

**Comments Received on Regenerative Agriculture Definition\***  
**Comment Period: March, 2024**

\*These are written comments received via email to [RegenerativeAg@cdfa.ca.gov](mailto:RegenerativeAg@cdfa.ca.gov) or through chat box via public listening sessions. Written comments submitted in the Zoom chat box during public listening sessions and work group sessions will be posted elsewhere. You may submit a written comment at any time to [RegenerativeAg@cdfa.ca.gov](mailto:RegenerativeAg@cdfa.ca.gov) through May 2024. Comments will be posted at the end of each month.

<b>Date</b>	<b>Written Comment</b>
3/4/2024	<p>The evidence is clear that regenerative organic agriculture is imperative to the health of consumers as well as the fight against climate change and the negative environmental and social impacts of industrial agriculture. The cannabis industry is no exception. A “regenerative, organic” approach is healthier for the planet and the people.</p> <p>It is our strong recommendation to include organic farming practices as the foundation of “regenerative agriculture” and to mandate a holistic framework that incorporates protection of farmworkers and neighboring communities. Creating and adhering to rigorous standards and guidelines is a crucial counterbalance to corporate interests that are susceptible to “green-washing” which will undermine those standards and create consumer confusion.</p> <p>A failure to exclude pesticides and other toxic chemicals from regenerative farming practices will inevitably fall short of fulfilling the framework for soil health as defined by the California Department of Food and Agriculture.</p>
3/7/2024	<p>California's definition of Regenerative might be as significant as your definition of Organic. We now have a Federal definition for Organic which gets buffeted, but still remains the most important destination for millions of Americans seeking an alternative to the conventional food system. It is the responsibility of our government to protect the integrity and transparency of these terms, thus serving both farmers and eaters.</p> <p>I urge you to require Organic as a base for Regenerative. The term originated from the writing of Bob Rodale. It was later promoted by Allan Savory, and then it became a movement. The early meaning was always to take the basic principles of organic agriculture and build on that to focus more on climate impact and worker &amp; animal welfare. If California embraces that early meaning (which is what most consumers assume it to mean), then regenerative will become a major influence on our food system.</p>

	<p>If California allows the use of chemical herbicides (plus chemical fertilizers and other pesticides) to be included in "Regenerative," then the term will have a short life in the marketplace. There is no reason to create a mushy standard that is "chemical-lite." The definition I suggest is what eaters are actually seeking out. It would be historic and important if California were to support eaters in their search for alternative ways of producing food. It would do no damage to conventional agriculture, merely offering farmers another pathway to a new market. Many people want an ethical food system that finds other ways of solving problems than turning to chemical inputs.</p> <p>There is already plenty of chemical farming being practiced. Let's give people a real choice.</p>
3/9/24	<p>If you are compiling ideas for your definition of regenerative farming you need to make it very very clear and it should be the first item. Number 1. Regenerative agriculture cannot have any glyphosate usage or GMO crops. No GMO CROPS. if you use GMO crops, you cannot be regenerative.</p>
3/10/24	<p>I like to work on the principle: you are what you eat, eats.</p> <p>Therefore, I believe, and encourage you to believe, that "regenerative" should not include any chemicals introduced separately from how they occur naturally in plants (or in animal/fowl/fish/worm manure). Ma Nature over many eons of tweaking has designed a closed cycle system - one step's "waste" is the next step's "nourishment". To my mind the concepts of "organic" and esp of "regenerative" need to accept and enhance that cycle, NOT by outside human-invented additives, but by helping continue the existence of the systems Ma Nature put in place (which we humans have all too often messed up).</p> <p>Also, I believe that Ma Nature designed the system to create soil - DIRT, that good stuff that has all sorts of things in it that humans have yet to discover and understand, and that help plants flourish. Thus that has to be a part of it. Sorry, not hydroponic - humans have a lot of hubris thinking they have found all the nutrients and factors that plants need in order to grow into good food that will really nourish the next body in that food chain. I ask that your definition "make it so", to quote Star Trek, and ensure we have food grown in healthy soil.</p>
3/10/24	<p>California's definition of Regenerative might be as significant as your definition of Organic. There is now a Federal definition for Organic which remains the most important destination for millions of consumers like myself seeking an alternative to the conventional food system. I believe it is the responsibility of our government to protect the integrity and transparency of these terms, thus serving both farmers and the consumer.</p>

	<p>I urge you to require Organic as a base for Regenerative. The early meaning was always to take the basic principles of organic agriculture and build on that to focus more on climate impact and worker &amp; animal welfare. If California embraces that early meaning (which is what most consumers assume it to mean), then regenerative will become a major influence on our food system.</p> <p>If California allows the use of chemical herbicides (plus chemical fertilizers and other pesticides) to be included in “Regenerative,” then the term will serve no purpose in helping consumers make informed decisions about their food purchases. This definition is what I as a consumer am actually seeking. It would be historic and important if California were to support eaters in their search for alternative ways of producing food. It would do no damage to conventional agriculture, merely offering farmers another pathway to a new market. As a consumer, I want an ethical food system that finds other ways of solving problems than turning to chemical inputs.</p> <p>There is already plenty of chemical farming being practiced. Please give consumers like me a real choice.</p>
3/10/24	<p>California's decision making often sets the stage for other jurisdictions. The important decision about a legal definition of "regenerative ag" is one of the most important ever.</p> <p>Conventional ag has a history of co-opting terms that make sense, e.g. sustainable, natural, regenerative, no-till, carbon friendly, etc. However, in reality, none of those terms reflect the nuances of farming with synthetic chemicals. Weeds are not necessarily a bad thing in an organic farming operation. Instead, it is a condition that needs cultural and mechanical attention. In other words, it's a little more work.</p> <p>In true regenerative ag, weeds, when properly managed, provide biomass, microbial nutrition, moisture and erosion control. The conventional ag way to manage weeds is to just kill them with synthetic chemicals, many of which have counterproductive influences both ecologically and environmentally. There is nothing "regenerative" or "sustainable" when spraying synthetic chemicals on our soil.</p> <p>Crop rotations, livestock foraging and fallowing are organic regenerative systems. No monoculture cropping system can be classified as regenerative. If synthetic fertilization systems are being used on a farm, it cannot be classified as a regenerative system. If synthetic pesticides and herbicides are used on a farm the same logic applies.</p> <p>I believe a legal definition of the term "regenerative" needs to reflect the original intention of the pioneer who coined the term: Robert Rodale. He said, <i>"Regenerative organic" is a holistic approach to farming that encourages continuous innovation and improvement of environmental, social, and economic measures.</i> There is nothing holistic</p>

	<p>or innovative when a farming operation overlooks these core principles and has profit as the main motive. There is no need to re-invent the wheel here, "regenerative conventional" is an oxymoron.</p>
<p>3/10/24</p>	<p>As a consumer, I eat locally produced and/or and USDA Organic food. Organic certification is expensive, and many small farmers have very narrow profit margins, in which case a California “regenerative” label could be useful to small farmers adhering to organic practices but not able to afford USDA certification.</p> <p>“Regenerative” must pertain to the basic organic practices of building soil by natural means. If it means “we use herbicides and do not till” it could also be useful to health-conscious consumers as a red flag to avoid. An additional label does not seem particularly helpful, just like the “GMO free” label on foods never known to be GMO in the first place seems to be nothing but a marketing device. If California allows the use of chemical herbicides, fertilizers and pesticides to be included in “Regenerative,” then the term will be meaningless. Chemicals and poisons do not regenerate anything. (Hydroponic must obviously be excluded from the label because there is no soil involved to be “regenerated.”)</p> <p>People like me, people invested in their own physical health, the health of their families, and the health of the planet, want a food system that finds traditional and natural ways of farming without chemical inputs. Regenerative could be a useful label if it requires basic organic practices, excludes all poisons, and requires soil. Otherwise, it is just another way large-scale chemical farms can bamboozle the public at the supermarket.</p>
<p>3/10/24</p>	<p>I recommend that you go with “Regenerative Organic Agriculture” as your key concept in this effort. “Regenerative Organic Agriculture.” is gaining traction amongst farmers, ranchers and others who have a stake in the future of true regenerative agriculture. Those two terms belong together.</p> <p>Attempts are already underway by the industrialized agribusiness sector to define their practices as “Regenerative.” These folks and their numerous front organizations would have you believe that you can still use herbicides, pesticides, and genetically modified grains, and still regenerate soil and the healthy biome that defines truly healthy soil. This is not the case.</p> <p>The best way out of this dilemma is to title your standard “Regenerative Organic Agriculture.” This way, opportunities for hijacking the term “regenerative” for use by corporate/conventional agribusiness are greatly reduced – and I trust that you want the State of California’s definition to mean what it says, in a way that earns the respect and trust of your citizens and people elsewhere in the USA and the world that buy agricultural products from California.</p>
<p>3/10/24</p>	<p>First and foremost, it should encompass and include the USDA organic certification. However, it should go beyond that. It should be directly land/soil based, excluding any form of agriculture that does not include the real land on which the crop is being raised. In other words, no bag planting, and grazing must be on the land certified itself.</p>

	<p>To maintain a certification, a regenerative farmer must maintain or improve the percentage of soil organic matter on a year-over-year basis. Any drop in percentage of organic matter would be grounds for removal of certification. Other measurements, such as biomass weight/acre, number of bacterial species/acre should be maintained or rise. No human-generated biomass should be allowed, i.e. no sewage sludge should be allowed, within three years of certification.</p> <p>Thank you for this effort. We should not let this concept be sullied or thinned out in the way the term "organic" has been. Let those who want the label for marketing reasons rise to the true meaning of it, rather than drag the label definition down to what they can conveniently manage at profit.</p>
3/10/24	<p>Obviously, the intent is to further complicate the wording of Regenerative by allowing chemical use. I simply have for years now will never say the word because of the chemical interests pushing for allowing harmful products to be used. Like the definition of certified organic and how it has been watered down by corporations.</p>
3/13/24	<p>Regenerative ag organically farms the soil biome to increase the organisms that support the crop and its environment.</p> <p>The use of pesticides, herbicides and over plowing destroy this soil biome. Regenerative soil has a sponge structure that stores water and sequesters carbon, all very necessary processes to combat climate change as well as promoting goals stated in SGMA.</p>
3/21/24	<p>The CAFB has actively participated in listening sessions on the development of a definition for regenerative agriculture by CDFR and is very concerned about the direction that the discussion and effort are moving in. There are several fundamental concerns we have with what is being proposed and offer some useful suggestions to ensure this effort moves forward in a manner that serves the agricultural community and California Farm Bureau members in this state. We have identified four areas of interest:</p> <ol style="list-style-type: none"> <li>1. Defining and accepting the term will create more significant confusion amongst California farmers, ranchers, and consumers.</li> <li>2. Defining the term regenerative agriculture is an effort to pick winners and losers, with no proper regulatory oversight, amongst farmers and ranchers in California.</li> <li>3. Defining the term should be the jurisdiction of the United States Department of Agriculture (USDA) so that interstate commerce is not disrupted by conflicting claims made by different states with different definitions.</li> <li>4. Regenerative agriculture should be focused on soil health only and consistent with scientific literature.</li> </ol>

1. Defining and accepting the term will create more significant confusion amongst California farmers, ranchers, and consumers.

California farmers and ranchers have had to deal with some of the most pressing and confusing regulations in the nation and world by farming in California. Couple that with the many environmental terms placed upon the sector, which means even more confusion. These terms include sustainable agriculture and ecosystem services. These terms, often first proposed by environmental and academic groups rather than the agriculture sector, have caused significant confusion amongst growers and consumers alike. They are used now more as buzzwords than quantitative variables with real market or agricultural production meaning. Agriculture already has a definition that defines how it aligns with environmental sustainability and regenerative agriculture, conservation. Conservation Practice Standards have been developed by the USDA NRCS to further the environmental footprint of agriculture. Regenerative agriculture is focused on the soil as found in the scientific literature, including the references used by CDFA to develop further the definition. USDA NRCS was created with the purpose of managing and sustaining our soil into the future following the Dust Bowl, where the soil system was mismanaged, given a lack of understanding on how effectively to manage it.

**Suggestion:** Any definition for regenerative agriculture that is proposed should be accompanied by a list of USDA NRCS Conservation Practice Standards.

2. Defining the term regenerative agriculture is an effort to pick winners and losers amongst farmers and ranchers in California.

Existing definitions are established on a platform for furthering environmental and social objectives (e.g., sustainable, organic) since no nutritional differences have been found between different farming practices on the food crops. These terms have already created winners and losers, and regenerative agriculture will create another term to fragment the agriculture sector further. Instead of two categories (conventional and organic), now there will be three (conventional, organic, and regenerative).

The environmental movement in California is constantly pushing for less pesticide use and removing other tools growers need to ensure food security, feed a growing population, and ensure food prices do not increase drastically. Defining regenerative agriculture is another environmental effort that farmers and ranchers in the state have to face and is no different than recent efforts by state organizations such as the Department of Pesticide Regulations to define and develop regulating criteria around "Sustainable Pest Management." A comment echoed through the Sustainable Pest Management Roadmap's development is that the proposed effort is already happening through the State's IPM or Integrated Pest Management efforts. Similarly, we comment here that regenerative agriculture efforts are already taking place in California agriculture and overlap with words such as "sustainable agriculture" and "organic agriculture." Adding a new word to the list will undoubtedly confuse growers, buyers, and consumers alike.

Confusion in the food systems marketplace is one of the leading causes of distrust by consumers of the agricultural community.

Most conventional farmers would agree that their agricultural operations are environmentally sustainable and regenerative as they care for their soil, manage water resources, and ensure that dust pollution and other environmental and societal impacts are minimized or eliminated altogether. The CDFA would benefit from not creating another term that will further fragment the agriculture sector and focus more on protecting food production rather than promoting environmentalism.

**Suggestion:** CDFA should follow comment number three below.

3. Defining the term should be the jurisdiction of the United States Department of Agriculture (USDA) so that interstate commerce is not disrupted by conflicting claims made by different states with different definitions. Imagine a situation where each state was to create its own definition of regenerative agriculture. Would each state agriculture department have its own organization (like the state organic programs) where they will have to provide regulatory oversight on if the claims for the term were being used accordingly? What sort of financial resources would this entail for the consumer and farmer to establish new bodies to provide regulatory oversight? How will farmers and ranchers benefit from such state regulatory programs, and how will they be able to benefit from interstate commerce regarding labeling? Fertilizer companies already have a difficult time complying with the myriad different state agriculture agency requirements for truth-in-labeling regarding claims for home and garden products. In the process of cross-state compliance that often requires different labels and efficiency data to support claims, the added costs of fertilizers do not help the consumer or farmers and ranchers. One agency that helps with standardization across states is the USDA. The USDA should define and establish Conservation Practice Standards developed by its sub-organization, NRCS, to assist with defining regenerative agriculture. The effort will help with not only standardization but less confusion to consumers, farmers, and ranchers across the nation. The USDA has successfully implemented these measures for similar issues. A good example is the USDA National Organic Program.

**Suggestion:** Allow the USDA to define the term regenerative agriculture along with USDA NRCS Conservation Practices Standards that support the definition.

4. Regenerative agriculture should be focused on soil health only and consistent with scientific literature. It was disappointing to see the CDFA and the State Board of Food and Agriculture, an agency to promote and protect agriculture, allow a scientific data collection and review for the word regenerative agriculture to be developed by NRDC, a leading environmental organization in the country. The report begins by stating “Prepared by the Natural Resources Defense Council for the CDFA Science Advisory Panel.” The report is posted on the State Board of Food and Agriculture website ([https://www.cdfa.ca.gov/State\\_Board/docs/2023may\\_attachment\\_nrdc.pdf](https://www.cdfa.ca.gov/State_Board/docs/2023may_attachment_nrdc.pdf)) but not on the

	<p>regenerative agriculture website (<a href="https://www.cdfa.ca.gov/RegenerativeAg/">https://www.cdfa.ca.gov/RegenerativeAg/</a>). The definition in the report itself is deviates greatly from the scientific meta-analysis that was completed by NRDC and clearly shows the environmental bias in the organizations approach to informing a department and board that is meant to promote and protect agriculture. The definition proposed talks about “indigenous knowledge,” “natural ecosystems,” “complex networks that support farms and societies in multiple ways”, adopts the same definition used in ecosystem services, and brings in “human health-particularly farmworker health”. This recommendation is recognized by CDFA already where it lists seven of the United Nations development goals on the its regenerative agriculture webpage (<a href="https://www.cdfa.ca.gov/RegenerativeAg/">https://www.cdfa.ca.gov/RegenerativeAg/</a>). No agriculture organization report has been requested, collected, or recognized by the Department whose mission it is to promote and protect agriculture in California. There are many agriculture organizations that are capable of producing such a report. These biased procedures in developing a definition for regenerative agriculture shows that agriculture is not the center of the definition but environmental groups working to influence further regulations and requirements on the farmers and ranchers in the state of California.</p> <p>The biasing of the report by NRDC is disappointing even though on page 2 and 3 of the report, three definitions from scientific literature have been recommended that focus on soil conservation and health. All the agriculture-based definitions that have been proposed for regenerative agriculture focus on the “soil health and the soil system.”</p> <p><b>Suggestion:</b> We suggest if a definition were to be determined for regenerative agriculture, that the synthesized definition be used consistent with Schreefel et al, 2022; “Regenerative agriculture is a mode of agriculture that uses soil conservation as the entry point to regenerate and contribute to multiple ecosystem services”. Ecosystem services has been previously defined and vetted by CDFA as "the multiple benefits we gain from farming and ranching including crop and livestock production. In addition to valuable open space and wildlife habitat, the management decisions and conservation practices of farmers and ranchers also enhance environmental quality, provide recreational opportunities and offer social benefits." (<a href="https://www.cdfa.ca.gov/oefi/ecosystemservices">https://www.cdfa.ca.gov/oefi/ecosystemservices</a>)</p>
3/26/24	<p>While I do believe regenerative agriculture has an established set of soil health principles, I’m going to address context. While defining regenerative might be important to prevent greenwashing, it might also have unintended consequences such as preventing progress. Regenerative mentality and experimentation are what is needed in these early stages of the movement. Seeking to define it will likely lead to stagnant practices for marketing purposes. For example, in my opinion, the use of ORGANIC pyganic pesticides does not fit into the regenerative mindset, as it’s a broad-spectrum insecticide that happens to be organic. Depending on climate, terrain, resources, etc, each farmer might have a different approach to their context. Perhaps just a broad definition might be best for now. Please don’t suffocate this moment with a narrow definition that will be coopted by big ag.</p>