FMC Sustainability Assessment Tool

Introduction:

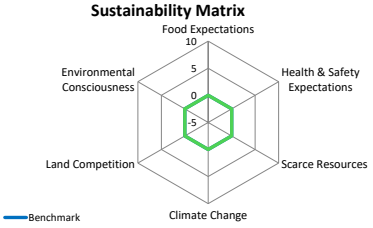
The Sustainability Assessment tool is designed to assess sustainability issues early in the product discovery/development process and to create a framework to compare the sustainability of diverse projects. A product is considered sustainably-advantaged if it positively impacts at least one of the six major Global Challenges: Food Expectations, Health and Safety Expectations, Environmental Consciousness, Climate Change, Scarce Resources and Land Competition, but does not retreat in any of the five other areas.

Instructions:

To complete this tool, you will need to select a benchmark product to compare the development product to. It is best to select a commercial product or products as benchmarks that the development product is designed to replace. Indicate in row 24 why the bench mark product was selected. Then answer the questions in column "B" comparing the development product to the benchmark. Enter your results in column "D" with an indication of "1" if the development product is more sustainable than the benchmark , a "-1" if the product is less sustainable and a "0" if they are the same. Please answer all questions. The results will be indicated in Project Summary Box and the Sustainability Matrix diagram. The Project Summary Box indicates the overall Sustainability of the product. If a product is not considered "sustainably-advantaged", consider options to correct the deficit. The Product Sustainability Index is a comparative measure that can be use when comparing across projects to identify projects that maybe more sustainable than others.

Proposed FMC Product or Process:	
Project number:	
Project stage:	
Date of assessment:	
Names of assessors:	

Sustainability Matrix



General Information

Proposed FMC Product or Process:	
Benchmark Product or Process:	
Explain why the benchmark was chosen:	

PROJECT SUMMARY

BOTTOM LINE: IS THE PRODUCT SUSTAINABLE

PROJECT SUSTAINABILITY Index

No

-

Enter data in yellow cells only: 1 = better than the benchmark, 0 = equal to the benchmark, -1 = worse than the benchmark

A. Food Expectations

Compared to the benchmark:	Weighting	Benefit (-1, 0, 1)	Total Importance to Sustainability Score	Comments
1. Does the product increase crop yields?	1		0	
2. Does this product increase sustainable agriculture?	2	0	0	
3. Will this product control a significant crop pest?	2	0	0	
4. Will this product maintain/improve and ecosystem?	1	0	0	
5. Will this product control a resistant pest?	2	0	0	
6. Will this product have new mode of action that delays resistance development?	2	0	0	
7. Is this product more useful in integrated pest management?	2	0	0	
8. Does this product reduce pesticide residues in food (ask for regulatory input)?	1	0	0	
total score			0	

B. Health & Safety Expectations

Compared to the benchmark:	Weighting	Benefit (-1, 0, 1)	Total Importance to Sustainability Score	Comments
1. Is this product/process carcinogenic, mutagenic, reproductive toxin or endocrine disruptor?	2	0	0	
2. Does this product control pests known to negatively impact human health?	1	0	0	
3. Will this product reduce exposure for mixers, loaders and applicators?	2	0	0	
4. Does this product use inert ingredients that are deemed "safer" (check with Formulations chemist; refer to list of preferred inerts)?	1	0	0	
total score			0	

C. Scarce Resources

Compared to the benchmark:	Weighting	Benefit (-1, 0, 1)	Total Importance to Sustainability Score	Comments
1. Will this product/process reduce energy use in production (need to check with engineers/mfg.)?	1	0	0	
2. Will this product/process reduce waste in production (need to check with engineering/mfg.)?	2	0	0	
3. Will this product reduce the water use by the applicator/farmer (i.e. reduced number of applications, reduced volume of water needed for applications)?	2	0	0	
4. Will this product reduce packaging needs?	2	0	0	
5. Does the product utilize renewable components (i.e. Packaging component)?	1	0	0	
6. Will this product maintain/improve water quality (i.e. does not get into groundwater or surface water)?	2	0	0	
7. Will this product increase the efficiency of water utilization by the crop or turf (i.e. creates greater root mass; requires less irrigation, crop/turf can be grown on arid land)?	1	0	0	
total score			0	

D. Climate Change

Compared to the benchmark:	Weighting	Benefit (-1, 0, 1)	Total Importance to Sustainability Score	Comments
1. Will this product reduce greenhouse gas, particulate emissions or replenish the ozone layer (i.e. reduce VOC's; reduced # of applications req'd)?	1	0	0	
2. Does this product help crops or turf adapt to higher temperatures or drought conditions due to changing weather conditions (i.e. create increased root mass to absorb more water)?	2	0	0	
3. Will this product reduce the time to harvest?	1	0	0	
4. Will this product improve consistency of yield?	1	0	0	
total score			0	

E. Land Competition

Compared to the benchmark:	Weighting	Benefit (-1, 0, 1)	Total Importance to Sustainability Score	Comments
1. Does this product reduce pesticide drift during the application?	1	0	0	
2. Will this product allow farming in arid areas or areas with poor soil?	2	0	0	
3. Does this product improve soil quality?	2	0	0	
4. Will this product promote crop rotation (i.e. rotational crop plant back intervals are short with no residues)?	1	0	0	
5. Will this product promote integrated crop management?	1	0	0	

6. Will this product minimize farming practices with negative impact to the environment (i.e. tilling; slash and burn)?	1	0	0	
total score			0	

F. Environmental Consciousness

Compared to the benchmark:	Weighting	Benefit (-1, 0, 1)	Total Importance to Sustainability Score	Comments
1. Is this product applied at reduced rates?	1	0	0	
2. Will this product reduce the impact on wildlife?	1	0	0	
3. Will this product reduce the impact on endangered or beneficial species?	1	0	0	
4. Will this product reduce risk of contaminating surface water, groundwater or reduce leaching?	1	0	0	
5. Does the product have a lower number of applications?	1	0	0	
6. Does this product reduce water or soil residues (ask for regulatory input)?	1	0	0	
7. Is this product less acutely ecotoxic (from an ecotoxicology perspective - ask for regulatory input)?	2	0	0	
8. Is this product less chronically ecotoxic (from an ecotoxicology perspective - ask for regulatory input)?	2	0	0	
9. Will this product be useful for precision farming (i.e. applying pesticides where needed in the field)?	1	0	0	
total sustainability score			0	

PROJECT TOTALS			0

Is it sustainable (check for negative benefit values entered in column E)?	**No**

A yes indicates that we have not retreated in any categories.

Sustainability matrix (spider chart)		Benchmark	Target Product
Food Expectations		0	0
Health & Safety Expectations		0	0
Scarce Resources		0	0
Climate Change		0	0
Land Competition		0	0
Environmental Consciousness		0	0

Add Comments: