FARMING IS THE FOUNDATION OF OUR BUSINESS

Up to 1/3 of global greenhouse gas emissions stems from the food system, an estimated 80% of which comes from agriculture.\(^1\) At General Mills, we recognize the critical role that farming plays in our business and we are committed to advancing agricultural practices that positively impact people and planet.

PURPOSE OF THE SELF-ASSESSMENT

Version 2.0 of the General Mills Regenerative Agriculture Self-Assessment is a user-friendly tool for farmers to understand alignment between their agricultural practices and the principles of regenerative agriculture. The tool is also designed to help companies with agricultural supply chains gain visibility to farm-level practices.

At General Mills, we define regenerative agriculture as **farming that protects and intentionally enhances natural resources and farm communities.**

5 CORE PRINCIPLES OF REGENERATIVE AGRICULTURE

This practices-based assessment includes farming techniques that align with five recognized principles of regenerative agriculture: keep the soil covered, minimize soil disturbance, maximize crop diversity, maintain living root in the ground year-round, and integrate livestock. Research suggests that implementation of these principles leads to positive outcomes in soil health, above ground biodiversity, and economic resilience in farming communities.

HOW TO USE THE SELF-ASSESSMENT

The tool is designed to be inclusive of all farming systems — small and large, organic and conventional, crop and livestock, domestic and international. This questionnaire is not a standard or a framework for a product claim, but rather a self-assessment designed to be completed in under 20 minutes. While the tool aims to highlight opportunities for continuous improvement, it is also intended to identify and celebrate ways that farmers are already advancing soil health, above ground biodiversity, and economic resilience in farming communities.

DEVELOPMENT OF THE SELF-ASSESSMENT

The self-assessment was developed in collaboration with farmers, scientists, practitioners, and a diverse group of employees across the General Mills family. Following the launch of Version 1.0 in 2018, we spent 15 months piloting the inaugural version in our own supply chain while collecting feedback from farmers, scientists, and other stakeholders. We hosted farmer feedback roundtables across the U.S. to engage 140 farmers who helped hone the content of the self-assessment so it can be useful to a variety of farmers across diverse agricultural systems.

WE ARE MEASURING IMPACT ACROSS 3 KEY OUTCOMES

SOIL HEALTH

ECONOMIC RESILIENCY IN FARMING COMMUNITIES

ABOVE-GROUND BIODIVERSITY

HOW WE ARE USING THE SELF-ASSESSMENT AT GENERAL MILLS

We are implementing the tool with key General Mills suppliers to empower farmers at the foundation of our supply chain to explore how their practices align with regenerative agriculture principles. We are also using the tool to track progress against our commitment to advance regenerative agriculture on one million acres by 2030.

In addition to this tool, we are developing robust scientific methodologies for measuring and researching the outcomes associated with regenerative agriculture. You can learn more about this and our other efforts on our Regenerative Agriculture Webpage. While the research on outcomes continues, we recognize the importance of assessing agricultural practices as a proxy for farm-level impact.

To honor the privacy of participating farmers, General Mills will keep all data attributable to individual operations strictly confidential.

WHAT’S NEXT?

We welcome feedback and look forward to iterating on this tool over time as we continue our journey to advance regenerative agriculture. If this tool can be useful for your operation or supply chain, we encourage you to use it. We’d love to hear about your experience!
PLEASE COMPLETE THE FOLLOWING INDICATORS FOR ACRES UNDER CROP CULTIVATION.
LIVING ROOT IN THE GROUND

PLEASE SPECIFY THE PROPORTION OF YOUR TOTAL CROP ACRES THAT FALL UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

Please complete ONE of the below indicators based on your region’s climate.

For humid, dry subhumid climates, or acres under irrigation

0
Does not meet baseline.

1
BASELINE: Fields have a living root in the ground for at least 130 days per calendar year. Weeds do not count. Dormancy may count toward days with a living root in the ground. Assume living root starts at planting and ends at harvest.

2
Meets baseline and fields have a living root in the ground for at least 200 days per calendar year.

3
Meets baseline and fields have a living root in the ground for at least 300 days per calendar year.

% OF TOTAL CROP ACRES IN EACH TIER

For dryland agriculture in arid and semi-arid climates

0
Does not meet baseline.

1
BASELINE: Summerfallow* is not present more than once every 3 years.

2
Summerfallow* is eliminated.

3
Summerfallow* is eliminated and fields have a living root in the ground for at least 200 days per calendar year.

% OF TOTAL CROP ACRES IN EACH TIER

*Summerfallow is an unvegetated period longer than 120 days between May and September.
PEST MANAGEMENT

PLEASE SPECIFY THE PROPORTION OF YOUR TOTAL CROP ACRES THAT FALL UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

0
Does not meet baseline.

1
**BASELINE:** All pesticide use is justified with evidence that a severe pest outbreak exists or has the potential to exist, as determined by scouting and monitoring protocols for common crop pests to determine whether an economic threshold has been reached. If no established threshold exists, the professional judgement of a certified pest control adviser, accredited crop consultant, extension agent, or other third party credentialed independent pest management specialist can determine whether pesticide use is justified. Nitroguanidine neonicotinoids (clothianidin, dinotefuran, imidacloprid and thiamethoxam) are not used.

2
Meets the baseline and producer implements a robust integrated pest management (IPM) strategy.*

3
In addition to the above, any pesticides used are either approved under the National Organic Program or are not listed in the PAN International List of Highly Hazardous Pesticides.**

*The plan must include an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as pheromone traps, pest mating disruption, trap cropping, maturity date selection, and use of resistant plant varieties. Any pesticide applications are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment. Visit the IPM Institute of North America website for more information on IPM strategies.

**National List of Allowed and Prohibited Substances in the Organic Program

**PAN International List of Highly Hazardous Pesticides.
### MINIMIZATION OF TILLAGE

Please specify the proportion of your total crop acres that fall under each tier. The total must add up to 100%.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Does not meet baseline.</td>
</tr>
<tr>
<td>1</td>
<td><strong>Baseline:</strong> At least 30% of the soil surface is covered by living plants or crop residue year-round, including after planting.</td>
</tr>
<tr>
<td>2</td>
<td>At least 50% of the soil surface is covered by living plants or crop residue year-round, including after planting.</td>
</tr>
<tr>
<td>3</td>
<td>In addition to the above, producer operates a no-till system.*</td>
</tr>
</tbody>
</table>

*A field is said to have had no tillage operations if none of the following categories of machinery was used on the field between the harvest of the previous crop and the current year’s planting: Plows and disks, including moldboard plow, offset disk, and tandem disk; harrows; bedder-shapers; packers; and any miscellaneous tillage equipment such as Land-all, Do-all, Mix-n-till, mulch treader, rototiller, soil finisher, or stalk puller.

Examples of Various Crop Residue Levels

- 30% Coverage
- 50% Coverage

Visit the NRCS website to learn how to estimate your soil coverage level with measuring tape.
NUTRIENT PROVISIONS

PLEASE SPECIFY THE PROPORTION OF YOUR TOTAL CROP ACRES THAT FALL UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

% OF TOTAL CROP ACRES IN EACH TIER

0

Does not meet baseline.

1

**BASELINE:** Nutrient application follows the 4 R’s of nutrient stewardship.*

2

Meets baseline and at least 25% of all nutrients applied (by weight) is made available to the plant via decomposition (e.g., cover crops, manure, or compost).**

3

Meets baseline and at least 75% of nutrients applied (by weight) is made available to the plant via decomposition (e.g., cover crops, manure, or compost).**

*4 R’s of nutrient stewardship:

**Right source:** nutrients are supplied in plant-available forms that are appropriate for the soil’s physical and chemical properties; compatibility of nutrient source blends and synergisms between nutrient elements are addressed. Examples include avoiding nitrate application to flooded soils, avoiding urea applications on soil surfaces with a high pH, and using slow-release or stabilized nitrogen sources.

**Right rate:** soil tests are used to determine appropriate application rate, and applications are at economically optimal rates rather than maximum yield rates.

**Right time:** timing of nutrient uptake and dynamics of soil nutrient supply are addressed. Examples include dividing the total amount of nutrients applied during a season into two or more applications, and only applying in the Spring when nutrient needs are highest.

**Right place:** nutrients are supplied strategically so plants can access them. Examples include banding, injecting, and side-dressing.

Visit the 4R Pocket Guide for more information on the 4R’s.

**EXAMPLE NUTRIENT SOURCE CALCULATION (MEETS TIER 3)**

Nutrients Made Available by Decomposition

- 30 lbs nitrogen per acre expected to mineralize through decomposition of clover green manure
- 25 lbs nitrogen per acre
- 45 lbs phosphorous per acre
- 25 lbs potassium per acre

= 125 lbs per acre (76%) available through decomposition

Nutrients Made Available by Inorganic Sources

- 40 lbs nitrogen per acre come from in-crop urea application

= 40 lbs per acre (24%) from inorganic sources
PLANT DIVERSITY

Please specify the proportion of your total crop acres that fall under each tier. The total must add up to 100%.

0

Does not meet baseline.

1

Baseline: Over a 3-year period, fields include at least 3 different species of plants, spanning both of the following categories: grasses and broadleaf plants.

Over a 3-year period, fields include at least 4 different species of plants, spanning at least 3 of the 4 following categories: warm season grass, cool season grass, non-legume broadleaf, legume.

2

Over a 3-year period, fields include at least 5 different species of plants, spanning all of the following categories: warm season grass, cool season grass, non-legume broadleaf, legume.

3

Crop Chart

The total must add up to 100%.
INTEGRATION OF PLANNED LIVESTOCK GRAZING INTO CROPPING SYSTEMS

PLEASE SPECIFY THE PROPORTION OF YOUR TOTAL CROP ACRES THAT FALL UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

% OF TOTAL CROP ACRES IN EACH TIER

0
Does not meet baseline.

1
**BASELINE:** Producer integrates livestock into cropping area and at least 30% of the crop residue and/or living vegetation remains in the field after grazing. Both dead residue and living plant vegetation may count toward the threshold.

2
Producer integrates livestock into cropping area and livestock graze *living* cover/forage crop. **At least 30%** of the biomass remains on the field after grazing.

3
In addition to the above, producer has a written Holistic, Prescribed, or Adaptive Grazing Plan.

See the below resources for more information on developing a grazing plan:

Savory Institute’s guide to Holistic Planned Grazing

Pasture Project’s guide to Developing a Grazing Plan

Soil Carbon Cowboys film
PLEASE COMPLETE THE FOLLOWING INDICATORS FOR ACRES UNDER PASTURE OR RANGELAND.
HOLISTIC, ADAPTIVE, AND PRESCRIBED GRAZING

Please specify the proportion of your total livestock acres that fall under each tier. The total must add up to 100%.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Does not meet baseline.</td>
</tr>
<tr>
<td>1</td>
<td><strong>Baseline</strong>: Producer has developed a written Holistic, Adaptive, or Prescribed Grazing Plan.</td>
</tr>
<tr>
<td>2</td>
<td>Meets baseline and the grazing plan considers livestock distribution and/or stocking rate for optimal forage health. Livestock distribution and stocking rate are analyzed and recorded annually.</td>
</tr>
<tr>
<td>3</td>
<td>In addition to the above, the grazing plan considers protection of local endangered species and waterbodies on or near the property.</td>
</tr>
</tbody>
</table>

See the below resources for more information on developing a grazing plan:

- Savory Institute’s guide to Holistic Planned Grazing
- Pasture Project’s guide to Developing a Grazing Plan
- Soil Carbon Cowboys film

This indicator is adapted from the U.S. Roundtable for Sustainable Beef.
ANIMAL WELFARE

PLEASE SPECIFY THE PROPORTION OF YOUR TOTAL LIVESTOCK ACRES THAT FALL UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

0

Does not meet baseline.

1

BASELINE: Producer adheres to the 5 Freedoms of Animal Welfare* and animals have access to the outdoors for at least 100 days of the year.

2

Meets baseline and animals have access to the outdoors for at least 180 days of the year.

3

Meets baseline, animals have access to the outdoors for at least 300 days of the year, and the operation is certified by one of the following: Global Animal Partnership, Animal Welfare Approved, Certified Humane, Beef Quality Assurance or Pork Quality Assurance.

*Five Freedoms of Animal Welfare

1. Freedom from hunger and thirst.
2. Freedom from discomfort.
3. Freedom from pain, injury, or disease.
4. Freedom from fear and distress.
5. Freedom to express normal behaviors.

The total must add up to 100%.
LIVING ROOT IN THE GROUND

PLEASE SPECIFY THE PROPORTION OF YOUR TOTAL CROP ACRES THAT FALL UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

Please complete ONE of the below indicators based on your region’s climate.

For humid, dry subhumid climates, or acres under irrigation

0

Does not meet baseline.

1

**BASELINE:** Fields have a living root in the ground for at least 130 days per calendar year. Summer dormancy does not count toward days with a living root in the ground; winter dormancy does count. Assume living root starts at planting and ends at harvest.

2

Meets baseline and fields have a living root in the ground for at least 200 days per calendar year.

3

Meets baseline and fields have a living root in the ground for at least 300 days per calendar year.

For dryland agriculture in arid and semi-arid climates

0

Does not meet baseline.

1

**BASELINE:** Summerfallow* is not present more than once every 3 years.

2

Summerfallow* is eliminated.

3

Summerfallow* is eliminated and fields have a living root in the ground for at least 200 days per calendar year.

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PEST MANAGEMENT

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NUTRIENT PROVISIONS

PLEASE SPECIFY THE PROPORTION OF YOUR TOTAL CROP ACRES THAT FALL UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

% OF TOTAL CROP ACRES IN EACH TIER

0
Does not meet baseline.

1
**BASELINE:** Nutrient application follows the 4 R’s of nutrient stewardship.*

2
Meets baseline and at least 25% of all nutrients applied (by weight) is made available to the plant via decomposition (e.g., cover crops, manure, or compost).**

3
Meets baseline and at least 75% of nutrients applied (by weight) is made available to the plant via decomposition (e.g., cover crops, manure, or compost).**

*4 R’s of nutrient stewardship:

**Right source:** nutrients are supplied in plant-available forms that are appropriate for the soil’s physical and chemical properties; compatibility of nutrient source blends and synergisms between nutrient elements are addressed. Examples include avoiding nitrate application to flooded soils, avoiding urea applications on soil surfaces with a high pH, and using slow-release or stabilized nitrogen sources.

**Right rate:** soil tests are used to determine appropriate application rate, and applications are at economically optimal rates rather than maximum yield rates.

**Right time:** timing of nutrient uptake and dynamics of soil nutrient supply are addressed. Examples include dividing the total amount of nutrients applied during a season into two or more applications, and only applying in the Spring when nutrient needs are highest.

**Right place:** nutrients are supplied strategically so plants can access them. Examples include banding, injecting, and side-dressing.

Visit the 4R Pocket Guide for more information on the 4R’s.

**EXAMPLE NUTRIENT SOURCE CALCULATION (MEETS TIER 3)**

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<thead>
<tr>
<th>Nutrients Made Available by Decomposition</th>
<th>Nutrients Made Available by Inorganic Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 30 lbs nitrogen per acre expected to mineralize through decomposition of clover green manure</td>
<td>• 40 lbs nitrogen per acre come from in-crop urea application</td>
</tr>
<tr>
<td>• 25 lbs nitrogen per acre</td>
<td></td>
</tr>
<tr>
<td>• 45 lbs phosphorous per acre</td>
<td></td>
</tr>
<tr>
<td>• 25 lbs potassium per acre</td>
<td></td>
</tr>
<tr>
<td>= 125 lbs per acre (76%) available through decomposition</td>
<td>= 40 lbs per acre (24%) from inorganic sources</td>
</tr>
</tbody>
</table>

**The total must add up to 100%.**
PLANT DIVERSITY

PLEASE SPECIFY THE PROPORTION OF YOUR TOTAL CROP ACRES THAT FALL UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

% OF TOTAL CROP ACRES IN EACH TIER

1

BASELINE: Over a 3-year period, fields include at least 3 different species of plants, spanning both of the following categories: grasses and broadleaf plants.

Over a 3-year period, fields include at least 4 different species of plants, spanning at least 3 of the 4 following categories: warm season grass, cool season grass, non-legume broadleaf, legume.

Over a 3-year period, fields include at least 5 different species of plants, spanning all of the following categories: warm season grass, cool season grass, non-legume broadleaf, legume.

Crop Chart

The total must add up to 100%.
WHILE THESE INDICATORS DO NOT DIRECTLY LINK TO THE 5 PRINCIPLES OF REGENERATIVE AGRICULTURE, FINANCIAL TRACKING, SHARING OF BEST PRACTICES, AND FOSTERING NATURAL HABITAT ARE IMPORTANT ELEMENTS FOR ADVANCING VIABLE REGENERATIVE AGRICULTURE SYSTEMS.
HOLISTIC WEALTH MANAGEMENT

PLEASE SPECIFY THE PROPORTION THAT FALLS UNDER EACH TIER. THE TOTAL MUST ADD UP TO 100%.

% OF TOTAL ACRES IN EACH TIER

0
Does not meet baseline.

1
BASELINE: Producer keeps detailed records on expenses and returns in order to understand profit and loss margins.

2
Meets baseline and producer sets a profit goal each year that they strive to achieve.

3
Meets baseline and producer follows the principles of Holistic Management Financial Planning or a similar wealth management system by separating expenses into wealth-building (W), inescapable (I), and maintenance (M) categories, seeking to minimize M expenses and allocating W expenses to address a weak link in the operation.

Wealth-building “W” expenses are those you apply toward fixing a weak link in your operation. For example, if you are a rancher who can grow a lot of grass, but you don’t have enough cows to harvest it all (a problem with product conversion), buying more cows would be an example of allocating more money to the “W” category to address a weak link.

Inescapable “I” expenses are ones you can’t control. These include taxes and land payments.

Maintenance “M” expenses are anything else, such as herbicides to control weeds, and these should be minimized as much as possible.

For more information on holistic financial management, visit the Holistic Management Institute.
## Community Engagement

Please specify the proportion that falls under each tier. The total must add up to 100%.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Description</th>
<th>% of Total Acres in Each Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Does not meet baseline.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td><strong>Baseline:</strong> Producer uses informal or formal means of sharing learnings and discussing best practices with other farmers.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Meets Baseline and producer engages in regular sharing of best practices with other farmers. Examples include regular meetups with other growers to compare techniques and collectively address common issues, membership in a group that convenes farmers and encourages sharing of information (e.g., National Young Farmers Coalition), and participation in online forums for farmers to share information.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>In addition to the above, producer acts as a community resource through activities such as hosting agricultural workshops, field days, and community fundraisers.</td>
<td></td>
</tr>
</tbody>
</table>

The total must add up to 100%.
# Natural Habitat

Please specify the proportion that falls under each tier. The total must add up to 100%.

<table>
<thead>
<tr>
<th>% of Total Acres in Each Tier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not meet baseline.</td>
<td></td>
</tr>
</tbody>
</table>

**Baseline:** At least 5% of the field is planted to natural habitat. Natural habitat must consist of at least 50% native vegetation. Examples of natural and habitat include insectary strips, riparian buffers, prairie, shrublands, woodlands, and grasslands. Lawn grass and row crops are not considered natural habitat.

| 1 | Meets baseline and at least 10% of the field is planted to natural habitat. |
| 2 | Meets baseline and at least 20% of the field is planted to natural habitat. |

The total must add up to 100%.
CONGRATULATIONS!
You have completed the Regenerative Agriculture Self-Assessment. In the fall of 2019, we will be launching a web-based app that will generate an analysis of individual users’ results. If that analysis would be useful for you, please check back for updates on the app this fall by visiting the General Mills Regenerative Agriculture page.