



# REGENERATIVE AGRICULTURE

# SCORECARD

Full pillar 1 Scorecard - June 2021



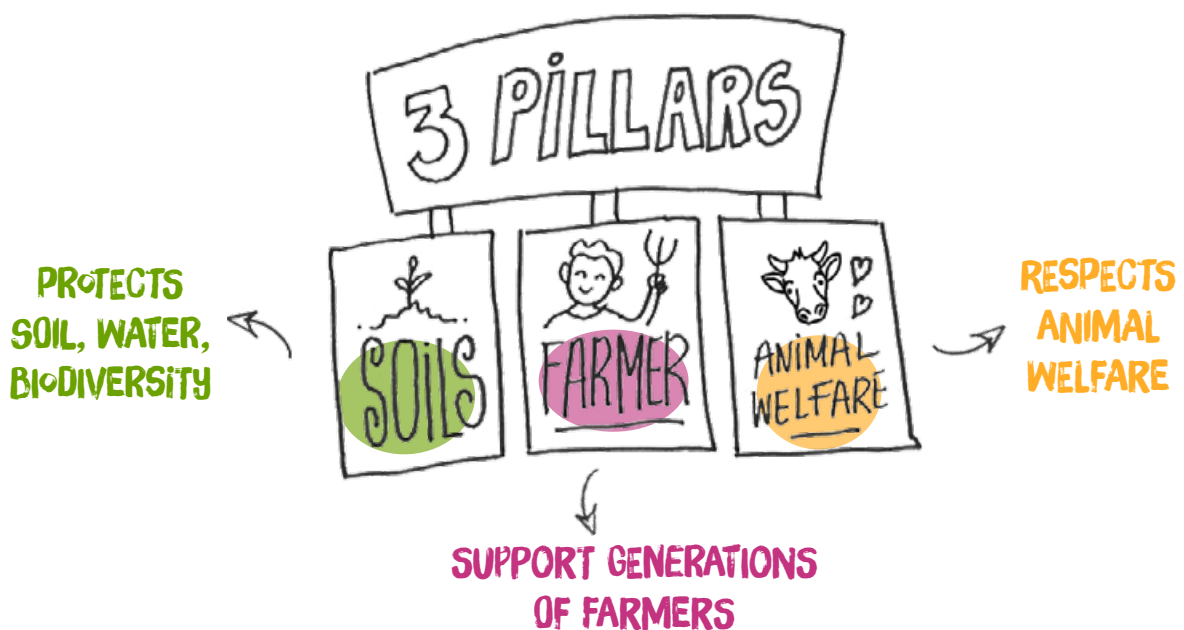
## As a food company,

one of the most important ways we deliver societal impact is through the farming model we choose. Agriculture represents 2/3 of our current global GHG emissions, and roughly 90% of our water footprint. Danone has a choice between a linear model of agriculture, which degrades resources, or a circular one that regenerates them. Our decision is clear. We are committed to growing food in a way that regenerates natural ecosystems, starting with the soil, and strengthens the well being of farmers, local communities and consumers.

For Danone, regenerative agriculture is based on 3 main pillars: protecting soil, empowering a new generation of farmers, and promoting animal welfare. It is a response to the overwhelmingly predominant current practices that doesn't consider enough the release of carbon dioxide in the atmosphere, degradation of soil, depletion of water

resources and destruction of biodiversity. At this rate, within 50 years, we will struggle to find enough arable topsoil to feed 9 billion people.

Since 2017, we have launched ambitious projects to expand regenerative agriculture inside and outside our supply chain. We now have regenerative agriculture programs in the United States, France, Spain, Mexico, Algeria, Morocco, Romania, and beyond. We also co-founded two initiatives aimed at advancing regenerative agriculture through private-sector collaboration: One Planet Business for Biodiversity (OP2B), which promotes regenerative agriculture as a means for businesses to strengthen biodiversity, and Farming for Generations (F4G), which aims to refine and share best practices for regenerative dairy farming.



To know more about our global ambition on Regenerative Agriculture, go read [Regenerative Agriculture for a Regenerative Future.](#)



Farmers and farm workers are the lead actors in the transition to regenerative agriculture, and we are committed to supporting them-whether they are just starting on this journey or well on their way. This is why we worked with the World Wide Fund for Nature France (WWF France), technicians, and a diverse group of environmental and agricultural experts (including APEXAGRI and CIWF), to create this scorecard. This document focuses on the pillar dedicated exclusively to soil health.

The scorecard defines regenerative practices for initiated, advanced and best in class practitioners, which can be applied no matter what the farming system or ingredient. We ask our farmer partners to use it as a guide and invite others outside our value chain to do the same.

Our Pillar 2 dedicated to farmers and farm workers is in progress. Pillar 3 is dedicated to animal welfare and managed separately. All our performance on Animal welfare are accessible in our Website.

“Degraded land accounts for 2 billion hectares worldwide. It is urgent to change our agricultural model in favor of more sustainable practices that will improve soil health, help anticipate future climate shocks, feed a growing population, provide a decent living wage for producers and reduce our dependence on fossil fuels. In partnership with WWF France, Danone has developed its regenerative agriculture framework based on a continuous improvement approach in order to embark all agricultural producers, from less advanced to best in class. We are glad to be part of this journey.»

**Arnaud Gauffier, Conservation Programs Director, WWF France**



WWF France  
with Danone  
towards  
Regenerative  
Agriculture



This document is open source.  
Please feel free to use this tool and join  
our movement! We believe that, together,  
we can scale up regenerative agriculture  
and unleash its full potential in building a more  
sustainable, just and resilient world.



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# OUR APPROACH



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## WHY HAVE WE BUILT A SCORECARD ?

The main purpose of this assessment tool is to engage farmers and accompany them through the regenerative agriculture journey. By assessing a farmer's current practices first, Danone can define a specific roadmap for each farmer to support him/her/them in developing more sustainable agricultural activities.

To promote continuous progress, Danone has set a 3 year time frame for each farmer to reassess his her their farm using the group's scorecard latest version. Danone will publish results on an annual reporting basis, starting with its direct sourcing footprint in 2020 and 2021, and moving to an enlarged scope afterwards. Ultimately, Danone's goal is not to certify its partners through the scorecard, but to support their transition and progress towards regenerative agriculture.

### The scorecard is designed to :

- be inclusive of all global farming systems: small and large, organic and conventional, crop and livestock...
- highlight a progressive journey in which all farms can use the assessment tool to implement real improvements
- cover the 3 main topics in terms of impacts first: soil, water and biodiversity.

“It is not about certification but about transformation”

Danone's goal is to implement regenerative agriculture practices in farms along its supply chain. This translates into the following:

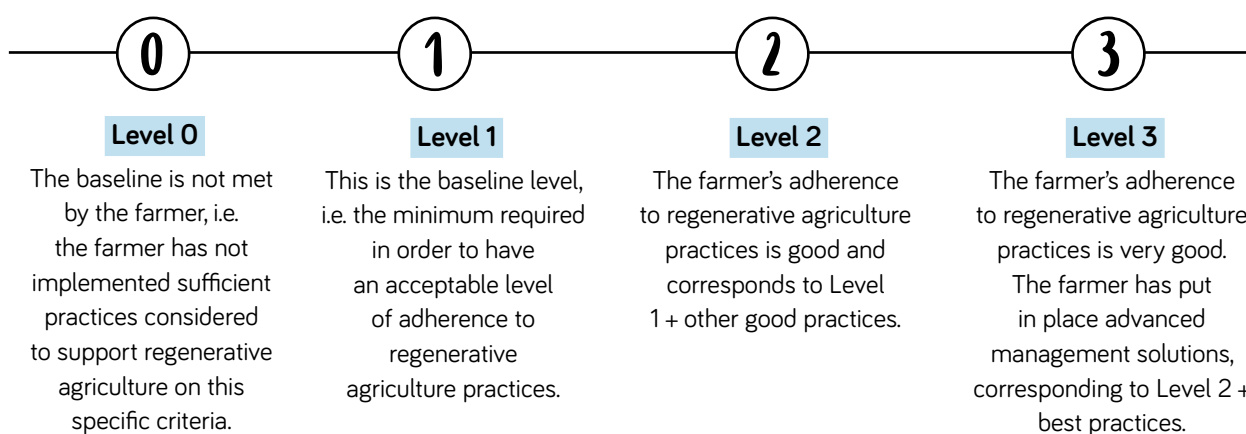
- Verifying the implementation of on-farm management practices and increasing transparency within our supply chain;
- Creating a simple tool for farmers to understand baselines, identify strengths, and determine areas for improvement;
- Making progress towards understanding how agricultural practices can be part of the solution.

**Note:** The 2 others complementary pillars, Farmers & Workers and Animal welfare, are tackled in another document.








# FROM FUNDAMENTALS TO BEST PRACTICES

- This document presents the scorecard designed to help Danone's technicians, partners and suppliers assess the farmers' level of adherence to regenerative agriculture practices.
- The tool is structured under one common backbone for all geographies, ingredients and farming systems. Nevertheless, some specificities needed to be included within adapted scenarios to reflect farming systems fundamentals (irrigation systems, water courses, production type...).
- The scorecard covers 4 main categories: 1. Soil; 2. Manure (only for dairy farms)  
3. Biodiversity; 4. Water.
- Each category has a number of sub categories, all covering different practices. Each practice has 4 levels of scoring:



- To start, 5 ingredients have been identified. The ingredients for which the criteria apply are highlighted in bold on the left hand side of the criteria evaluation as shown below:

-  Livestock farmer only
-  Livestock farmer + crop (cereals and/or pasture)
-  Orchard farmer
-  Strawberry farmer
-  Ground crop farmer



Apart from this scorecard, Danone trains its partners through a Handbook and a dedicated website. Besides, in 2020/21, 200 people have been trained on regenerative agriculture.

<https://regenerative-agriculture.danone.com>

# VALORIZATION OF THE FARMING SYSTEM'S DIVERSITY

The scorecard has been built around one main objective:

**Encourage farmers to constantly improve**

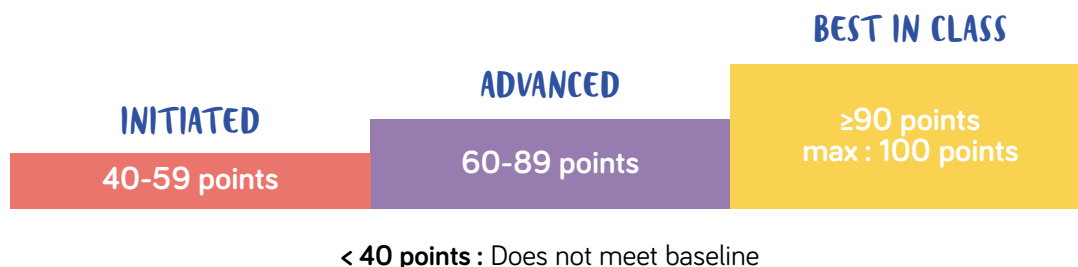
Hence, although the tool will always deliver a score to the farmer, there are neither good nor bad figures as the **main goal is to stimulate progress regarding farming practices.**

The comparison of scores between two farms with different approaches to regenerative agricultural practices will not result in accurate conclusions, as the tool poses different questions depending on type of farming and a farm's specificities.

As part of a holistic approach to regenerative agriculture, the **three main pillars defined by Danone** have the exact same importance on the overall score as their basis points remain the same (100).

This system is expected to evolve according to future climate and agronomic realities. The end goal of future updates will always be the **seek of continuous improvement** of Danone's tools.

From the total score of the Soil Health pillar, the farm is categorized into one of three following categories: Initiated, Advanced, and Best in class.



Agricultural practices should recognize and value diversity. There is no need to have put in place all best practices (i. e. all Level 3 practices) to be considered Best in Class.

**For each criteria, the user will find a brief description of the practice evaluated, what are the best practices that regenerative agriculture foster and further detail on how to evaluate the practice in a farm. Unless specified otherwise, all calculation methodologies in this document have been developed by Danone and its partners.**

## 4 CATEGORIES TO ASSESS



### 1. Soil

The quality of the soil is paramount to sustainable production that guarantees water, nutrient holding capacity and productivity . Many practices of conventional agriculture disrupt soil biotic communities — the very life that drives soil carbon sequestration. Practices that reduce erosion and increase carbon sequestration are encouraged.



### 2. Manure

Managing manure properly is necessary to avoid harmful pollution on farms. It can also be reutilized as organic fertilizer, which has a very positive impact on the soil and reduces farm costs.



### 3. Biodiversity

Protecting biodiversity is essential to the preservation of our soil. Respect of biological balance and reintroducing of wild areas where nature can thrive are essential to healthy soils.



### 4. Water

Water stress scarcity is one of the big challenges we face. As an irreplaceable resource essential to agriculture, its usage has to be thoroughly managed and monitored in terms of quantity and quality.





# SCORECARD AT A GLANCE



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# SCORECARD AT A GLANCE

This summary is based on an irrigated dairy farming system.

CATEGORY	CRITERIA	SUB CRITERIA	DESCRIPTION	LEVEL 1	LEVEL 2	LEVEL 3
SOIL	Soil practices	Soil working	% of untilled cultivated land per year	30% - 59 %	60% - 90 %	Over 90%
		Tillage intensity	Number of passes by the number of crops	4 to 5	2 to 3,99	0 to 1,99
	Surfaces covered	Cover soil	% of the soil covered	> 70% + 21 days between crops	> 80% + 21 days between crops	>90% + 21 days between crops
		Pasture	% of land under temporary or permanent pasture or meadow	30% - 59 %	60% - 75%	Over 75%
	Crop rotation	Crop rotation land	% of land growing a minimum of 3 different crops	30% - 59 %	60% - 90%	Over 90%
		Crop rotation species	Average number of crops of various species	> 3 species	> 3 species, from which 1 legume	>4 species from which 1 legume
	Fertilization	Soil nitrogen balance	Estimation of nitrogen loss versus gain of the agro-eco system	I know the amount of nitrogen brought to my crop	Simplified nitrogen balance and/or nitrogen soil analysis	Nutrient Management Plan with strategic approach
	Soil organic matter	Monitoring	% of analyzed land every 5 years	> 50%	>75%	>90%
Content		Weighted average organic matter content (%), not older than 5 years	Not yet scored but Danone encourages farmers to calculate the percentage of organic matter within their soil			
MANURE	Manure management	Slurry storage	Implementation of the following systems :	Slurry storage system	Level 1 + phase separator or natural curst over	Level 2 + cover liquid or anaerobic digester
		Dry manure storage	Implementation of the following systems :	Dry stock system	Sealed closed storage	Excretion deposited directly on pastures
		Manure handling techniques	Meets the following criteria :	Quantity registered and respect manure local spreading rules	Spreading monitoring and respect manure spreading rules	Manurespreading techniques to limit ammonia losses
BIO-DIVERSITY	Pesticides and weeds	Management	Pesticides and weeds management	Consumption monitoring	Use of alternative techniques	Exclusive use of biocontrol agents
		Frequency	Quantity of active ingredient proportion of crop protection treatment/ha/year	Not yet scored but Danone encourages farmers to calculate the percentage of organic matter within their soil		
	Natural habitat	% of natural habitat in the agricultural land	5% - 6,9%	7% - 10%	>10%	
	Feed self-sufficiency	Protein traceability	% of the sustainable protein source that can be tracked	From 60% to 79%	From 80% to 99%	100%
		Local protein	% of protein locally grown (<500km)	30% - 49%	50% - 80%	>80%
Local forage	% of protein locally grown (<100km)	30% - 49%	50% - 80%	>80%		
WATER	Water quantity management	Water source	Source of water used	Has water-use license but does not necessarily respect it	Has water-use license and respects it	Tracks irrigation, relies on >75% of rainwater or uses recycled water
		Irrigation type	Type of irrigation system used in the farm	Occasional flooding	Managed aspersion irrigation	Drip irrigation or drop aspersion mgt
		Irrigation management	Timing and regulating water applications	Quantity assesment	Simplified water balance model	Soil needs monitoring
	Water usage	Quantity of water used at farm level	Not yet scored but Danone encourages farmers to calculate the percentage of organic matter within their soil			
	Water quality management	Buffer zones	% of the farm water courses surrounded by buffer zones	From 25% to 34%	35%-50%	>50%
		Increase in buffer zones	-	Not yet scored but Danone encourages farmers to calculate the percentage of organic matter within their soil		
Runoff water contamination		Use of waters generated from crop and livestock operations	Storage system for all wastewaters	Storage system specifically for contaminated runoff waters	Level 2 + wastewater treatment process	





**OUR DETAILED  
SCORECARD ON  
SOIL HEALTH  
MANAGEMENT**



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# 1. SOIL



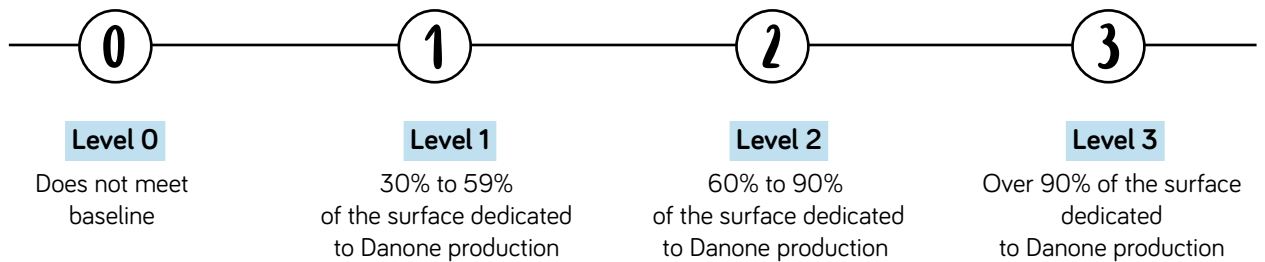
## A. SOIL MANAGEMENT PRACTICES



A farmer integrating less intensive tilling practices is contributing to mitigating negative impacts on soil quality, such as soil erosion, as well as keeping the soil's organic carbon, water and nutrients levels up.

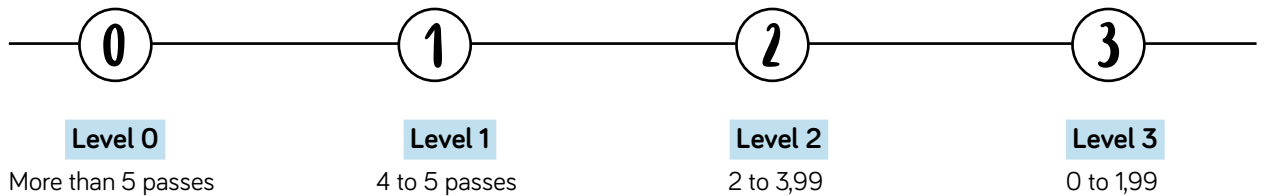
### Proportion of untilled cultivated land per year

A field is considered to have had limited tillage operations if the machinery was used on the field between the harvest of the previous crop and the current year's planting at a depth < 10 cm.



### Tillage intensity

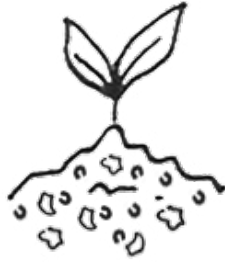
Average number of passes between last harvest or crop destruction and seeding of next crop (including cover crop), with any machinery. It is the number of passes divided by number of crops.



# 1. SOIL



## B. SURFACES COVERED

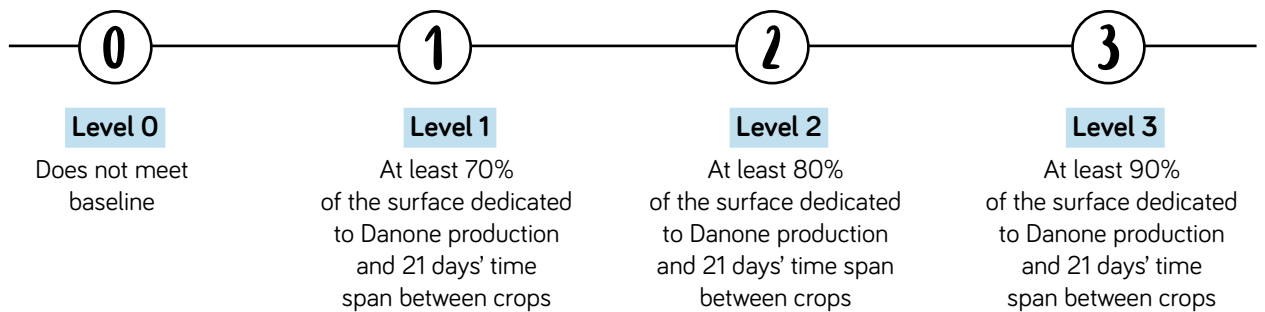


The more a farmer keeps the land covered, the more carbon is captured in the soil. This also contributes to minimizing water loss and soil erosion. Even in semi-arid areas, some vegetal cover is always better than none!

### Proportion of soil covered per year

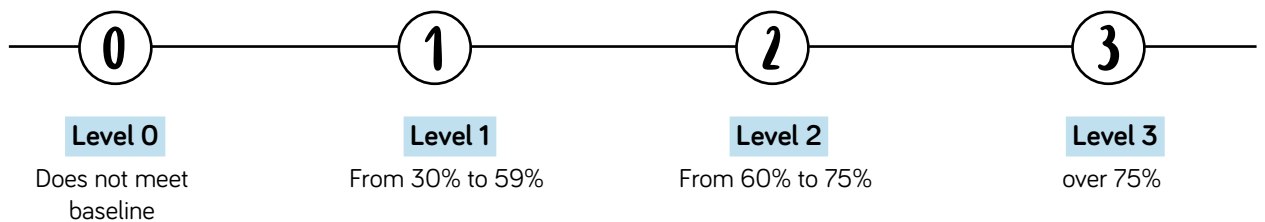
Proportion of the surface of the crop dedicated to Danone covered during the entire year (crops, dense crops residues, mulch, cover crops, permanent and temporary pasture, mulch or snow).

- Soil may be uncovered during a maximum of 21 days between harvest or destruction of the previous crop or cover, and the seeding of the next crop.
- cover crop can be a crop not dedicated to Danone.



### Proportion of land under temporary or permanent pasture or meadow

Pastures include a range of vegetation types (grass, shrubs, tree cover ...) that are of exceptional biodiversity importance as well as an extremely important carbon store. Maintenance is crucial to ensure a good grazing management.



# 1. SOIL



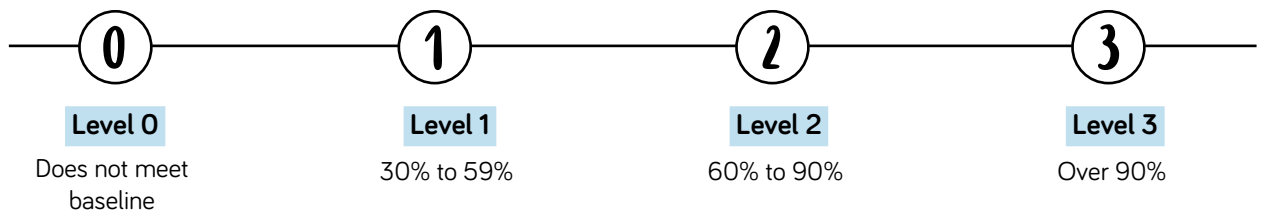
## C. CROP ROTATION



When a farmer cultivates diverse crops and avoids monocultures, he is boosting healthy soil ecosystems, reducing pest risks and enriching the nutrient portfolio of the land.

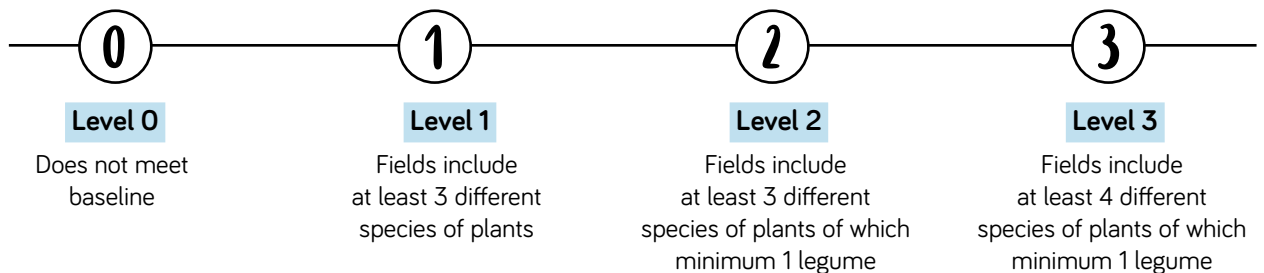
### Proportion of land with crop rotation

Proportion of land growing a minimum of 3 different crops from one another on the same plot. Timeline is crop rotation; it can range up to several years.



### Number of species in the crop rotation (excluding permanent pasture)

Average number of crops of various families and species rotated with one another on the surface dedicated to Danone production, intercropping included. Timeline is crop rotation; it can range up to several years.



NB : For Orchard farmers, this criteria applies only for inter-rows.





# 1. SOIL

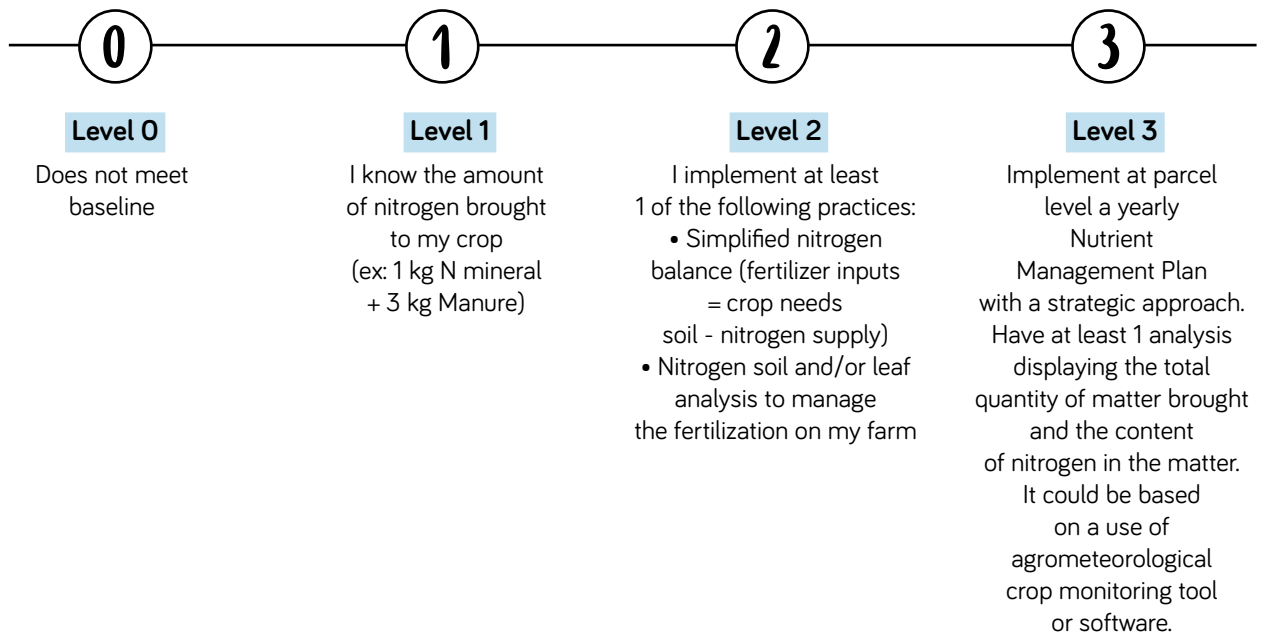
## D. FERTILIZATION



When a farmer monitors fertilization, he is able to know the exact amount of nitrogen needed. This can help in reducing environmental impacts such as disrupting the natural relationship between microorganisms and plant roots.

### Soil Nitrogen balance assessment

Effective tool to estimate the magnitude of nitrogen loss versus gain of the agro-eco system and to appraise its sustainability. It refers to Nitrogen inputs from various sources: mineral, organic and industrial including manure, compost, legume crop residues, urea...



# 1. SOIL



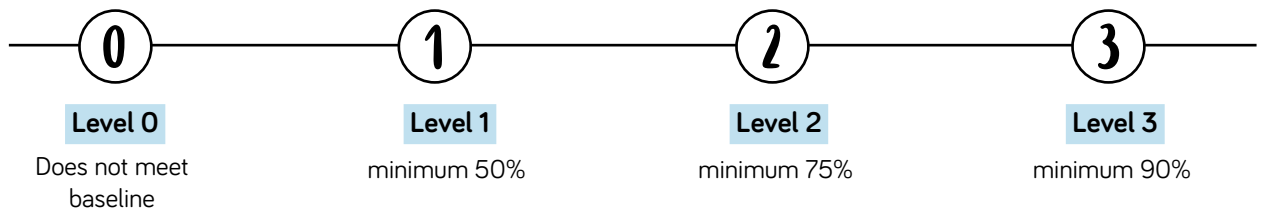
## E. SOIL ORGANIC MATTER



Improving the levels of carbon in the soil can be very beneficial for enhancing agricultural productivity as well as capturing CO2 from the atmosphere. The very purpose of keeping organic matter in the soil is to maximize soil health.

### Frequency of soil organic matter monitoring

Proportion of analyzed land use every 5 years (including pasture if applicable).



### Content of organic matter

Weighted average organic matter content (%), not older than 5 years.

This sub criteria is not yet scored but Danone encourages farmers to calculate the percentage of organic matter within their soil.

## 2. MANURE



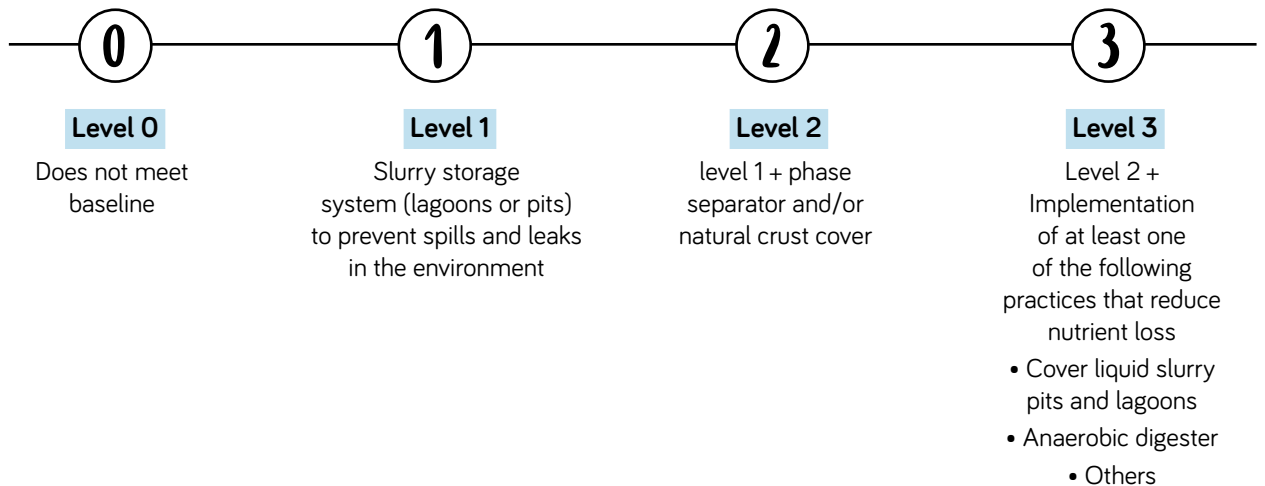
### A. MANURE MANAGEMENT



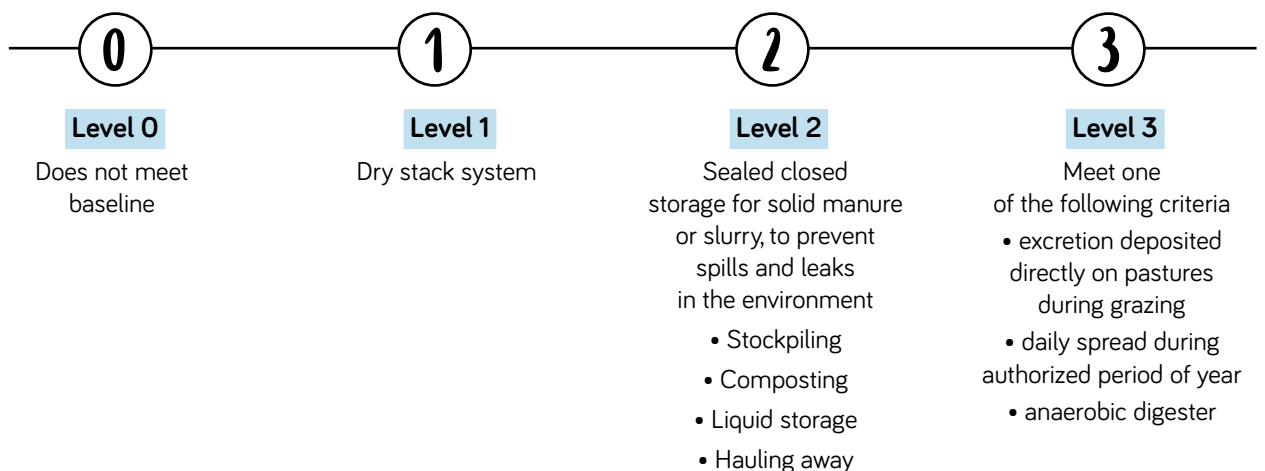
**Animal manure can be used to replace chemical fertilizers that damage the environment. However, it needs to be used in a sustainable way in order to minimize odor and pollution.**

Best management practices require all manure storage areas to be sealed and operated to reduce the risk of seepage and runoff. Manure can be farm manure, birds' droplets, mud, green waste compost,...as long as it is stored and used on the farm.

#### Slurry storage



#### Dry manure storage





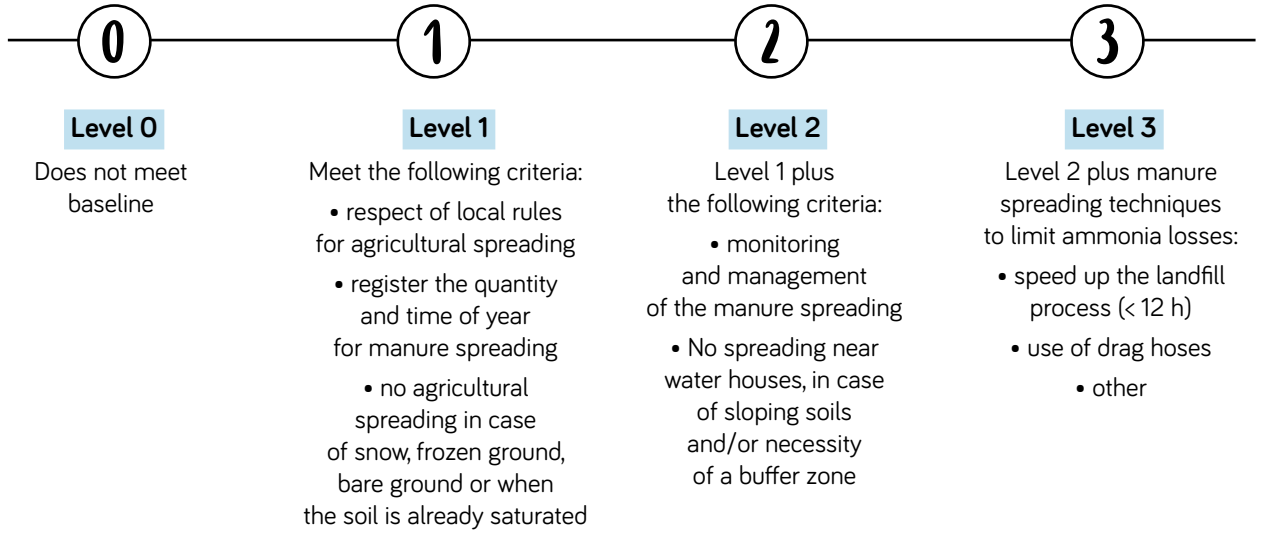
## 2. MANURE



### A. MANURE MANAGEMENT (continuation)

#### Manure handling techniques

Utilization of animal manure in an environmentally sustainable manner.



### 3. BIODIVERSITY



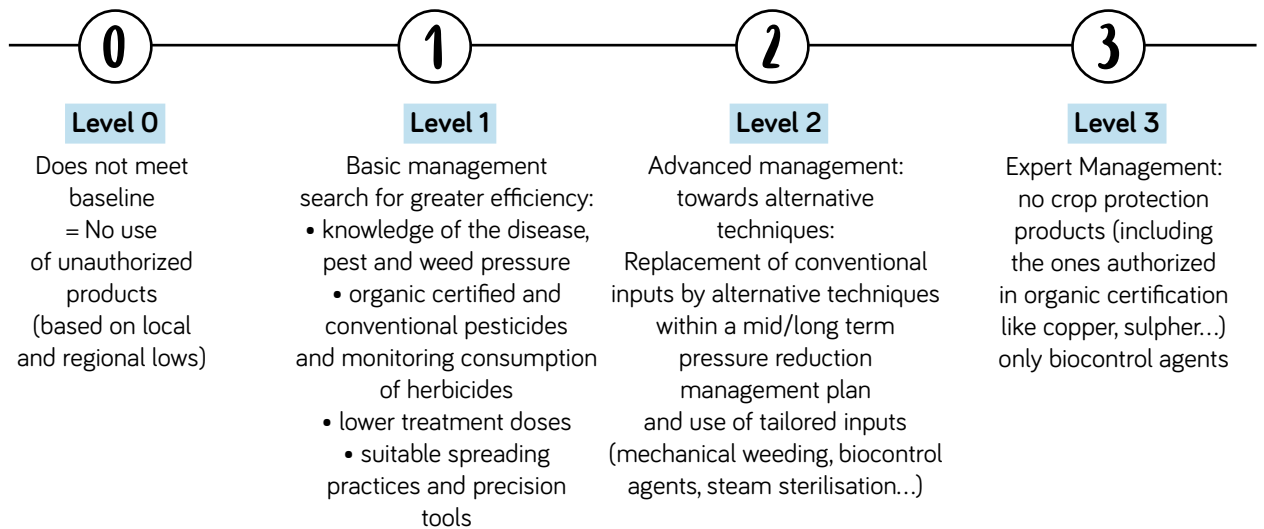
#### A. PESTICIDES AND WEEDING PRODUCTS



The use of pesticides and weeding products can disrupt soil health and threaten the natural ecosystem by killing all types of species. Natural alternative exists, but the end goal is to not use any at all!

#### Pesticides and weed management

The development of weed & pest control strategies incorporates preventive and nature based techniques as well as mechanical methods. It covers a range of approaches, from inexpensive techniques to very innovative technologies.



#### Treatment frequency

Quantity of active ingredient proportion of crop protection treatment/ha/year (fungicide, pesticide, insecticide, chemicals...).

This criteria is not yet scored but Danone encourages farmers to calculate the frequency of application of pesticide products.

### 3. BIODIVERSITY



#### B. NATURAL HABITAT

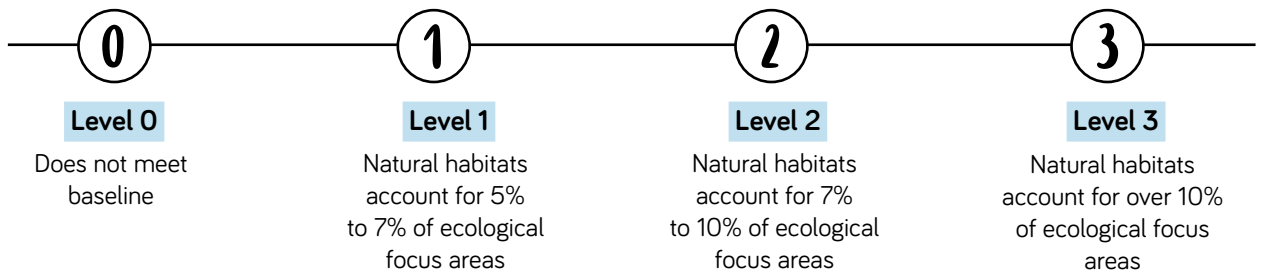


Protecting and enhancing natural habitats on our agricultural lands (such as trees, woodland, meadow, oasis or stonewalls) can be extremely beneficial for fostering biodiversity.

#### Proportion of natural habitats on agricultural land

Assessing the percentage of agricultural land that is natural habitats. Natural habitats include ecological corridors on agricultural landscapes (fixed and nonproductive elements) such as permanent meadows, hedges, woodlands and isolated trees, stonewalls, uncultivated field margins and corners, wetlands, deserts, non cultivated/built/productive areas...

We recommend favoring local species.



### 3. BIODIVERSITY



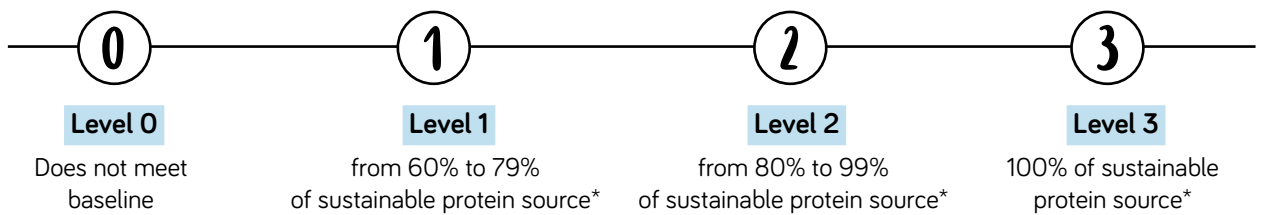
#### C. FEED SELF-SUFFICIENCY



Dairy farmers growing their own feed (protein, forage,...) have improved traceability as well as more positive environmental impact (i.e. reduced transportation needs).

#### Origin of protein feed

Traceability of the proteins used in the animal feed.

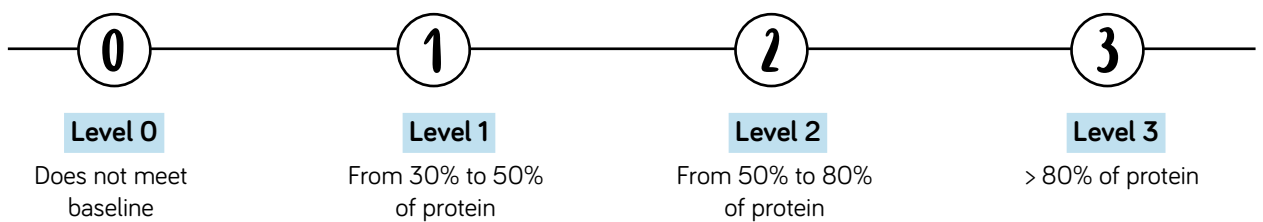


\*including:

- imported non deforested certified soy, on-farm produced in Europe or the US, or soy produced in a low deforestation risk area or on farm produced
- alternative sources of proteins (any legumes or byproducts like rapeseed cake, brewers' grains
- grass

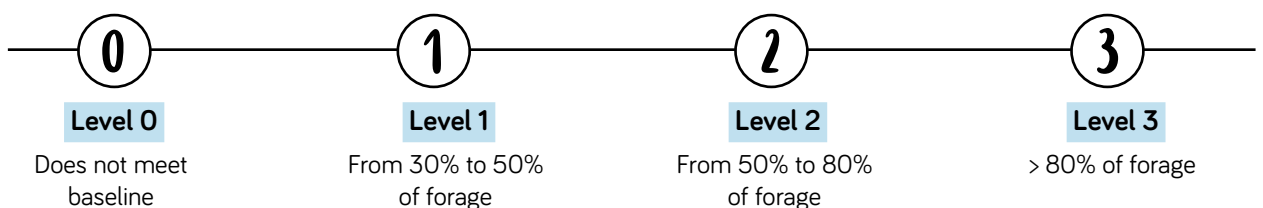
#### Local protein

Proportion of protein locally grown (on farm or < 500 km).



#### Local forage

Proportion of forage locally grown (on farm or < 100 km).





# 4. WATER



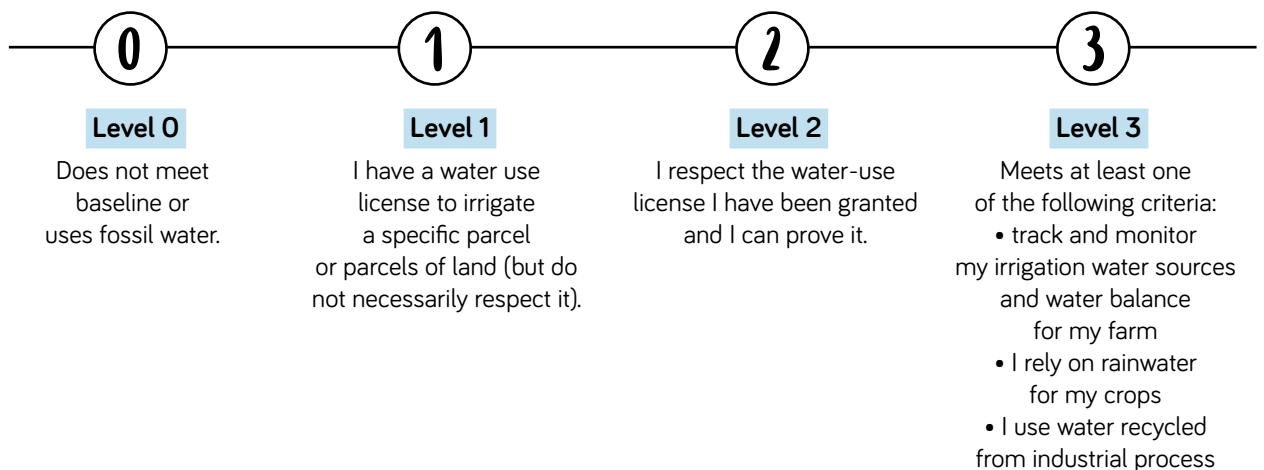
## A. WATER QUANTITY MANAGEMENT



Today, an estimated 70% of the world's freshwater is used for agriculture. By measuring and managing their water more efficiently (especially when it comes to irrigating crops), farmers can help address water scarcity.

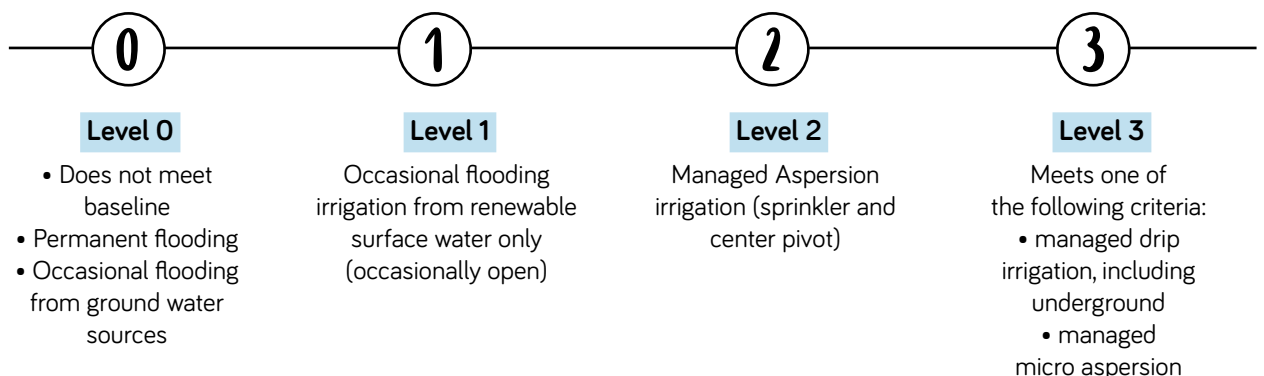
### Water source

Sources of water include natural surface water (rivers, reservoirs and lakes), rainwater, groundwater, piped water supply and reclaimed/recaptured/recycled water. Fossil water is groundwater that has remained sealed in an aquifer for a long period of time and is not renewable.



### Irrigation type

Each irrigation method has upsides and downsides. By far, the best sustainable irrigation techniques are drip irrigation or micro aspersion.



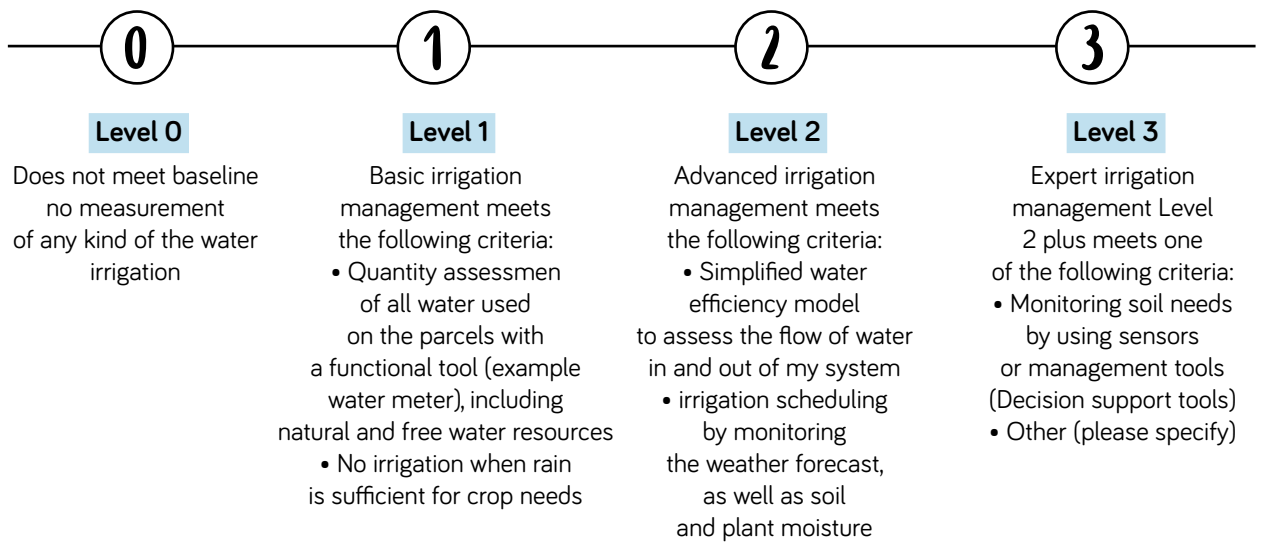
# 4. WATER



## A. WATER QUANTITY MANAGEMENT (continuation)

### Irrigation management

Timing and regulating irrigation water application in a way that will satisfy the water requirements of crops without the waste of water, soil, plant nutrients, or energy. This means applying water according to crop needs in amounts that can be held in the soil available to crops, and at rates consistent with the intake characteristics of the soil and the erosion hazard of the site.



### Water usage

Quantity of water (all types of water including pumped water for irrigation, frost protection, pest management, machinery and farm building cleaning...) used at farm level (L/year).

→ Criteria to be assessed at a farm level and not at Danone's supply chain level.

This best practice is not yet scored but Danone encourages farmers to calculate the actual quantity of water (for all types of use) used per year.

# 4. WATER



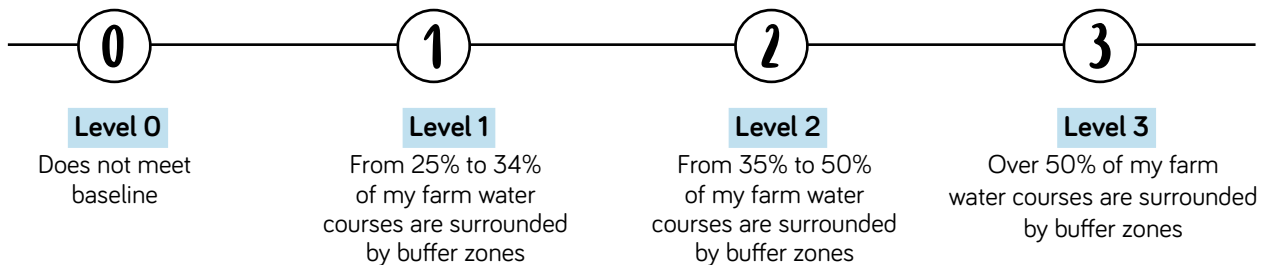
## B. WATER QUALITY MANAGEMENT



Farmers are encouraged to put in place efficient water quality management practices (such as water courses protection and water usage recycling), that strengthen the quality of their agriculture and health of their ecosystems.

### Buffer zones

Strip of permanent vegetated land of a minimum of 5 m (herbs, grass, bushes, trees) or at least including hedges planted continuously alongside water courses and occupying a bandwidth of the strip significant enough to protect valuable natural assets.



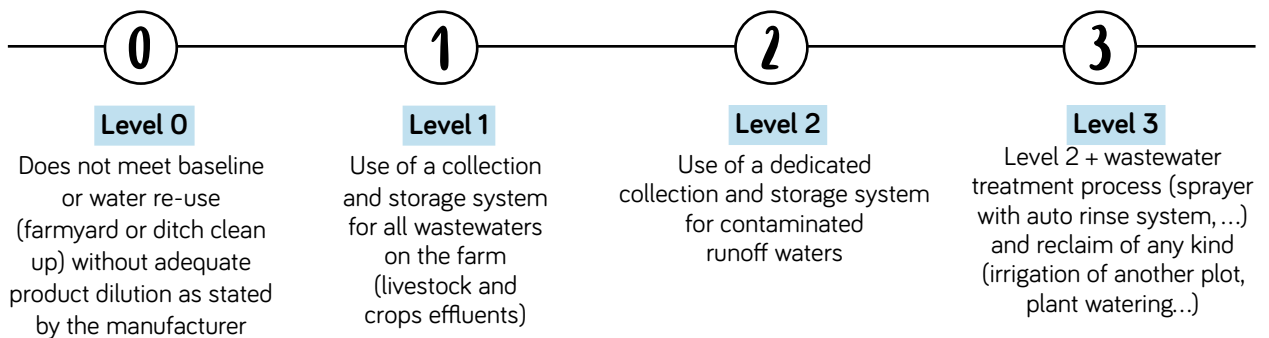
### Increase in buffer zones surfaces

Precise estimation of the proportion of my farm water courses surrounded by buffer zone (%)

This best practice is not yet scored but Danone encourages farmers to increase their buffer zones surfaces..

### Contaminated runoff water management

Use of water generated from crop and livestock operations: agrochemicals tanks cleaning, agrochemicals canisters cleaning, cleaning of the milking system (parlor, yards, milk cooling..), manure and slurry process generated wastewater-cleaning of farm buildings.





# JOIN THE MOVEMENT



+33 1 40 70 11 89



[danone@dgm-conseil.fr](mailto:danone@dgm-conseil.fr)



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