SAGE Sustainability Assessment for Green Eating

DELIVERABLE 2.3 – Environmental Impact Assessment Tool

FONDAZIONE ECOSISTEMI

31 December 2024

SCHOOLFOOD 4CHANGE

Project acronym	SF4C
Project number	101036763
Version	1.0
WP	2 – Defining, Mapping and Impact Assessment
Deliverable	D2.3: Environmental impact assessment tool
Due date	M36– December 2024
Dissemination level	Public
Deliverable lead	FONDAZIONE ECOSISTEMI
Authors	SAGE has been CO-DESIGNED in collaboration with Dordogne, Nuoro, Vienna, Slovakia, Tallin, Budapest, Czech Republic, ICLEI, WWF Sweden, UNISG, as well as, during several GA workshops, all the other SF4C cities.
Abstract	This report describes SAGE, an online calculator designed to support sustainability assessments and informed decision-making in food procurement processes, particularly for school meals. The tool evaluates environmental and health impacts, measures progress toward SF4C procurement goals, and ensures compliance with innovative procurement criteria. Developed through a participatory codesign process, SAGE incorporates advanced features such as detailed calculations, customizable reporting, and a user-friendly interface. Tested and refined with input from European pilot cities, it addresses diverse food system needs while integrating health and environmental metrics. SAGE's broad applicability extends to educational activities, catering planning, and other food-related contexts.
Keywords	sustainability, procurement, schools, school meals, food, catering, environment, impact, health assessment, Social Return on Investment, participatory design, food systems, decision-making tool, greenhouse gas emissions, waste, education, government, local, regional, city

TABLE OF CONTENTS

EXECUTIVE SUMMARY

SAGE is an innovative online calculator designed to support sustainability assessments and inform decision-making in procurement processes. It evaluates the environmental and health impacts of school meals, measures progress toward SF4C procurement goals and verifies compliance with innovative procurement criteria. Additionally, it provides data for assessing the Social Return on Investment (SROI), making it a valuable tool for improving sustainability practices.

Developed through a participatory design process in SF4C, SAGE has been refined to meet the diverse needs of European school food systems and procurement practices. Tested extensively in pilot cities, the tool has evolved through real-world data and feedback, resulting in features such as advanced calculations, detailed reporting, a user-friendly interface, and integration of health and environmental metrics.

The tool's adaptability extends its applicability beyond the procurement realm, making it valuable for educational activities, catering planning, and broader food related contexts.

Currently expanding to more cities and stakeholders, SAGE is poised to become an essential tool for food producers, policymakers, NGOs, and other actors seeking to enhance sustainability practices and achieve long-term goals across Europe.

1 GOAL & PURPOSE OF SAGE: HOW CITIES, SCHOOLS, CATERING COMPANIES & OTHER STAKEHOLDERS CAN USE IT

SAGE (Sustainable Assessment for Green Eating) is an online calculator tool developed to provide practical support for sustainability assessments and informed decision making, particularly in procurement processes. It is a versatile tool, being also suitable for use in educational activities, catering planning, and other food related contexts. SAGE has been developed to evaluate the environmental and health impacts of food served in schools (e.g. school meals), measures progress toward SF4C procurement ambitions, and automatically verifies compliance with the SF4C Innovative Procurement Criteria (deliverable 5.1). Additionally, it collects data for the Social Return on Investment (SROI) analysis (task 2.3.2).

The data generated by SAGE can play a crucial role in procurement activities of the SF4C cities and schools. It can support stakeholder engagement by facilitating the sharing of methodologies, prioritising actions, designing implementation plans, and drafting public tender clauses. The tool also enables the comparison of offers provider by different providers (through tenders) and is currently being tested in seven cities/regions in SF4C (task 2.3.1), alongside the ongoing SROI analysis. Data from each city are being collected, aggregated, and analysed at two key points — baseline and progress — to evaluate and monitor the overall sustainability impact of the SF4C actions (task 2.4).

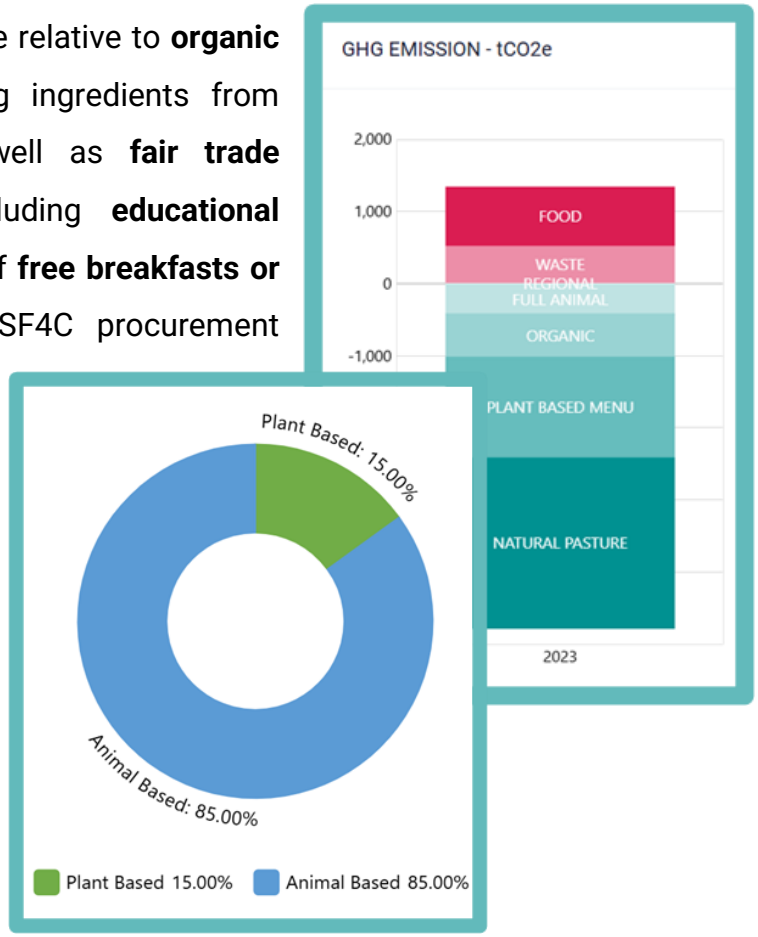
Given the valuable insights provided by SAGE, its application will be expanded throughout 2025 to include the 11 remaining SF4C cities and selected replication cities during 2025. There is also potential to extend its use to a wider range of stakeholders, including other public and private food procurers, public decision-makers, food producers, catering and distribution companies, teachers, NGOs, and other relevant groups. This expansion aims to maximise the tool's impact and enhance its applicability to broader audiences, with the goal of rolling out further SF4C actions and the like.

2 INDICATORS ASSESSED BY SAGE AND ALIGNMENT WITH SF4C OBJECTIVES

% ORGANIC food	99%
% GHG reduction	64%
% REGIONAL food	53%
% FAIR TRADE exotic	100%
% SMALL FARMERS	78%
% FOOD EDU tenders	100%
% SMALL KITCHENS	100%
% FREE BFAST/SNACK schools	100%

The main indicators assessed by SAGE are relative to **organic** food, reducing **GHG** emissions, sourcing ingredients from **regional** sources, **small farmers**, as well as **fair trade** ingredients/products, food tenders including **educational** activities, **small kitchens** and availability of **free breakfasts or snacks** in schools, in alignment with SF4C procurement ambitions.

SAGE measures impacts by accounting for a wide range of **food characteristics**, including regional provenance, type of agricultural production (e.g., organic, natural pasture, integrated farming, free-range, antibiotic-free, sustainable fish), full animal purchase, wholegrains, seasonal, and non-ultra-processed options.

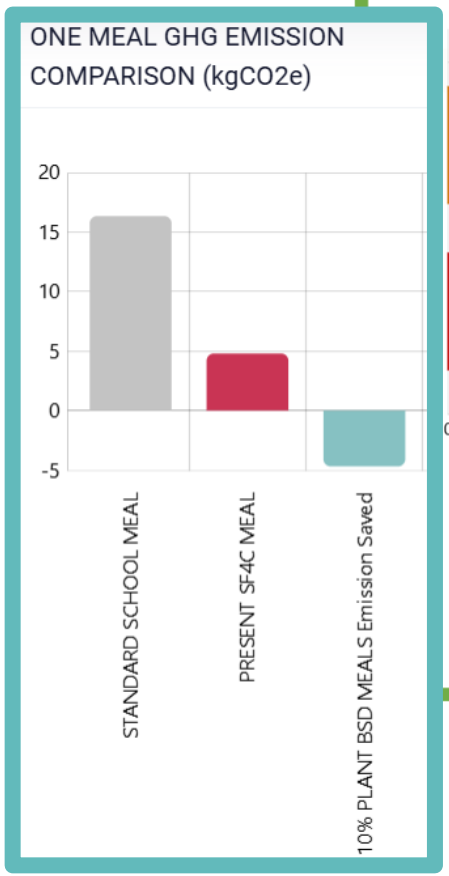


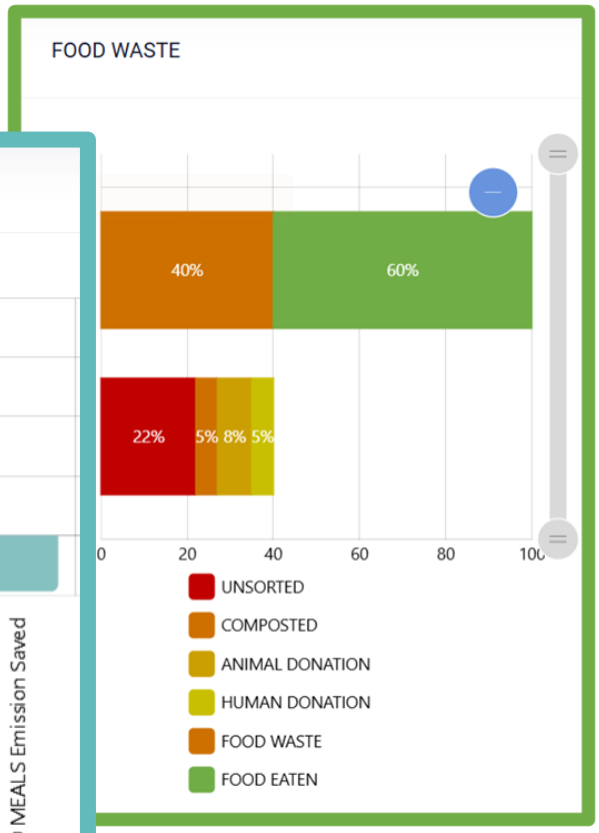
TYPE	INDICATOR
PROTEIN BALANCE	LEGUMES
	FISH
	EGGS
	POULTRY
	RED MEAT & CHEESE
HEALTHY FOOD CONSUMPT	VEG PORTION
	FRUIT PORTION
	NUTS
	WHOLEGRAIN
FOOD DIVERSITY	VEG VARIETY
	FRUIT VARIETY
UNHEALTHY FOOD PREVENTION	RED MEAT PORTION
	STARCHY FOOD
	NO ULTRA PROCESSED
	SUGAR & SWEETENED
SOCIAL	FREE BREAKFAST
	FAMILY MEALS

SAGE also calculate the percentage of **plant-based meals** that are served over a full school year, and the **GHG savings due to plant-based** meals, as well as the **GHG emission comparison** of **SF4C meal** with those of an **average meal**.

In addition to SF4C procurement ambitions, SAGE also assesses most of SF4C **health** indicators, relative to protein balance, fruit, veg, and nuts consumption, food diversity, low sugar intake, free meals as well as family involvement in canteen activities.

The software also includes a number of best practice checklists as well as a **food waste** management section. The GHG emissions due to food waste are also shown in the calculation results.





All the impact coefficients used in SAGE calculations are sourced from **internationally accredited references**, thoroughly documented in the manual, which also details the metrics and calculation methodologies.

3 CO-DESIGNED METHODOLOGY

The co-designed methodology has played a pivotal role in developing a tool capable of accommodating the diverse requirements of various European countries, including their school food systems, procurement practices, and types of food production.

Throughout 2022, several meetings were held among the project partners, culminating in the release of a beta version of the tool in Excel format in September 2022. The tool was first presented in Tallinn in November 2022, after which a dedicated Working Group was formed to further develop the the environmental impact assessment tool. This group worked to integrate feedback from pilot cities and define the future features of the online software in greater detail.

In October 2023, during the General Assembly in Vienna, a hands-on workshop was conducted where participating cities provided substantial and valuable feedback on the tool's second version. Both before and after the workshop, significant progress was made, thanks in part to the active involvement of Nuoro, Vienna, Dordogne, and Slovakia, whose cities/regions tested the application step by step, offering real data and timely feedback. The key focus areas during this phase included:

- **Online deployment**
- **Food categories**: Refining the set of food categories considered by SAGE.

- **Calculations**: Enhancing existing formulas, introducing new indicators and sub-calculations (e.g., categorizing meat by type: organic, whole animal, natural pasture).
- **Reporting**: Selecting relevant information and developing visual graphs.
- **Interface**: Designing and developing a user-friendly interface, including widgets.
- **Additional features**: Creating a menu composition module tailored for schools, with options for individual customization by menu type.
- **Overwriting algorithm**: Developing a feature for overwriting existing data.
- **Integration**: Refining the alignment with health impact assessments and Social Return on Investment (SROI) analysis.
- **Automatic data Import from excel**
- **Debugging**

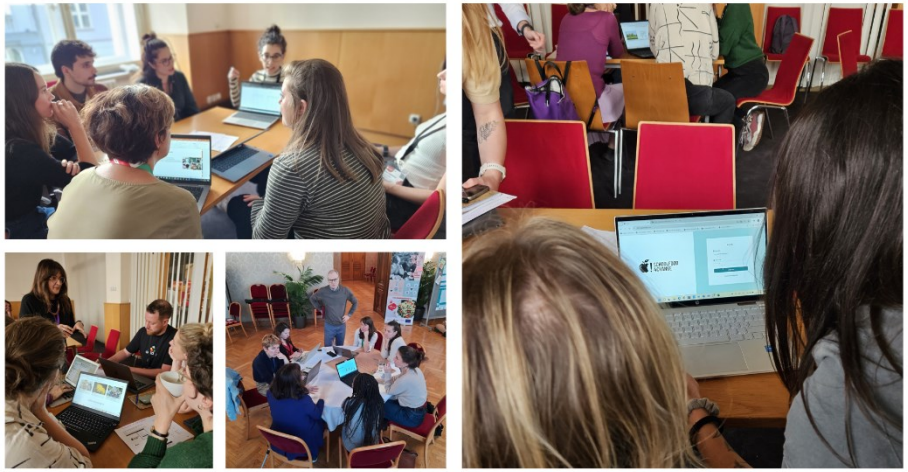
In parallel with the above developments, SAGE's health assessment was developed in collaboration with the University

of Alcalà (Spain) and fine-tuned with the help of nutritionists from the Region of Dordogne and the City of Lyon.

The online version of the tool was presented during a follow-up workshop at the General Assembly in Prague on October 9, 2024. All implementing partners within the Consortium had the opportunity to test the tool and provide their feedback. The partners unanimously agreed to adopt the tool for the project's final impact assessment.

Over the subsequent two months, final refinements were made, incorporating feedback from the Prague workshop. These included adjustments to graphic outputs and the integration of the health impact assessment. The final version of the tool was successfully released in January 2025.

SAGE's participatory co-design process ensured the refinement of the initial proposal to align with real-world needs, transforming theoretical concepts into a practical, user-centred tool with broad applicability across Europe.



4 HOW SAGE WORKS

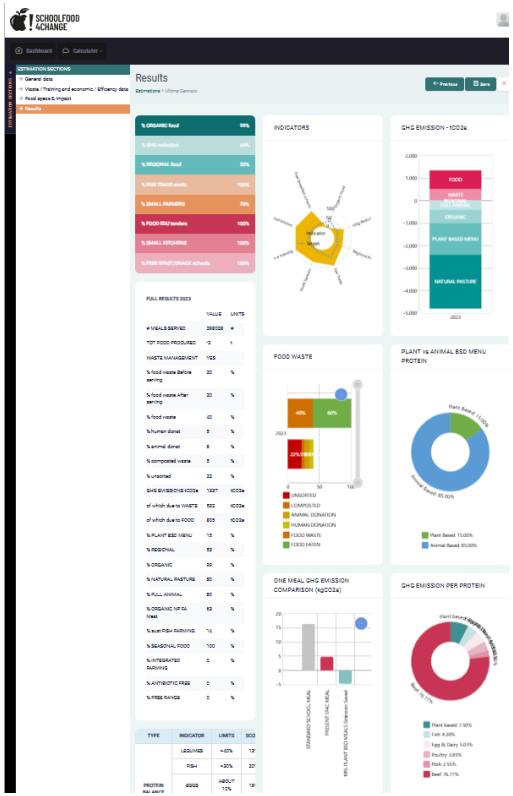
In this section we provide take a step-by-step look at how SAGE works. SAGE, Tool Assessing Sustainable and Healthy Eating, is designed with an intuitive interface, ensuring that anyone can engage with it.

Here is what you will find in this section:

- **4.1** – Overview of SAGE's interface and Log In
- **4.2** - How do I start a calculation?
- **4.3** – Food Categories and Input data requirements
- **4.4** - Indicators and graphic outputs

Icons, screenshot, and visual cues are used throughout the section to draw attention to key points, warnings, or additional resources.

Let's get started!



4.1 OVERVIEW OF SAGE'S INTERFACE

After entering Username and Password (*Image 1 – Log In*) the main interface of **SAGE** opens.

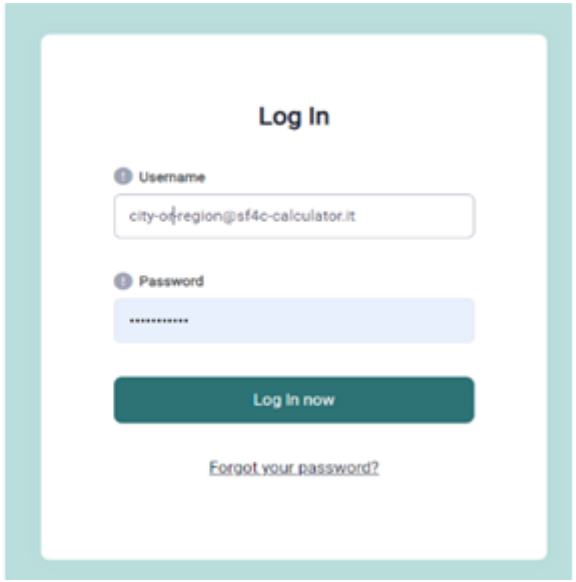


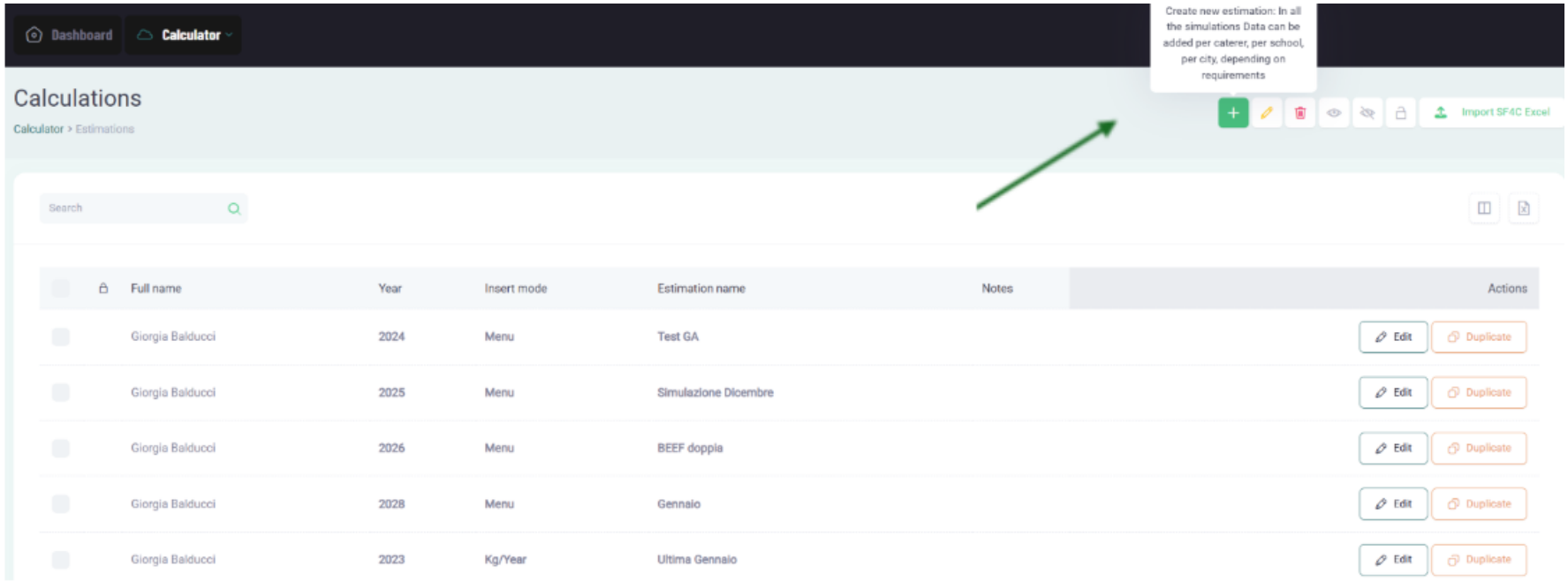
Image 1 – Log In

4.2 HOW DO I START A CALCULATION?

Once in SAGE, a very intuitive interface will open, allowing you to start using this tool.

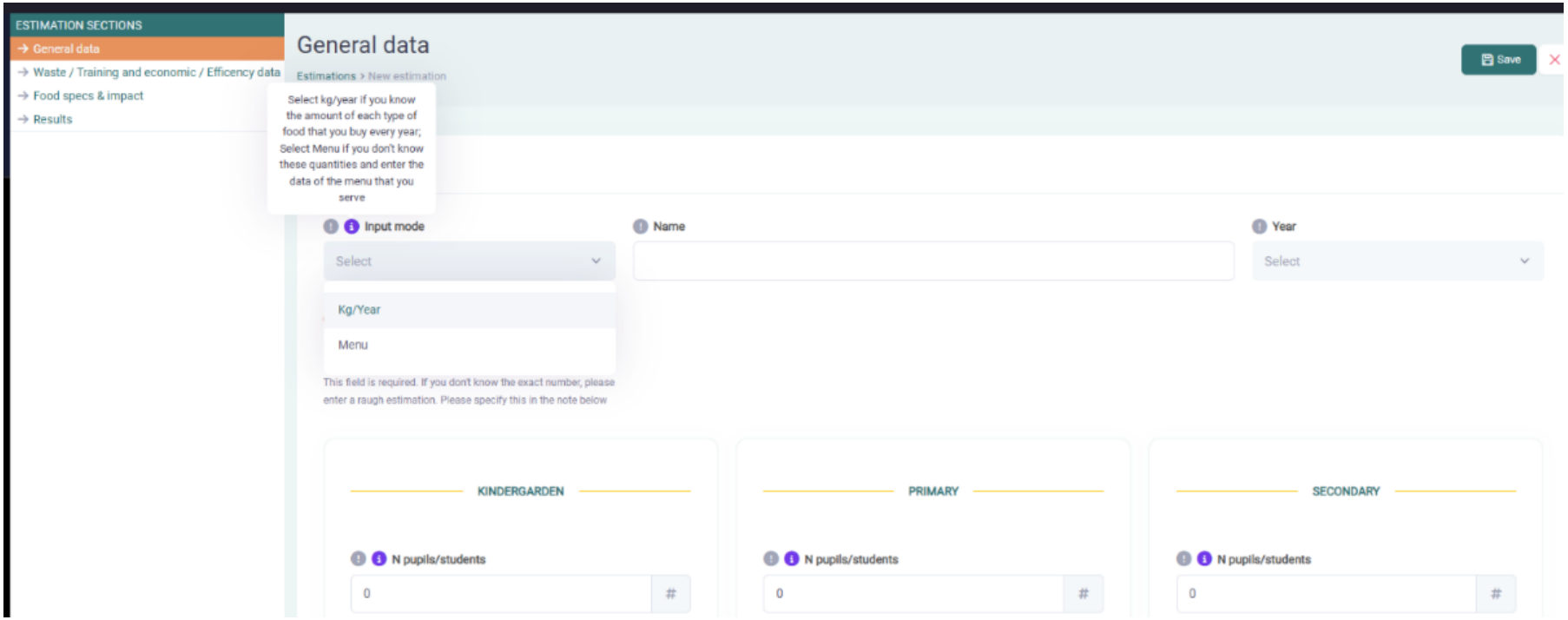
To start a simulation, you will need to click on the + 'new' icon in the top right-hand corner, indicated by the green arrow *in Image 2 - New Simulation.*

Image 2 – New Simulation



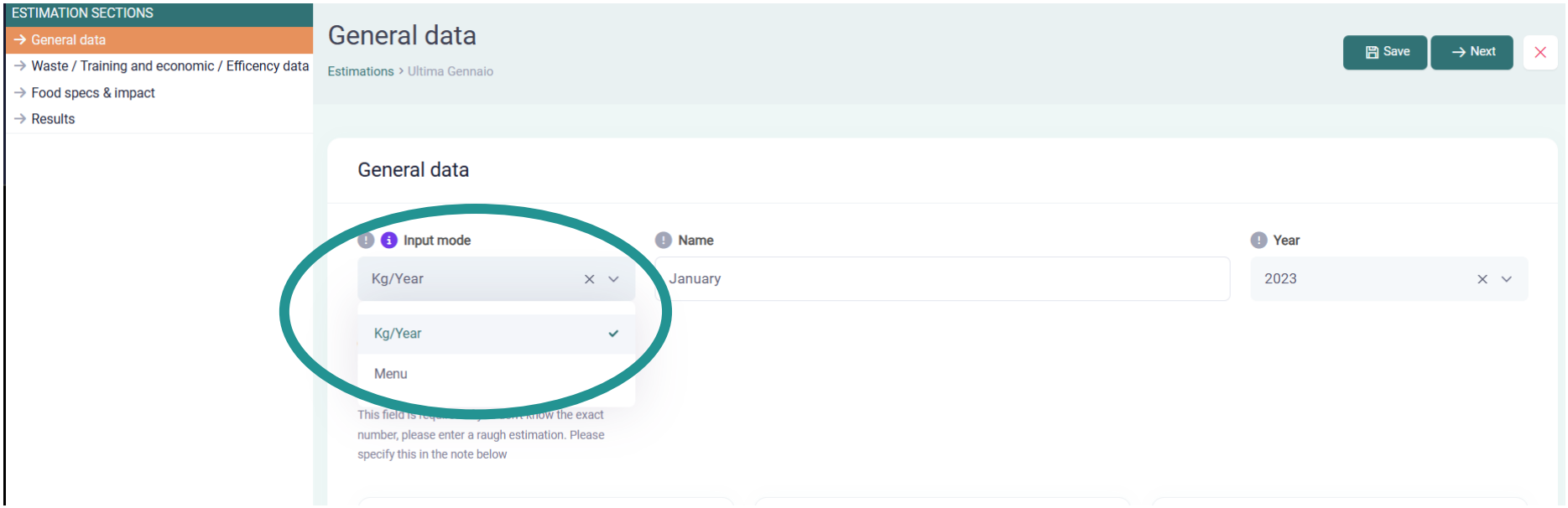
After clicking on the + icon, the first data input screen of SAGE will open, and the **General Data** section will appear. See *Image 3 – General Data* below.

Image 3 – General Data



The calculator provides, first, a dual mode of data entry. See *Image 4 – Input mode*

Image 4 – input mode



Choosing **kg/Year** it's possible to enter the kg for each category of food purchased during the year.

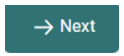
However, if food quantities data in kg/Year are not available it's possible to enter the data in terms of **Menu** served.

Important: This software allows to use average values wherever data are not available. By selecting the *Menu input mode* it'll be possible to have average menus, per each main protein served during the meal. We will see this after.

Whichever way of entering data is chosen, it is possible that not all information is available or only a very limited amount of data is available. In this case, the impact will still only be calculated on the data entered. In the General Data screen, apart from choosing the Input mode, the other important fields are **Number of Meals/year** that you can find in the 3 different sections of "Kindergarden", "Primary" and "Secondary": for this fields average data cannot be used. If the exact number is not known, please enter a rough estimate here.

The other fields on this General Data screen also do not provide average data, so if a precise number is not known, please enter a rough estimate here.

Clicking on the 'Save' 

button in the top right-hand corner and then on the 'Next' 

button, also in the top right-hand corner, there will be *2 different screens* depending on which input mode is chosen:

- ✓ *Input mode in kg/year*: there will be the section "Waste/Training and economic/ Efficiency data" as can be seen in *Image 5 – Waste/Training and economic/ Efficiency data* below;
- ✓ *Input mode by Menu*: there will be the section "Food Menu" section - as seen in *Image 5 – Food Menu* below.

Image 5 – Waste/training and economic/ efficiency data

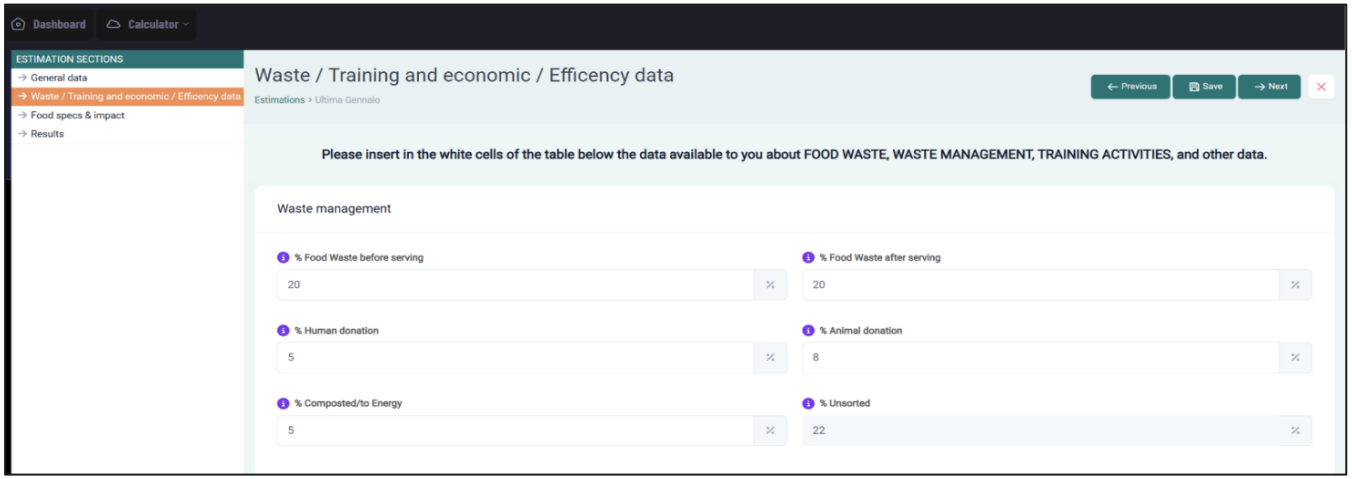
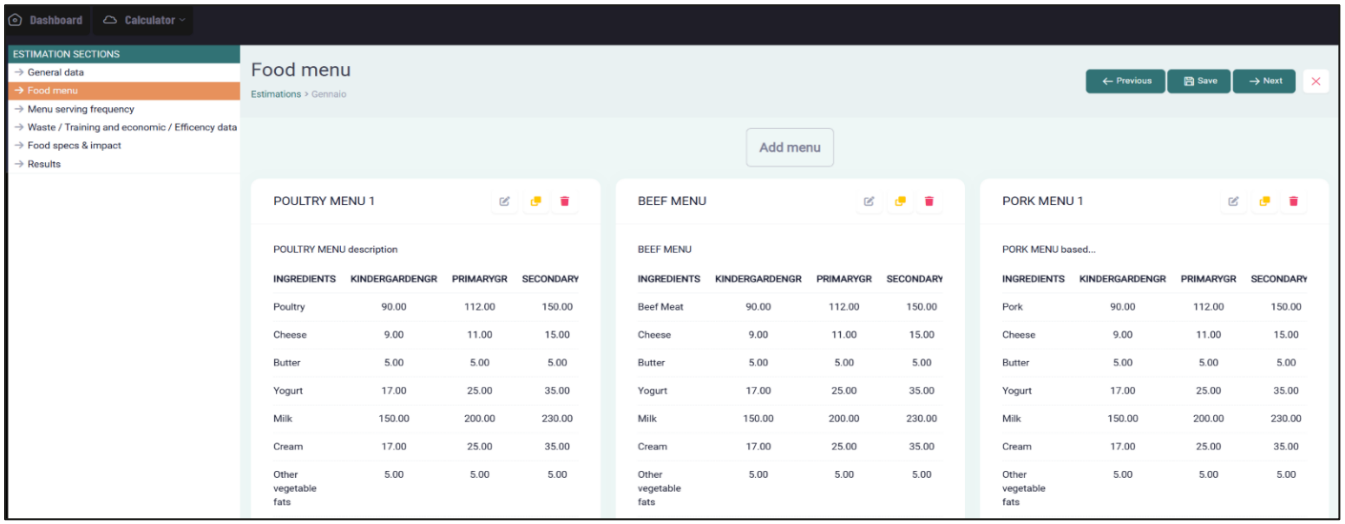


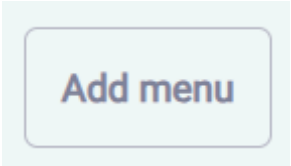
Image 6 – Food Menu



It is possible to enter food quantities in two ways:

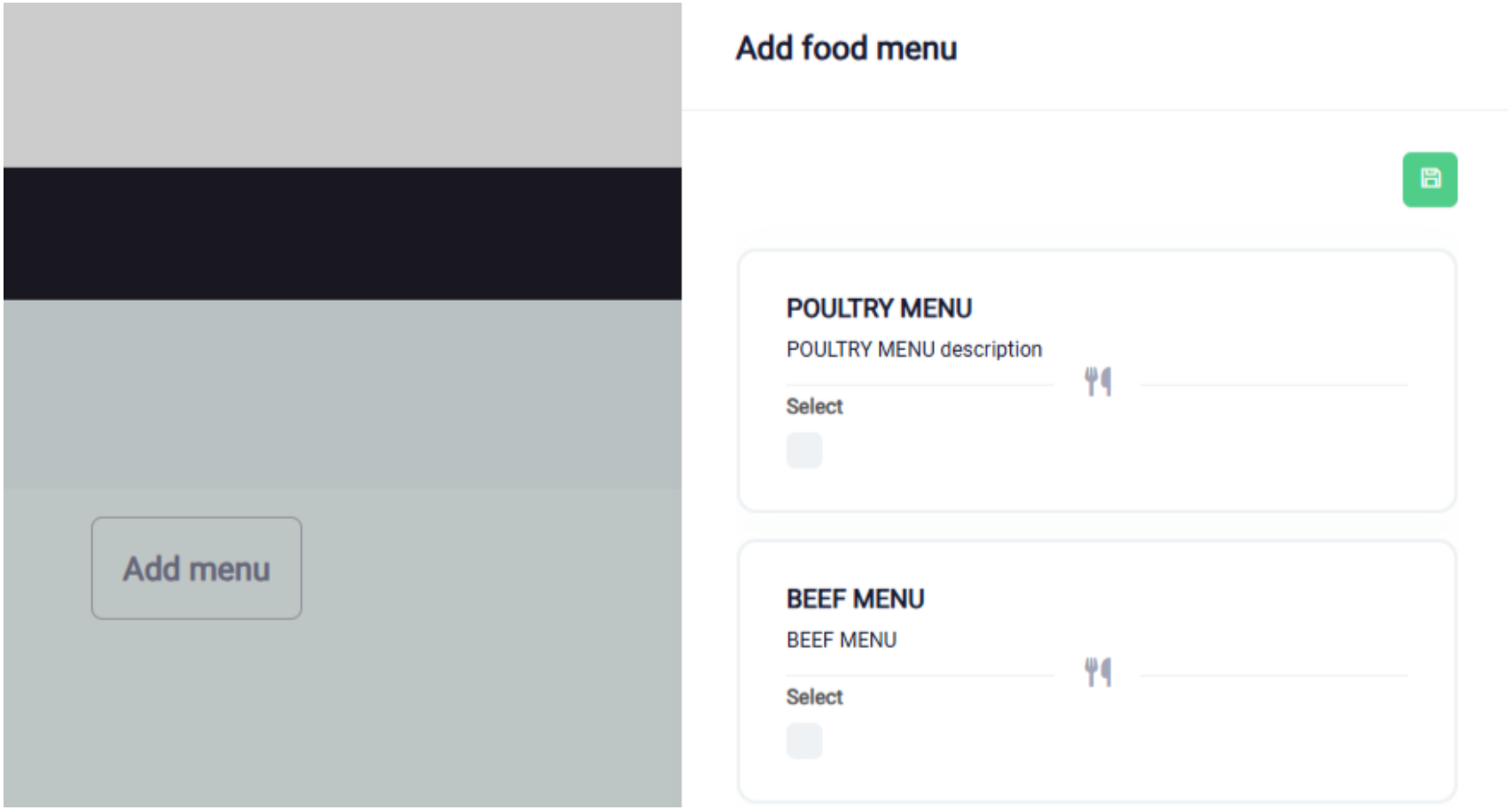
1. Per each food category you can enter **kg/year;**
2. Alternatively, if you don't know the kg/year data, you can enter food quantities in the form of **MENU**.

In case of food quantities in the form of MENUS will be necessary to:

a. Click on the "add menu" button. 

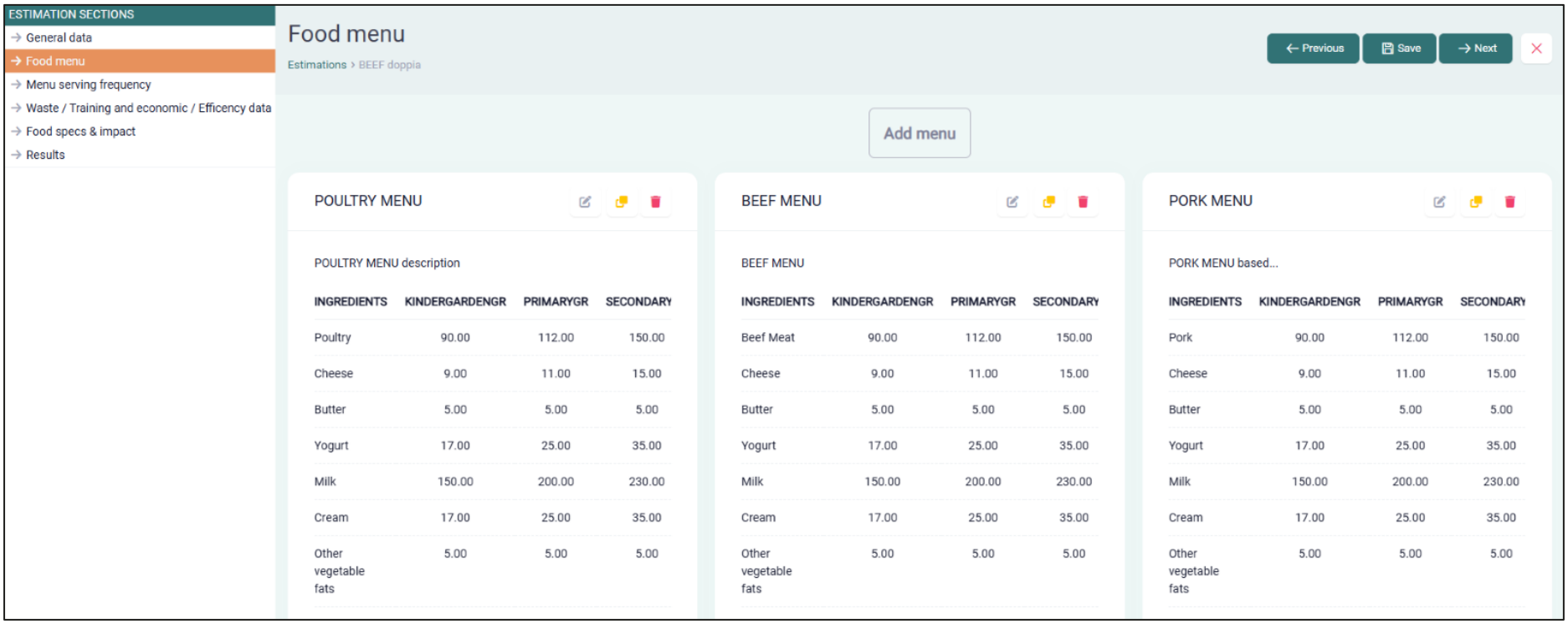
b. A side screen opens (*see image 7 below)*: now it's possible to select menus according to the main protein being served. SAGE allows to add several menus with the same basic protein.

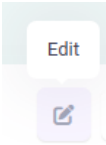
Image 7 – Add menu



c. Clicking to save  the screen that will appear will be as shown in Image 8.

Image 8 – Menus

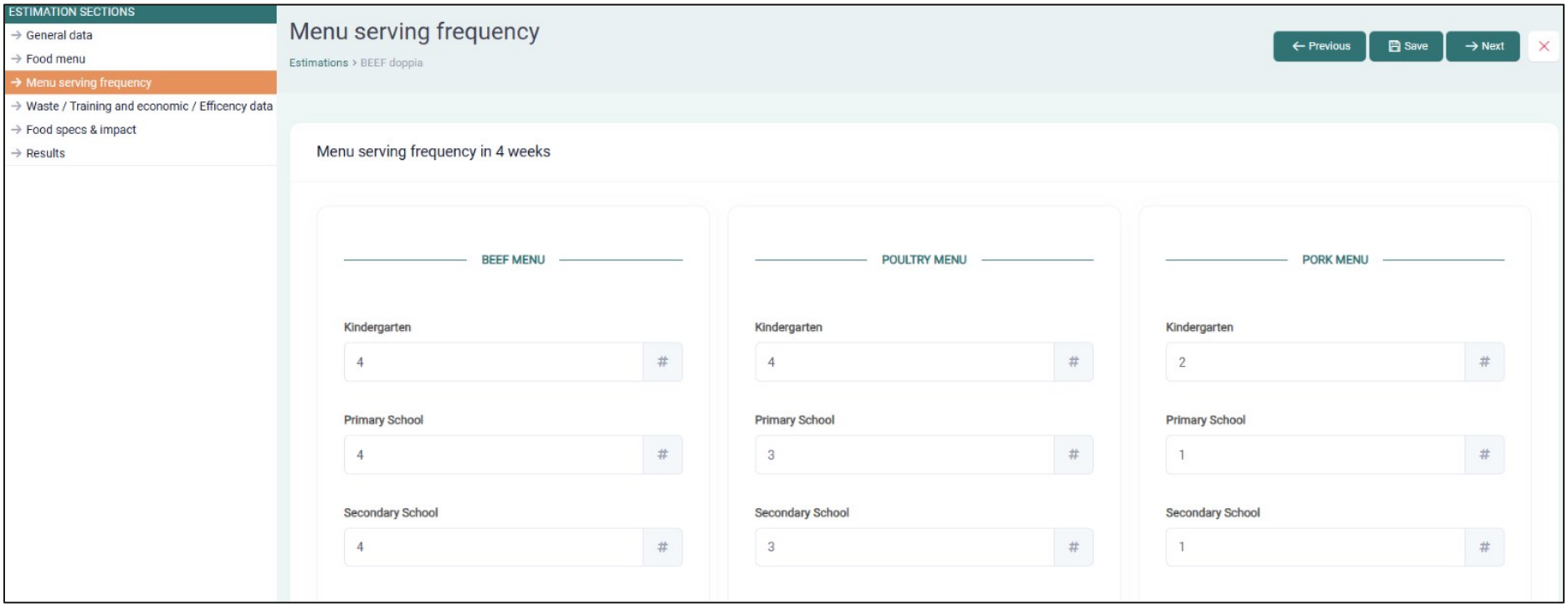


d. The menus that will appear are average menus, already filled with average values for kindergarten, primary and secondary school. By clicking on the edit icon 

, in the top right-hand corner of the menu, there is the possibility of editing the menu, either by changing the name of the menu, or by changing the food categories, entered in automatic mode, and their quantities.

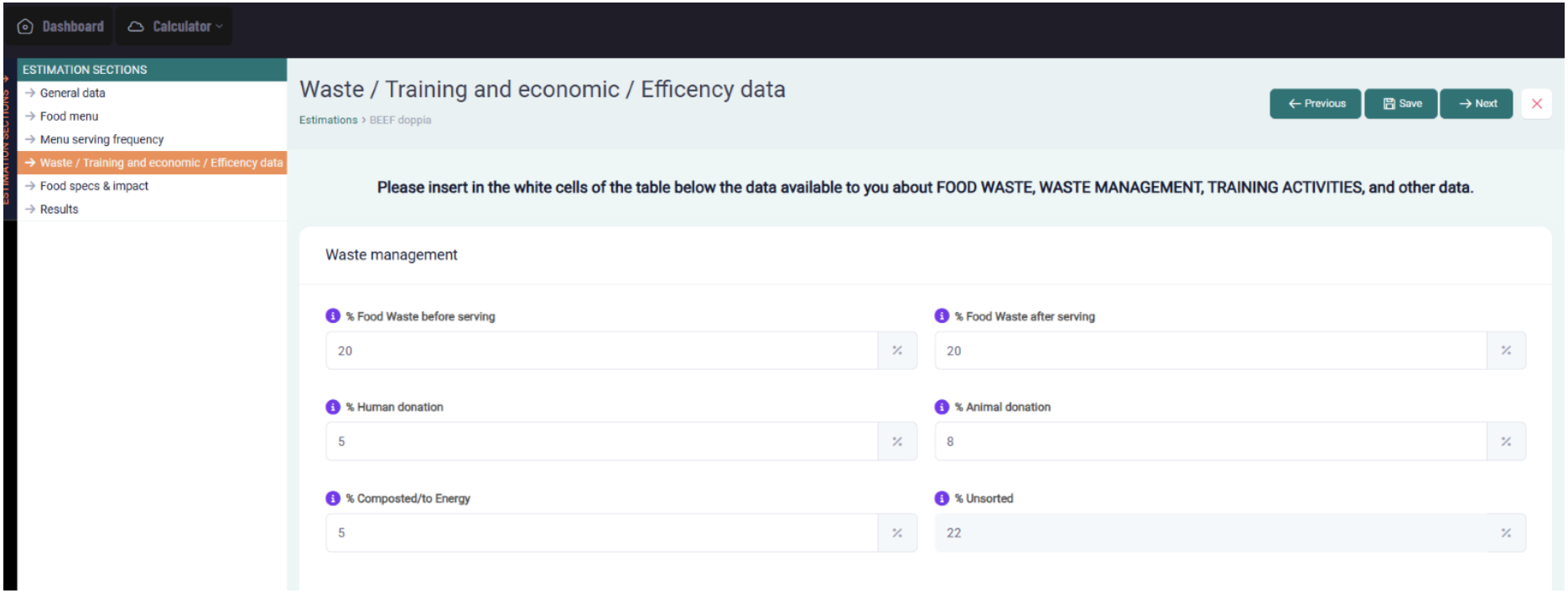
e. Then saving menus, again with the save button at the top right, and clicking on the next button, **SAGE** will open the next section 'Menu serving frequency' where the frequency of weekly menu serving are required. See *Image 9* below.

Image 9 – Menu serving frequency



Again, by continuing with the “save and then next” procedure, **SAGE** will open the ‘Waste/Training and economic/Efficiency data’ section. Please note that the data in this section are not compulsory, if the exact number is not known, average data have been provided for the section. See *Image 10* below.

Image 10 – Waste/Training and economic /Efficiency data



g. By saving the data from the previous session, **SAGE** will open the *"Food specs and impact"* section (See *Image 11* below). Here, by clicking on the ⚙ icon, it is possible to find further data required by the calculator. Required data include:

- *For animal protein (Image 12, 13 and 14 below)*:

%Regional Produced

%Organic

%Natural Pasture (This indicator will appear automatically when you enter a % of organic)

%Full Animal NP (This indicator will appear automatically when you enter a % of Natural Pasture)

%Full Animal Org.Not NP

%Full Animal Not Organic

%of animal used (This indicator will appear automatically when you enter a % of any Full Animal)

%Integrated farming

%Antibiotic Free

%Ultraprocessed

% Sustainable Fish (only for Farmed Shrimp/prawns, Farmed Fish and Wild Fish)

% Free range (only for *Poultry and Eggs*)

- *For dairy protein (Image 15 below)*:

%Regional Produce

%Organic

%Natural Pasture (This indicator will appear automatically when you enter the % of organic)

%Integrated farming

%Antibiotic Free

- *For Rice and Cereals (Image 16 below):*

%Regional Produce

%Organic

%Wholegrain

%Ultra processed

- *For Bananas and Exotic Food (Image 17 below):*

%Regional Produce

%Organic

%Integrated farming

%Non-Seasonal

%Fair Trade

% Ultra processed

- *For Fruits and Other veg. & mushrooms*:

%Regional Produce

%Organic

%Integrated farming

%Non-Seasonal

% Ultra processed

Image 11 – Food specs & impact

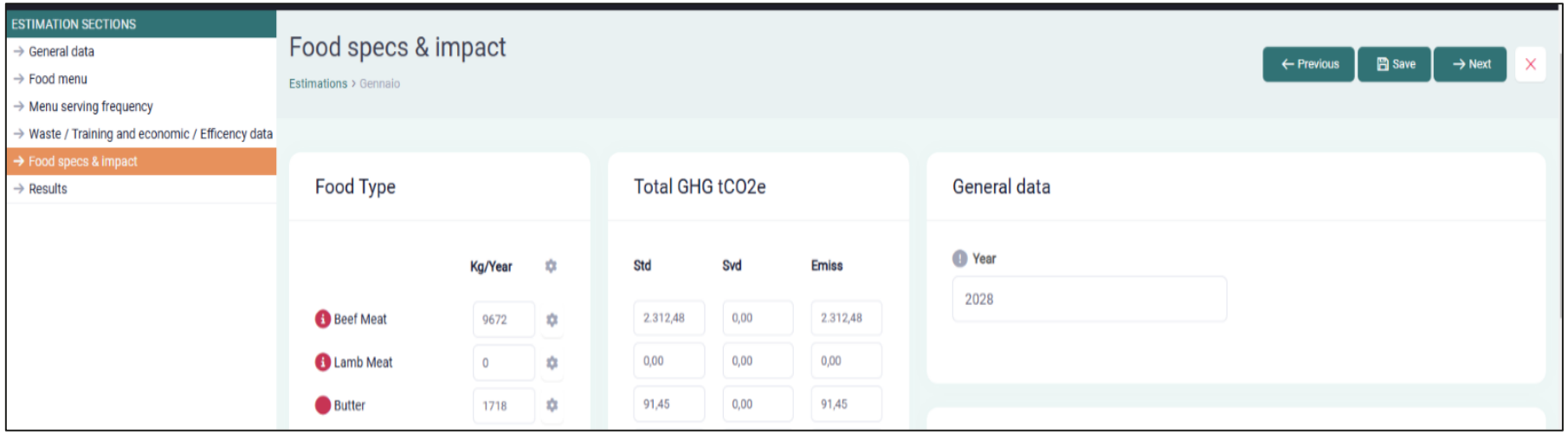
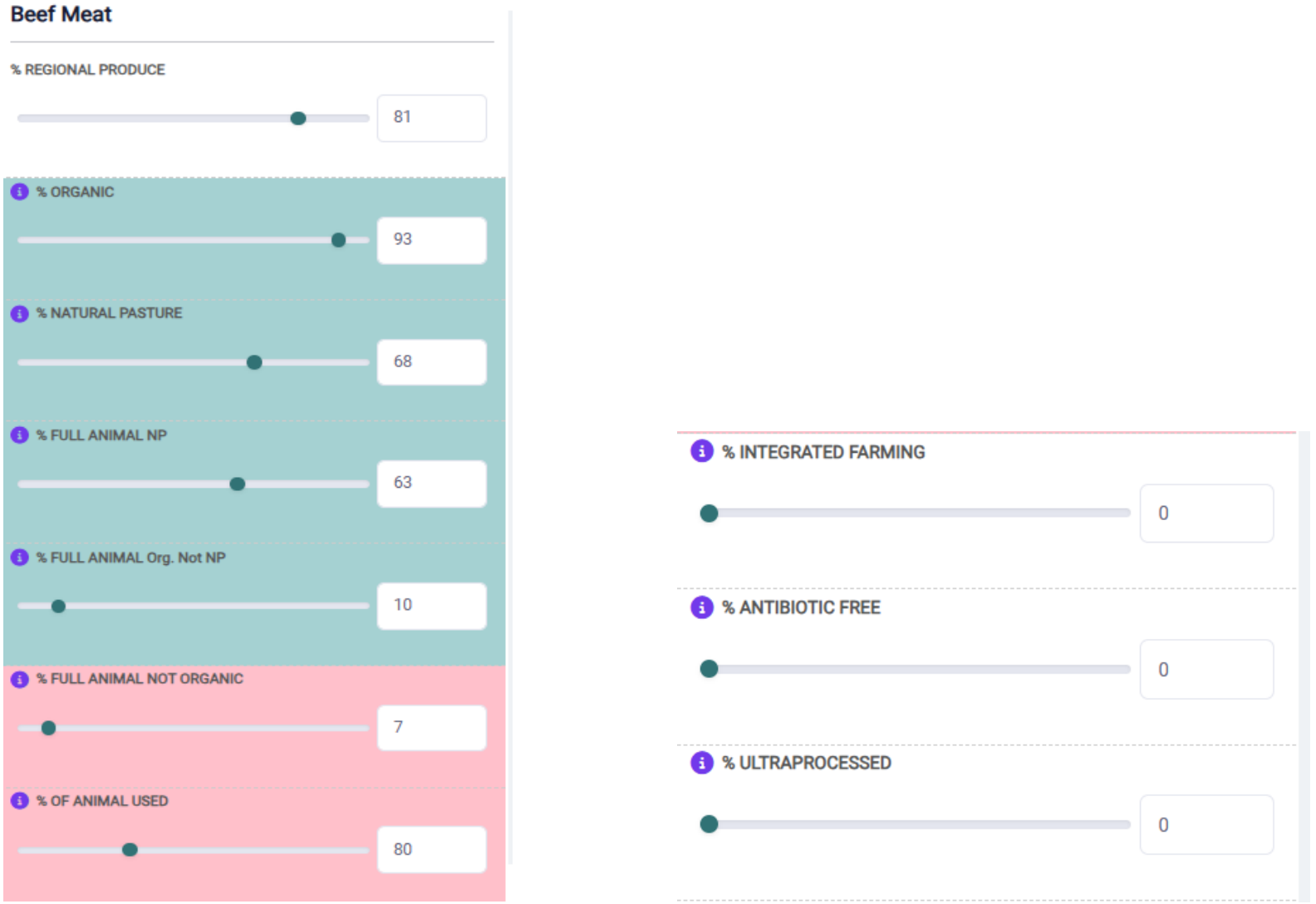
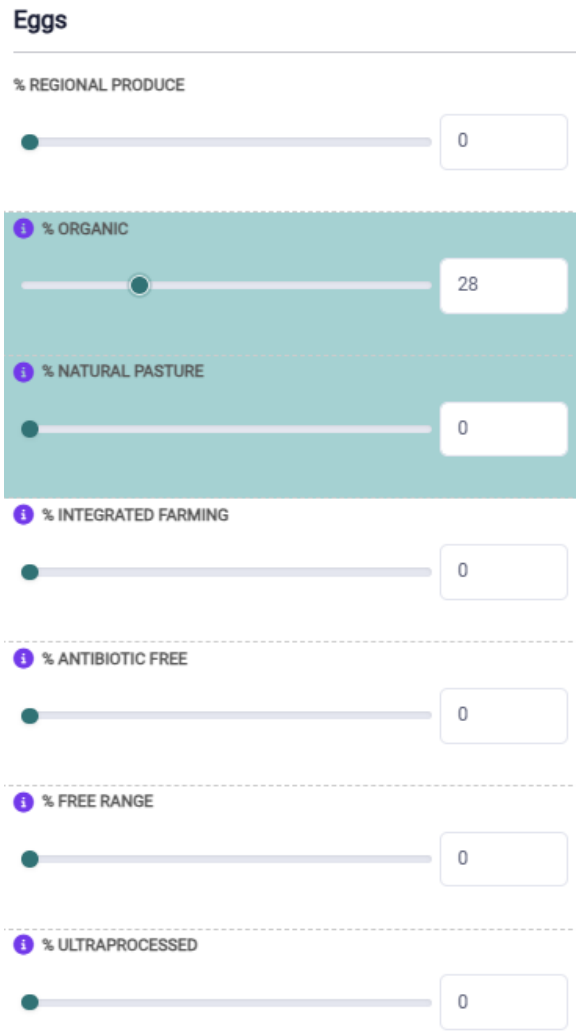


Image 12 – Animal Protein



Images 13 & 14 – Poultry & Eggs (13), Farmed Shrimp/prawns, Farmed Fish and Wild Fish (14)



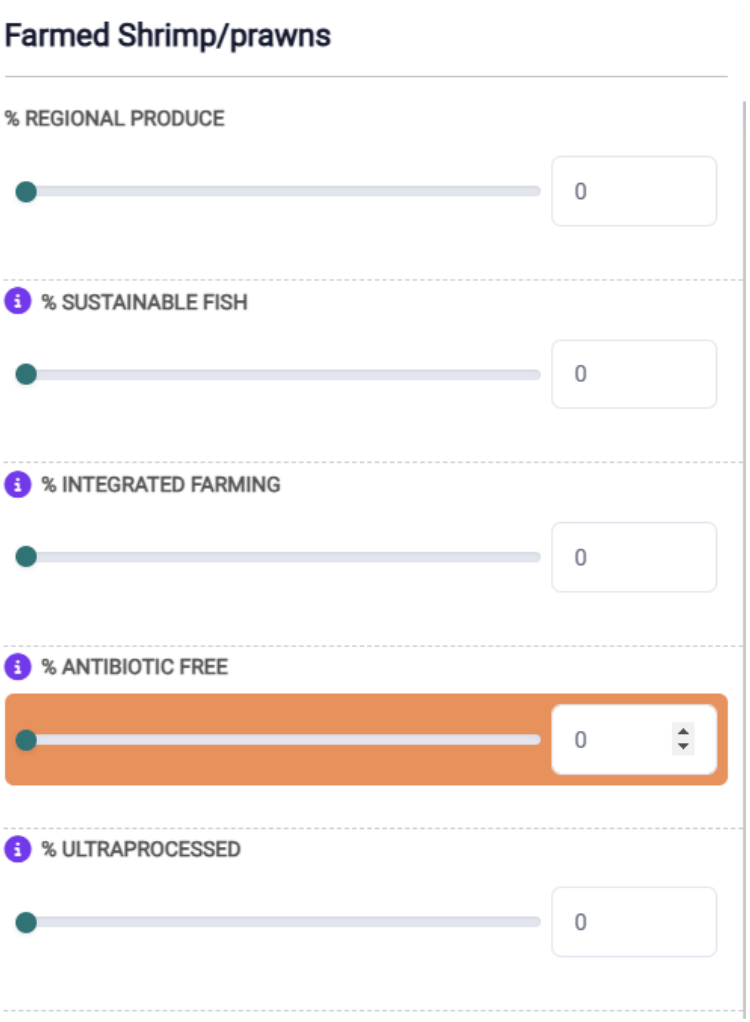


Image 15 – Dairy Protein and ***Image 16 – Rice & Cereals***

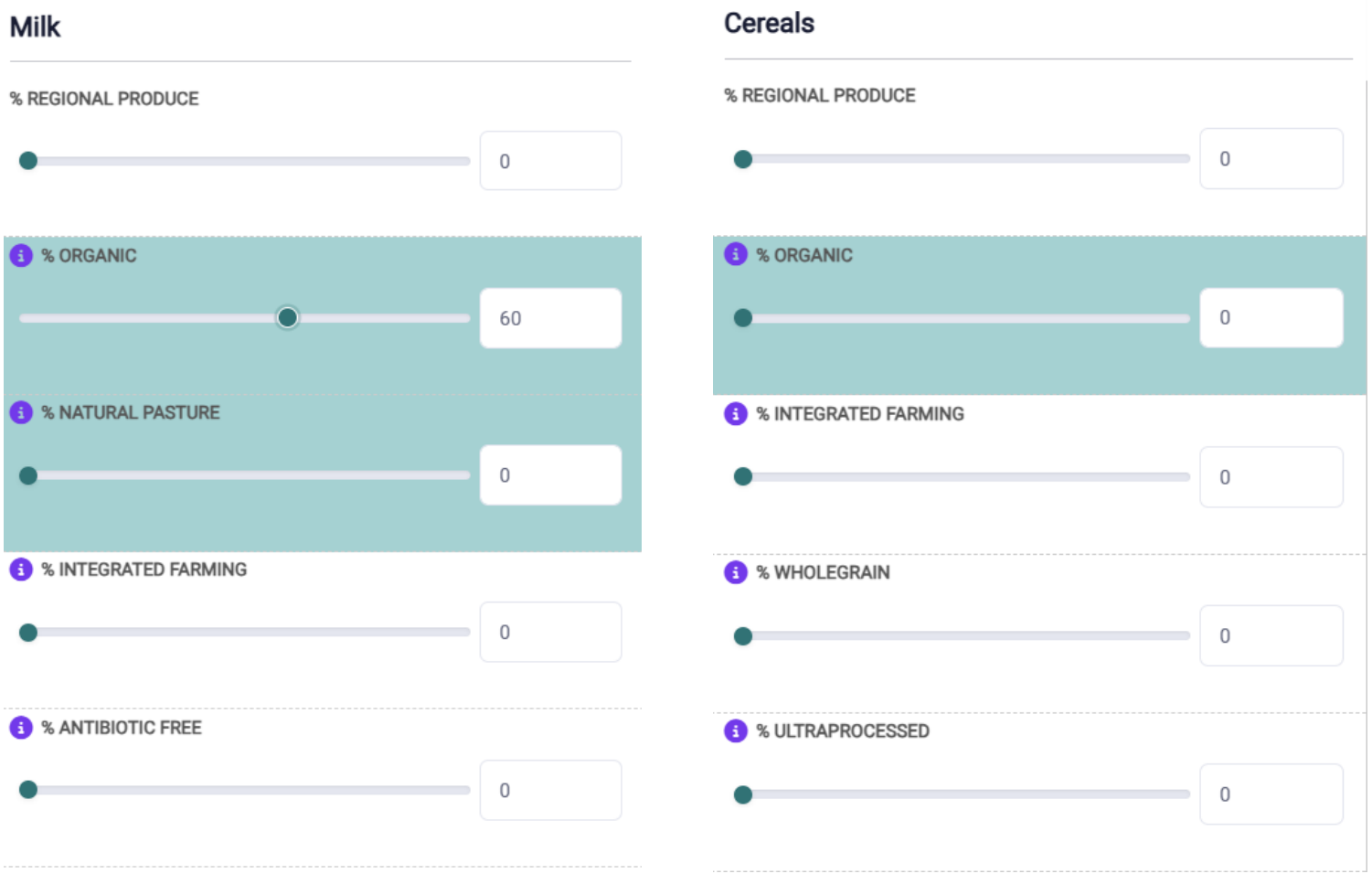
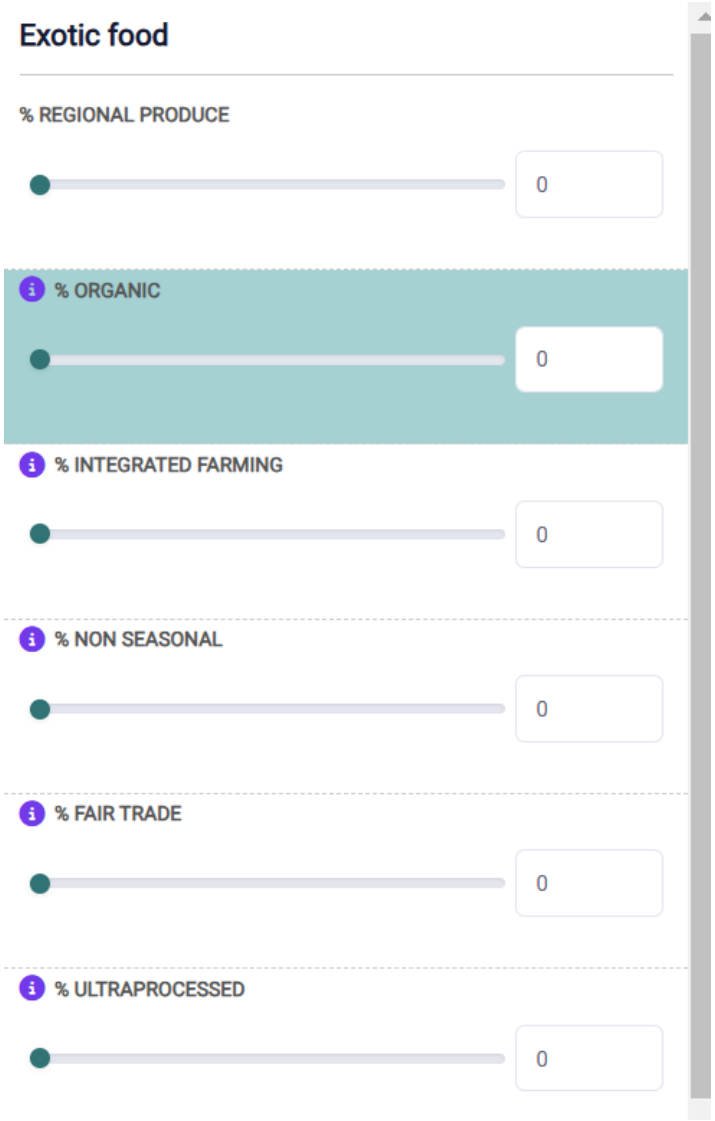


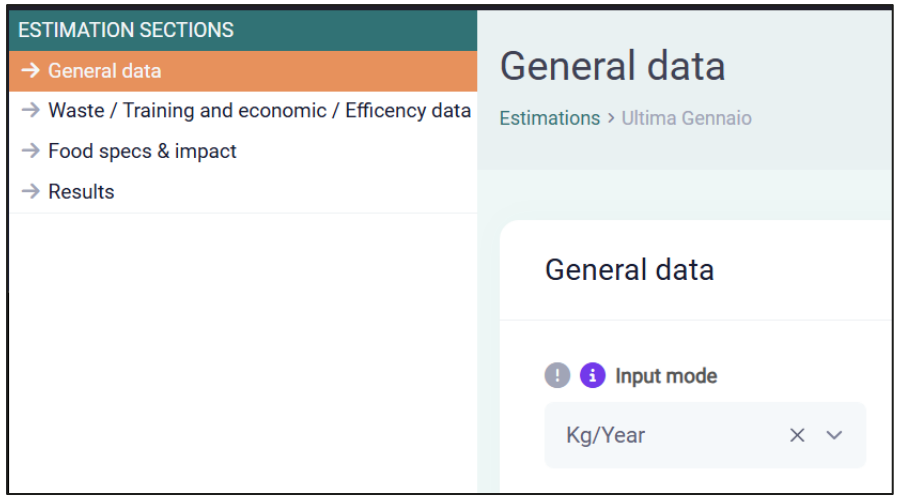
Image 17 – Bananas & Exotic Food



In case of food quantities in the form of KG/YEAR, here the side menu will be different, as can be seen from *Image 18 below*. Therefore, there will only appear the sections:

- General data
- Waste/ Training and economic/ Efficiency data
- Food specs & Impact

Image 18 – kg/year input mode

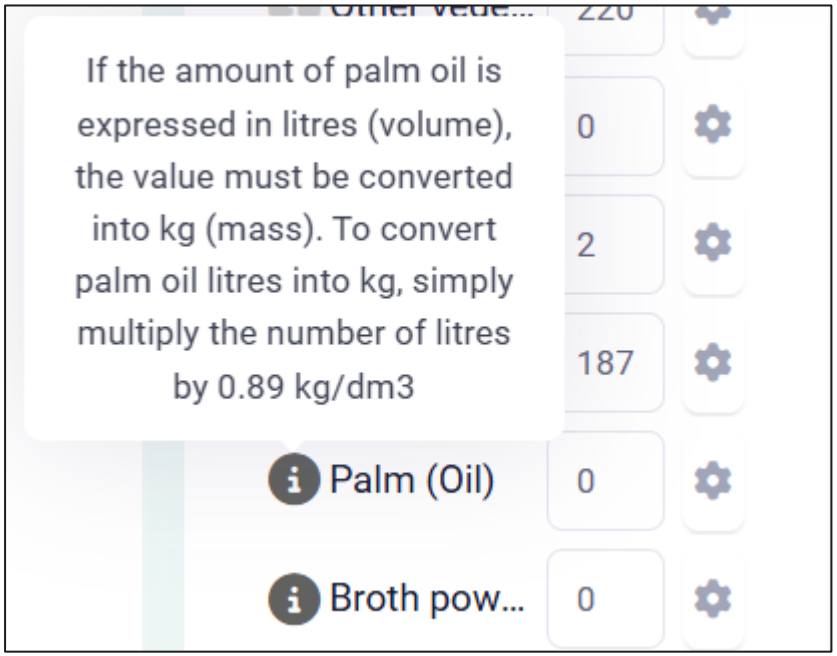


In the section 'Food specs & impact' it will be possible to enter additional data required for each food category by clicking on the icon. For more details on which data is required, please refer to the section 'Food specs & impact' under point 'g' of the explanation of data entry for Menu.

4.3 FOOD CATEGORIES AND INPUT DATA REQUIREMENTS

SAGE contains several Food categories, each of which has its own specific description. By hovering over the side icons of food category, you can read an accurate description of it and how the information should be entered. See example in *Image 23 below*.

Image 23 – Food categories description example



SAGE covers the following food categories:

Beef Meat	Beef, veal & buffalo meat
Lamb Meat	Lamb/mutton & goat meat
Pork	Pig Meat
Animal fats	Animal fats (no butter)
Poultry	Poultry (chicken, turkey)
Eggs	
Cheese	
Butter	
Cream	
Milk	Milk from cows. If the amount of milk is expressed in litres (volume), the value must be converted into kg (mass). To convert milk litres into kg, simply multiply the number of litres by 1.03 kg/L
Yoghurt	Yogurt from cows
Farmed Fish	Farmed fish, no shrimps/prawns
Shrimp/prawns	Farmed Shrimp/prawns
Wild fish	All types of wild fish

Dried Seaweeds	
Cereals	Cereals, except rice (Bread, pasta, baked goods)
Beans	Beans and pulses (dried)
Tofu etc	Tofu (from soybeans), Tempeh, Seitan
Soy sauce	Litres
Nuts and seeds	
Plant-based milk	Plant-based cow milk substitutes (example: almond milk, coconut milk, rice milk, and soy milk)
Fruits	Any fruit except from berries, bananas and exotic food
Berries	
Bananas	
Exotic food	Large assortment of tropical and subtropical fruits
Potatoes etc	Potatoes and other tubers
Tomatoes	Fresh and processed Tomatoes (tomato sauce/paste, passata, etc)

Vegetables	Other Vegetables (no pulse/potatoes/tomatoes/exotic)
Olives (Oil)	If the amount of olive oil is expressed in litres (volume), the value must be converted into kg (mass). To convert olive oil litres into kg, simply multiply the number of litres by 0.86 kg/L
Palm (Oil)	If the amount of palm oil is expressed in litres (volume), the value must be converted into kg (mass). To convert palm oil litres into kg, simply multiply the number of litres by 0.89 kg/dm3
Other vegetable fats	This can include sunflower oil, soybean oil and rapeseed oil. If its value is expressed in litres (volume), the value must be converted into kg (mass). To convert litres into kg, simply multiply the number of litres by: - sunflower oil 0.92 kg/L; - soybeans 0.92 kg/L – rapeseed oil 0.91 kg/L

Broth powder etc.	Ready2use broth powder & ultraproc. spices
Salt	
Ice cream	
Cocoa	
Sugars	Sugars and Sweeteners
Healthy Snack	Healthy Snack (Fruit, Veg, Nuts & Seeds)
Healthy Drink	Healthy Drink (freshly squized juices)
Unhealthy Snack	
Unhealthy Drink	

As specified above, for each food category, **SAGE** requires the input of further data, which are different for the different categories. Some examples have already been given above in the 'Food Specs & Impact' section under g in the previous section of this document.

Let us take a closer look at the data required and the descriptions given for each data item, which can be easily understood by scrolling the mouse over the  icon.

% REGIONAL PRODUCE	
% ORGANIC	% ORGANIC (Excluding NATURAL PASTURE, FULL ANIMAL, SUST FISH)
% INTEGRATED FARMING	% INTEGRATED FARMING (If NOT ORGANIC, Excluding FULL ANIMAL, SUST FISH)
% NATURAL PASTURE	% NATURAL PASTURE
% SUSTAINABLE FISH	% SUSTAINABLE or ORGANIC FISH FARMING / SUST FISHING
% NON SEASONAL	% NON-SEASONAL (=FROM HEATED GREENHOUSE)
% FULL ANIMAL NOT ORGANIC	Enter the percentage of food for this type that is bought as a full animal and is not organic
% FULL ANIMAL ORG. NOT NP	Enter the percentage of food for this type that is bought as a full animal and is organic but not natural pasture

% FULL ANIMAL NP	Enter the percentage of food for this type that is bought as a full animal, coming from natural pasture
% OF ANIMAL USED	If you buy full animal enter the percentage of animal that you use in total
% FAIR TRADE	% FAIR TRADE (for exotic food)
% WHOLEGRAIN	Enter the percentage of procured wholegrain food for this type
% ULTRAPROCESSED	Ultra-processed foods are formulations of ingredients, mostly of exclusive industrial use, typically created by series of industrial techniques and processes. Some common ultra-processed products are carbonated soft drinks; sweet, fatty or salty packaged snacks; candies (confectionery); mass produced packaged breads and buns, cookies (biscuits), pastries, cakes and cake mixes; margarine and other spreads; sweetened breakfast 'cereals' and fruit yoghurt and 'energy' drinks; pre-prepared meat, cheese, pasta and pizza dishes; poultry and fish 'nuggets' and 'sticks'; sausages, burgers, hot dogs and other reconstituted meat products; powdered and packaged 'instant' soups, noodles and desserts; baby formula; and many other types of product. For more information, please refer to the glossary.
% ANTIBIOTIC FREE	(If not organic)
% FREE RANGE	(if not organic)

In the 'Waste/Training and economic/Efficiency data'' section, **SAGE** asks the following data to be entered:

% Food Waste before serving	When food waste occurs before serving the meal, e.g. during the preparation, when unwanted parts of a food item, such as peelings, are thrown away. This includes the prepared meal that is not served and goes to waste.

% Food Waste after serving	When food waste occurs after the meal is consumed, e.g. food left over from the meal and thrown away.
% Human Donation	Enter the percentage of food donated to charity out of the total food purchased. This means that if, for example, you have 40% of food waste and a quarter of this goes to human donation, you should enter 10% here.
% Animal Donation	Enter the percentage of food donated to kennels or catteries out of the total food purchased. This means that if, for example, you have 40% of food waste and a quarter of this goes to animal donation, you should enter 10% here.
% Composted/to Energy	Enter the percentage of food going to composting or energy production out of the total food purchased. This means that if, for example, you have 40% of food waste and a quarter of this goes to composting or to energy production, you should enter 10% here.
% Unsorted	It calculates the percentage of unsorted waste out of the total food purchased, based on all the other waste data entered.
water served in plastic bottles?	Enter yes if you serve any water in plastic bottle.
kg of other plastic waste	Enter the kg of plastic waste in the kitchen, per year, excluding the percentage of plastic bottles served.
Waste management activities provided?	Please click yes if you provide any waste management activity. The list of possible activities will appear when YES is selected.
IF YES WHICH OF THE FOLLOWING IS PROVIDED?	
Waste monitoring?	Do you monitor the amount of waste produced before and/or after serving?
Staff training?	Do you provide any training for the catering staff?
Students/teachers trained?	is any training provided to the teachers and/or to the students?
Satisfaction questionnaires?	Do you provide satisfaction evaluation questionnaires to students/teachers/families?
Age-appropriate ladles and servings	Tick YES if the serving and the ladles used to serve are adjusted to the different appropriate portion for the different ages

Buffet option?	Tick YES if the buffet serving option is available to the students	
Tasting option?	Tick YES if the students are given the opportunity to SAGE the food. For example, if the buffet option is available this should be YES. But there could be other ways of getting the students to taste the food even when the buffet is not an option. Tick YES in these other cases as well.	
Portion size choice?	Tick YES when the students are free to choose the size of their portion.	
Families invited to meals in schools?	Are families invited to the canteen for any food related event during the school year.	
ok – add an open field	Describe any other waste management activity you provide which is not listed above.	
Other Data		
TOT t food procured	TOT amount in tonnes of food procured per year	
TOT t food from small farmers	TOT amount in tonnes of food procured from small farmers per year	

% schools providing free breakfast	% of schools providing free breakfast among all the schools included in this calculation	
% school providing free meals	% of schools providing free meals among all the schools included in this calculation	
% kitchen < 5000 meals a day	% of kitchens providing less than 5000 meals among all the kitchens included in this calculation	
% kitchen < 5000 meals a day	Total cost of one meal for the procurer	
Family meal price	Average price of one meal to be paid by the student family	
Teacher's meal price	Average price that each teaches has to pay for its own meal	
Training, Communication, Educational activities provided?	Do you provide any training, communication, educational activity on any subject related to food, environmental and/or social sustainability, field trips, etc.	
IF YES WHICH OF THE FOLLOWING IS PROVIDED?		
% of schools with training	Percentage of schools providing training over the whole number of schools involved in this calculation	
Children awareness?	Are there any programmes/training/activities to	

	raise children's awareness of healthy and sustainable food?	
Activity with parents/community?	Are there food related activities carried out with caregivers, pupils' families or the community?	
Staff training on:	Do you provide staff training on any of the following:	
energy saving?	Do staff receive training on energy-related topics? Example: energy production, energy saving or energy efficiency	
H2O savings?	Do staff receive training on H2O saving?	
portion's sizes?	Do staff receive training on portion's size?	
nutritional quality?	Do staff receive training on nutritional quality?	
food waste?	Do staff receive training on food waste?	
Energy efficient kitchen appliances	Do kitchen have energy efficient appliances?	
Sustainable low-carbon transport?	Is the logistic manages with a low-carbon strategy (journey, vehicles, storage management, etc.)	
Access to free tap water?	Is free tap water available to the canteen users ?	
GHG emission monitoring?	Is tehre any GHG emissions monitoring in place ?	
Innovative approaches to reducing GHG emissions in meals served?	Do you implement any innovative approach to reduce GHG emissions of the meals served?	
Sustainable packaging?	Do you use environmentally friendly packaging (reusable, or no packaging)?	

As mentioned above, these data are not mandatory, but **SAGE** provides average data for the entire section.

There are other data that are required by **SAGE** in the case of choosing data entry by Menu. These data were specified in the previous section and can be found under “e” point.

4.4 INDICATORS AND GRAPHIC OUTPUTS

For both data input modes, by saving all the data entered in the section “Food Specs & impact”, you will have reached the end of the simulation and will then find the “Results” page (Image 19, 20, 21 & 22 below), including:

- *Table of the 8 SchoolFood4Change indicators*
- *Table with Full Results*
- *Table with the Health Impact indicators*

- A chart showing the SF4C indicators and your results against these indicators

- A chart with GHG emissions - tCO2e

- A chart illustrating Food Waste

- A graph of Plant based vs Animal BSD menu protein impact

- A comparison graph between a standard school menu and a SF4C menu which also illustrates the emission savings through the percentage of plant-based menus included in the simulation

- Finally, a graph of GHG emissions per protein

Image 19 – Results Page and eight SF4C indicators

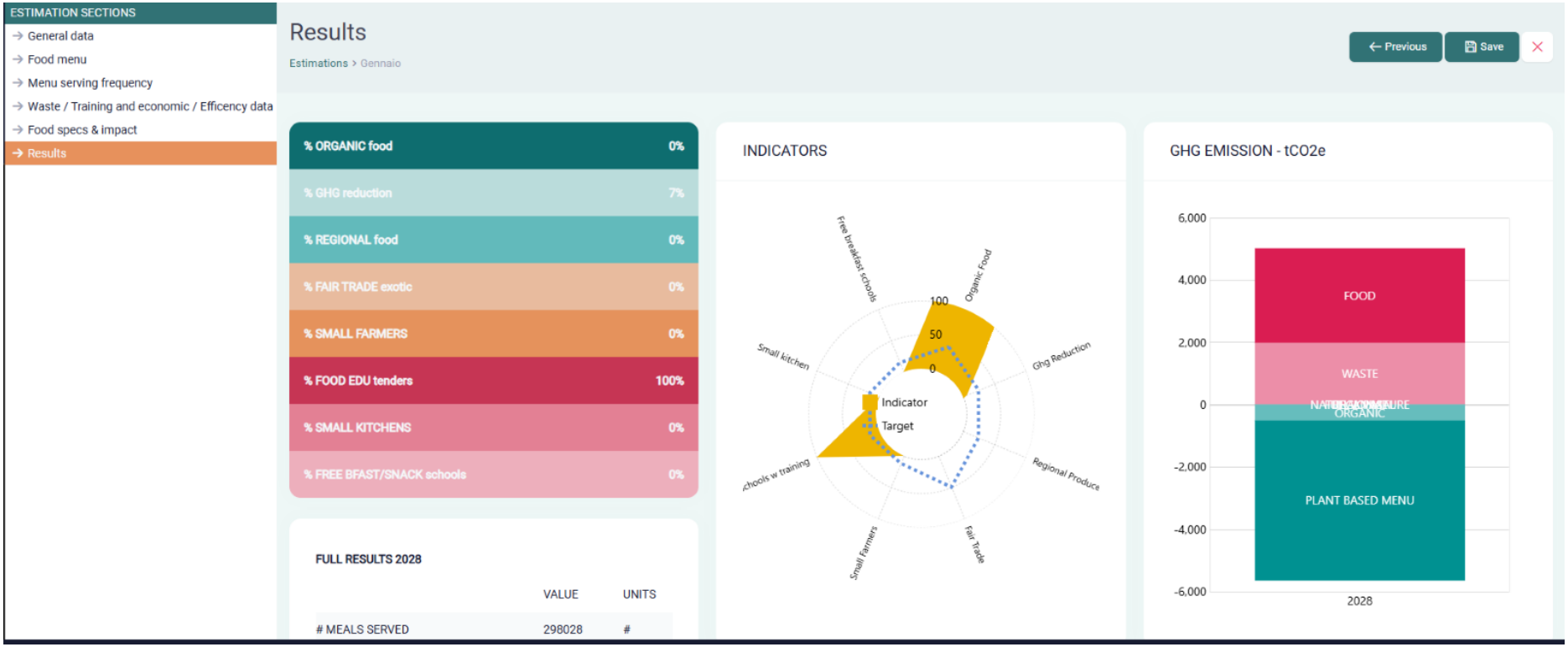


Image 20 – Full Results

FULL RESULTS 2028

	VALUE	UNITS
# MEALS SERVED	298028	#
TOT FOOD PROCURED	0	t
WASTE MANAGEMENT	YES	
% food waste Before serving	20	%
% food waste After serving	20	%
% food waste	40	%
% human donat	0	%
% animal donat	0	%
% composted waste	5	%
% unsorted	35	%
GHG EMISSIONS tCO2e	5006	tCO2e
of which due to WASTE	2004	tCO2e
of which due to FOOD	3002	tCO2e
% PLANT BSD MENU	35	%
% REGIONAL	0	%
% ORGANIC	0	%
% NATURAL PASTURE	0	%
% FULL ANIMAL	0	%
% ORGANIC NP FA Meat	0	%
% sust FISH FARMING	0	%
% SEASONAL FOOD	100	%
% INTEGRATED FARMING	0	%
% ANTIBIOTIC FREE	0	%
% FREE RANGE	0	%

Image 21 – Graphs (Food Waste, Plant vs Animal BSD Menu Protein, One Meal GHG Emission Comparison & GHG Emission per protein)

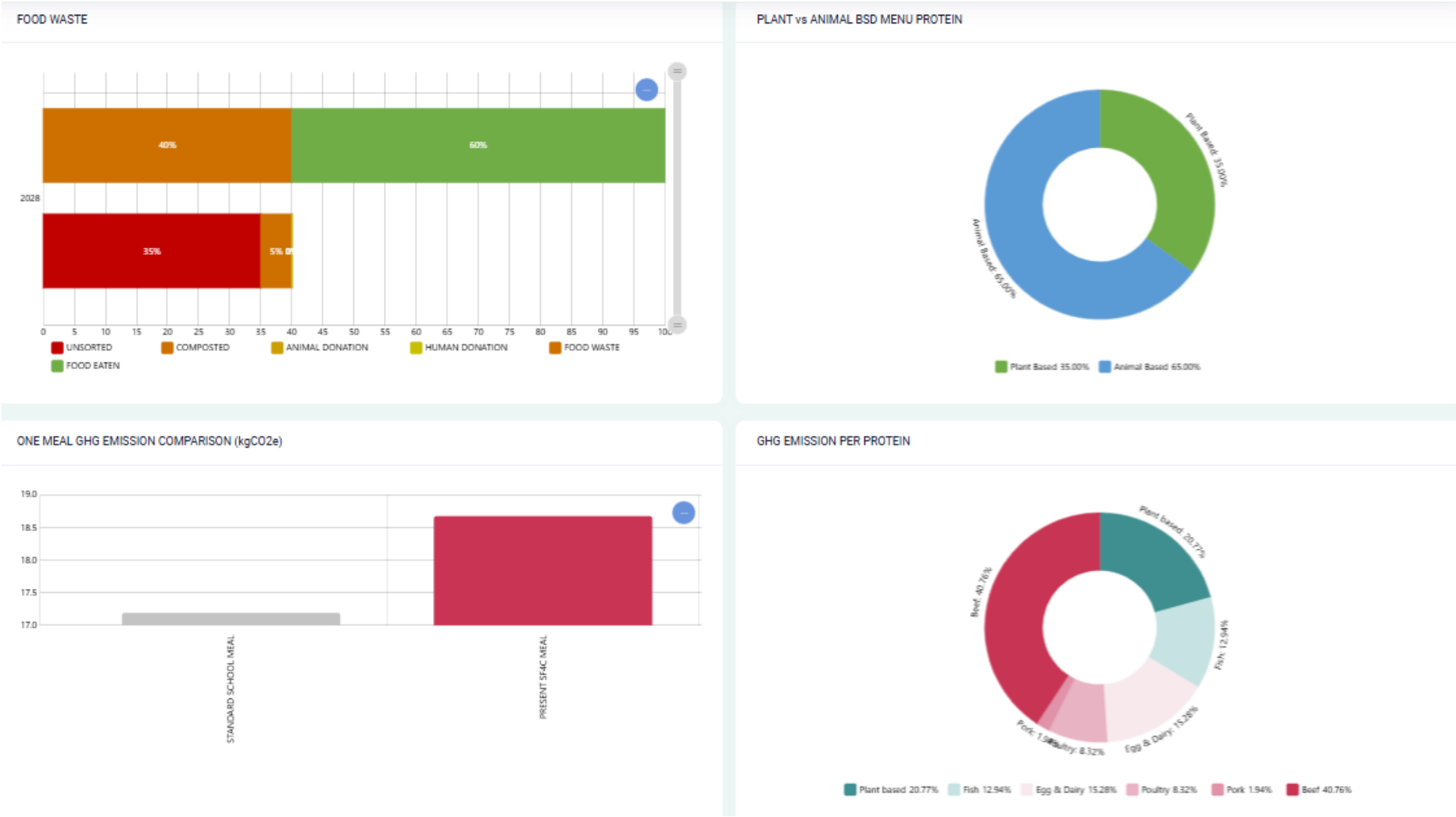


Image 22 – Health Impact Assessment

TYPE	INDICATOR	LIMITS	SCORE
PROTEIN BALANCE	LEGUMES	>40%	33%
	FISH	>30%	27%
	EGGS	ABOUT 10%	14%
	POULTRY	< 20%	9%
	RED MEAT & CHEESE	< 10%	16%
HEALTHY FOOD CONSUMPT	VEG PORTION	>126g	50
	FRUIT PORTION	>166g	220
	NUTS	>21g	0
	WHOLEGRAIN	>30%	0%
FOOD DIVERSITY	VEG VARIETY	>80%	66%
	FRUIT VARIETY	>80%	100%
UNHEALTHY FOOD PREVENTION	RED MEAT PORTION	<66g	345
	STARCHY FOOD	96-159g	141
	NO ULTRA PROCESSED	>95%	100%
	SUGAR & SWEETENED	<5%	0%
SOCIAL	FREE BREAKFAST	offered in at least 50% of schools	0%
	FAMILY MEALS	parents invited to eat in the canteen in occasions	YES

THANKS FOR THE FOOD!

It's time for a new menu

info@schoolfood4change.eu

www.schoolfood4change.eu

#SchoolFood4Change

SCHOOLFOOD 4CHANGE

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036763.