping and biological control with parasitoids of T. absoluta, the management of the pest increase considerably and last longer when compared with conventional pesticide applications. Besides, use of pheromone traps have shown that captures can be used as well as indicators for decision-making and chemical management. However, even when the efficacy of this solution has been demonstrated, there is a need for local demonstrations of the efficacy of the technology. Some countries do not need a registration of such or an efficacy test for pheromones such as United States or the European Union. **However, for the countries proposed, a local efficacy test demonstration is necessary to register and commercialize this technology**	EU registration is ongoing and emergency registrations have been granted (Germany in 2019, Greece and Cyprus in 2020). Product can be mixed in combination with existing IPM measures such as beneficial insects because it does not affect them. Product is also completely harmless to the user and the consumer, as the active ingredient is not capable of infecting non-target organisms and is not a toxic substance.	Spinetoram has MRLs established in CODEX for Tomatoes (0.06 mg / kg), If GMUF wants to support registration in the 7 countries from LATAM, Asia and Africa(Bolivia, Peru, Malaysia, Thailand, Ghana, Uganda, Tanzania) that do not have registration on tomato, it should be an easier (and cheaper) achievement, because no residue data in needed (just leverage on the Codex monograph). **GMUF could support local efficacy data generation Thus, no additional residue data should be needed.**	It is suitable for foliar applications, at a rate of 1 to 5 fluid ounces per acre, both in the field and greenhouse. A non-ionic surfactant (NIS) should be added when applying this product. Applications can be spaced 3 to 10 days apart (average 7 days). **The merit analysis team considered that it is too early to nominate this solution to work with the GMUS, MBI-306 is still under development and is not currently registered in any country.** **It is recommended to evaluate a nomination in the future.**	Sprays are initiated at low to moderate risk levels. During this period preventive sprays can be made with Bacillus thuringiensis (IRAC Mode of Action Group 11), . DiPel® and XenTari® should be used when the adult moth population is low and egg laying has just started. Perform two to four sprays with 7 – 10 days spray interval. Alternate DiPel® (Btk) with XenTari® (Bta) when possible. Bt sprays are not harmful to beneficials. The use of DiPel®and XenTari® can be continued during this period. **The merit analysis team considered it a low priority, because Bt is a solution already registered in different formulations in the proposed countries.**

No specific points, but useful information					
TOTAL POINTS	15	9	10	11	8
GRAND TOTAL					53

*if not specified otherwise in the ‘criteria’ box, assign 1 point per solution in gray boxes only.