Introduction

The biological need for food entangles every person and every culture with land, plants, animals, water, and energy. The agricultural revolution that began 12,000 years ago, and intensified 175 years ago in the Global North, has had major planetary impacts. In the process of converting nearly 40% of all land area on the planet to agricultural use, the Earth has lost over 35% of its historic forests and compromised most surviving forests and woodlands. An estimated 96% of all mammals today are domesticated, mainly in the form of farm livestock. Aside from the negative effects that agriculture-related deforestation has had on the planet’s capacity to capture greenhouse gases, the global livestock industry—the beef industry, especially—accounts for 15% annually of all greenhouse gas emissions, making it a major contributor to global climate change. Combined with population growth and urban development, the industrialization of agriculture and fishing have diminished biodiversity, heightened fossil fuel use (via mechanized farm and fishing equipment), contaminated soil and water in many areas, and strained water systems. In 2022, agriculture was responsible for 70% of all freshwater withdrawals globally. By the end of 2023, 90% of marine areas were classified as overfished or expended.

Of course, food also sustains life and societies. Shared cuisines help define local, regional, indigenous, tribal, and national cultures, and many communities are built around food production and distribution. Food distribution points and commercial food establishments—farm stands, markets, grocery stores, restaurants, sorting and processing centers, canneries, food pantries, soup kitchens—anchor many urban and suburban neighborhoods. Most rural areas continue to be bound together by overlapping interests in some kind of agricultural production. Among the crises created by global climate change is that shifting growing zones have destroyed the capacity of some agricultural regions to sustain themselves, prompting widespread population migrations and the loss of historic communities.

In general, because food meets a biological need, access to it tends to reflect and reinforce other kinds of systemic and structural social inequities within and across culture, and these inequities become more apparent during periods of ecological duress or disaster. The stress on food systems during ecological crises often lead to profound social and political changes. The French Revolution in 1789 and the Russian Revolution in 1917, for example, were both caused in part by bread shortages stemming from poor grain harvests. Irish emigration in the nineteenth century resulted from the catastrophic convergence of a series of agricultural crises with economic inequities that had been created over time by British colonial practices of land redistribution and food exportation. The populist drive for Indian independence in the 1940s intensified in part because the British Raj failed to stem a preventable famine, in the face of a drought in Bengal in 1943. The massive profits
available in global food production and distribution have also made food systems not just into registers of other inequities but drivers of them. European and North American consumer demand for sugar and rum in the seventeenth and eighteenth century, for example, helped sustain a labor system that depended on enslaved laborers kidnapped from Africa. Ongoing food precarities in portions of sub-Saharan Africa are the legacy, in part, of colonialism, when early twentieth-century European powers coerced local populations to shift from diversified subsistence farming to growing cash monocrops for export. This monocrop system resulted in degraded soil systems and food shortages.

The Food Systems e-museum highlights some of the Syracuse University Art Museum’s extensive holdings of artworks that depict aspects of domestic and global food systems in different times and places. It includes artworks that represent food production, processing, distribution, preparation, and consumption practices. We invite you to reflect critically on how artworks from different times and places shape ways of thinking and feeling about specific foods and food systems, and especially about how they are ecologically and culturally entangled.
Teaching Strategies: General Questions

Individually and collectively, the works in the gallery can help students think critically about how different artworks represent, comment on, and shape ideas and feelings about:

- Different kinds of food systems (hunter-gatherer, agricultural, etc.) and the kinds of societies they create, sustain, or benefit
- How particular foods are produced, distributed, prepared, and consumed
- How particular foods are entangled ecologically (with land, water, air, climate, energy, other food sources, and so forth)
- How sustainable particular foods and food systems are
- How various kinds of social or global inequities are related to, created by, reinforced by, or diminished by particular food systems
- How food figures into the ways in which people conceive of divisions between plants and animals, humans and animals, and humans and nonhumans
- Pastoral traditions that depict food production

Each of these bulleted points can easily be converted into a general discussion prompt for a specific artwork by prefacing it with the phrase “How does this piece represent (or comment on, or shape ideas about, or prompt feelings about)…?”

![Baking the Bread](https://example.com/baking-the-bread.png)
The “Food Systems” e-museum includes a nineteenth-century Japanese print that depicts laborers planting rice in the rain [Object 2011.0143]. Employing a distinctly Japanese medium (color woodblock) and artistic genre (Ukiyo-e, or “pictures of the floating world”), the work depicts the cultivation of rice, a grain that has long been symbolic of Japanese identity. Rice paddies require many laborers to tend them, and rice is a protein-rich food capable of sustaining large populations. Because of this, rice paddies became the key to community and to population growth on the Japanese archipelago, something acknowledged by eighth-century myth-histories of Japan, which focus on the agrarian transformation of the islands around rice production. Rice and rice products remain central to festivals and rituals tied to Japan’s native Shinto belief system. Images of rice paddies are thus traditional symbols of historical Japanese identity and culture; rice remains a staple of the Japanese diet, and rice paddies continue to dominate Japanese agriculture and rural landscapes.

Converting the Japanese archipelago to rice production has produced significant deforestation through the centuries, and the leveling and water-flow needed to create a flooded rice paddy has had a massive impact on geologically historic waterways and ecosystems. Modern rice production also relies on pesticides and fertilizers that have contaminated some Japanese waterways (although Japanese resistance to rice imports has also persisted in part because of the perception that foreign rice has a more chemical taste due to the fertilizers and pesticides that other countries use when growing it).

Introducing more specific ecological context for the food or food system that an individual artwork references can transform how students experience the work and provoke thoughtful discussion of how its significance might have changed over time. In the case of images of agriculture, this ecological context can be especially important given the historical dominance of “pastoral” traditions of landscape painting, which celebrate humanity’s ability to live harmoniously with and off of the land. Such reassuring images of food production and sustainable dwelling—usually focused on small farms—can be hard to look past or through (thus the popularity of pastoral images in much contemporary industrial food packaging). When confronting such images, it is worth having students think about why this particular landscape looks like it does. What entwined ecological and cultural histories does it reflect? To what extent does the image call attention to or deflect attention from those histories? Finally, how does knowing more about these various histories affect how one interprets the object’s significance or project? Two examples of this, both drawn from pastoral traditions:
Have students discuss what elements of a Japanese rice paddy—as a place of cultural and ecological entwinement—this print does and does not capture. Keeping this discussion in mind, what are some of the things that this image of a rice paddy associates with Japanese identity? What aspects of rice production are not captured by the image (and thus not associated with Japanese identity by the image)? How does the image’s setting during planting potentially matter for these questions? What about its setting during a rainfall? How might the significance of this nineteenth-century image have changed over time? What about the feelings evoked by it? How might these things change in the future as climate change further intensifies?

Ecological and Cultural History cont.

At the same time, rice has proven to be a sustainable form of agriculture in Japan. Japanese rice production exceeds its rice consumption most years (the Japanese government also bans rice imports, except in processed forms). The remnants of rice harvesting are also recycled into other goods, including straw for weaving, meaning that Japanese rice production creates little waste. While Japanese rice paddies are entirely artificial ecosystems (created by raising earthen dikes around fields and then flooding them), they are also vibrant ecosystems that function like wetlands to sustain many kinds of aquatic and terrestrial life. A scientific study of a Japanese rice paddy that had been permanently drained and re-wilded found it to be less biologically diverse a decade later than when it had been a paddy. In many cases, fields are only flooded for a portion of the year, with a different food crop planted during the non-rice growing season. Though rice production has become much more mechanized since the time of this nineteenth-century print, it remains a labor-intensive operation that employs many people, often on small farms.

Amongst staple foods, rice has one of the smallest carbon footprints per ton of protein. That said, the flooding of rice paddies does create greenhouse gasses, since the flooding produces a kind of fermentation in the soil that gets released through the rice plants and, later, when the field is drained. Rice is also less drought-tolerant and heat-resistant than other grains, making it highly susceptible to climate change. In Japan, there has been a higher than usual incidence of low-grade rice harvests (so-called “chalky grain rice”) in the past twenty years, for which climatic conditions have been responsible. Rice production has shrunk by 20% in Japan since 2012, though not because of climate change: the government has long subsidized farmers to let some of their rice paddies go fallow, to prop up Japanese rice prices.
Charles Coiner’s *Wales* [Object 1998.058] offers a pastoral view of a landscape in Britain (likely, in the 1960s or 70s when Coiner was most active as a painter). Coiner was an American painter and advertising executive who presumably painted this while visiting Wales as a tourist. The landscape is largely devoid of trees, and yet historical investigation will reveal that Wales was once covered by broadleaf forests. So, the land that Coiner’s work depicts was almost certainly cleared centuries ago for farming. Much of the deforestation of the British Isles occurred in the seventeenth and eighteenth century, as agriculture was becoming more industrialized. To serve the interests of large landholders, British Parliament passed a series of Enclosure Acts that allowed landholders to enclose, for private profit, land that had previously been unfenced and enjoyed commonly by the community. Visual evidence of the Enclosure Acts in the British countryside persists to this day in the form of the lines of shrubbery—called hedgerows—that demarcate the edges of fields, and the avenues of trees (visible at the bottom of Coiner’s painting) that landowners sometimes created to distinguish roads from private fields.

Aside from the histories of deforestation and privatization visible in Coiner’s painting, the painting captures some of the ecological and cultural impacts of sheep farming (sheep are present in the field in the foreground). Enclosure of lands often forced subsistence farmers to migrate, and sheep farming—which requires vast tracts for grazing—was a particular driver of this. In fact, in certain historically rebellious parts of Scotland, enclosure of lands for the purpose of sheep farming was used as a political tool at the end of the eighteenth century to force relocation of potentially rebellious populations. While fear of rebellion did not drive enclosure in Wales, the profits available through selling lamb, mutton, and wool did, with the effect of depopulating the countryside. Many Welsh agricultural laborers were displaced from their longtime homes, after which they often moved to urban areas or, by the early nineteenth century, into mining communities.

The ecological effects of sheep farming are mixed. Sheep excrement helps keep soil fertile, their hooves compact soil that might otherwise erode, and their eating habits produce significant species turnover in grassland ecosystems. However, their grazing habits prevent reforestation of traditionally forested areas, their waste products contaminate many local waterways, and they diminish biodiversity in the grassland regions they graze. They have also been identified as significant producers of methane, so much so that several studies have been commissioned in the UK on how to reduce greenhouse gas emissions in the English, Scottish, and Welsh sheep industries.

Have your students discuss what ecological histories Coiner’s painting depicts when viewed in light of all of this information. How do certain elements of the painting or aspects of its composition encourage or discourage looking through different kinds of historical lenses? What attitudes or feelings does the painting foster towards the landscape it depicts? Towards agriculture? Towards sheep farming? Towards sustainability? Given the broader ecological and cultural history of sheep farming in Wales, how would you describe the ideological work that the painting performs? How much does it matter to your answers that Coiner was not a local resident of this landscape (or of Britain)?
Artist, Artistic Process, and Audience

You can also ask your students more directed questions based on biographical information about the artist, information about the methods and techniques used in creating the artwork, or information about the audiences for which a given artwork was created. Two examples:

Leonard Freed’s 1958 gelatin silver print photograph _Killing Cattle in slaughterhouse, Amsterdam, Holland_, is an early work by a Jewish-American photographer, of working-class upbringing and Eastern European descent, who came to be a significant figure in late twentieth-century documentary photojournalism. Freed’s fame rests primarily on his documentation in the 1960s and 70s of American racial discrimination, violence, and civil rights protest, including Martin Luther King’s march to Washington. Freed got his start as a photographer, however, when he photographed postwar Germany and then postwar Amsterdam in the late 1950s. Amsterdam is the historical center of the Netherlands Jewish population, and it had served as a safe haven for Jewish refugees in the 1930s. During Nazi occupation of the country in World War II, nearly 80% of the nation’s Jewish population were killed. Freed, who moved to Amsterdam in 1958, sought to document a still vibrant European Jewish community that nevertheless bore many traumas from the war and the Holocaust. His photograph of an industrial slaughterhouse in Amsterdam dates to this period.

The photograph offers an unflinching look at how cows become beef and, arguably, an unflattering look at a worker in the slaughterhouse. It is worth discussing with students how they interpret the image before they know anything about Freed. What commentaries do they see the image making on industrialized slaughter and/or this employee of that industry? After introducing more context about Freed’s identity and documentary project in 1958, have your students return to the photograph and discuss to what extent the information you’ve provided alters its significance for them, including its significance from an animal rights perspective. [Note: It is unlikely that the photo depicts a kosher slaughterhouse, given the very small percentage of the Amsterdam meat industry devoted in the 1950s to producing kosher meats. For beef to be considered kosher, a cow must be conscious (e.g., not stunned) and healthy when its throat is cut. The slaughter also must be performed by a trained Jewish shochet, or slaughterer. That said, it is not impossible. The cow on the floor has had its throat slit and been bled out into the drain on the floor.]
We don't know who created this painting of two monks talking about a bowl of the cereal Bran Chex [Object 1994.495]. We do know, however, that its audience was the American consumer market and that it was likely produced by the Wells Rich Greene advertising agency, which represented Ralston Purina's cereal lines, including Bran Chex, until 1987. In 1987, Wells Rich Greene created and aired a television commercial that featured a younger priest telling an older one how he worries that Bran Chex cannot be good for you because it tastes so good, and “Nobody likes bran cereal.” The older priest reassures him that there are “some mysteries in life, my son, that are simply not explainable.” The commercial's tagline is “Tastes so good it must be a sin.” The marginal markings on the work, which suggest that it is part of a sequence, indicate that it was probably part of a storyboard for an advertising pitch or for shooting the commercial itself, but at some point in the process priests were substituted for monks.

Engage your students in conversation about what message the image seems intended to convey, in light of the contextual information you offer about its likely purpose. Why use images of monks to sell this particular food? Why the dynamic of an older monk and a younger monk? The idea is to lead them to the insight that the advertising agency, with the cooperation of Ralston Purina, clearly wished consumers to get the message that eating Bran Chex would allow them, paradoxically, to indulge themselves while still feeling like they were living an ascetic life (or at least eating a nutritious diet). The ad came out at a moment when, culturally, mainstream messaging about healthiness tended to emphasize how good health required suffering and sacrifice, whether in the form of “Just Say[ing] No” to drugs, of finding low-calorie substitutes for sweets (frozen yogurt, for example, was introduced commercially in 1981), or of eating nutritious things that had acquired a cultural reputation for tasting bad, like bran.

Try then to use this discussion to get students to reflect on the ideological work that the advertisement accomplishes. How ascetic, really, is eating a commercially produced bran cereal? Breakfast cereal production is barely 150 years old, and its early development was tied to quack medical cures. Dr. Ralston, for example, had been in the health club business before, in 1898, buying into a livestock feed business that had just begun manufacturing cracked wheat as a breakfast cereal for human consumption. He renamed the company Ralston Cereal. Today, approximately 90% of Americans eat cereal for breakfast at least sometimes, and much of that explosion in consumption happened after the 1960s, because of advertising.

The grains of which breakfast cereals tend to be composed (wheat, corn, oats, rice) account for a small but significant percentage of overall American farmland. Since 1960, the acreage tied to supplying the breakfast cereal industry has grown by an area equivalent to the entire state of Montana. Scientists have extensively documented the ecological effects of America’s various cereal grain industries, which have strained and contaminated local water supplies over time, degraded soil in some regions, and hurt biodiversity (because of an industrial drive towards grain monocultures that are resistant to certain pesticides). While the American cereal industry recently has started to modify some of its supply chain practices in light of these ecological realities—mainly in an effort to reduce the industry’s carbon footprint—it remains true that Americans’ relatively young breakfast cereal habit has not proven to be especially healthy for the planet.
Visual Analysis

Any of the above approaches can be combined with more targeted questions about elements of form, composition, color, or style, based on student contributions to discussion. For example:

- How does the artist’s chosen medium (painting, print, photograph, drawing, sculpture, etc) and material (paint, wood, metal, ceramic, etc.) shape your experience of the artwork and the ideas it communicates? Why might the artist have chosen this particular medium or materials?
- How do the style and colors of this work factor into the way that you’re experiencing it as an image that codes what it is depicting positively? How might a different style or a different color scheme for the exact same composition have contributed to a different affective experience than the one you’re articulating? To what extent would you characterize its colors as “natural” or “unnatural” in context, and how does that matter to your response?”
- What decisions do you see this artist making about what to include and not to include in the frame? What about the angle or perspective they adopt in the image? How do these compositional choices contribute to your sense of the kind of ecological statement you see the artwork making (or failing to make) about the aspects of the food system it depicts? Specific to photographs, what things in the artwork seem beyond the artist’s control and how do they matter? How is the subject of the artwork also one of its authors?
- How do the figures matter to how you are interpreting this artwork’s ecological project or significance? What about the background? The relation between the two? In the case of works that have multiple figures, what different functions do these figures serve? Or what different relational vectors to other figures, or to their surroundings, do they establish?
- Are there any visual elements of this artwork that seem to function symbolically?

[Image of a painting]
Pairings and Groupings

Many of the works in the “Food System” e-museum make for critically provocative pairings or groups. Some of our suggested groupings for discussion include:

- **Hunting:** German etching of a hunter and his dogs [Object 1995.0333]; American engraving of prairie chicken shooting in Kansas [Object 2010.0017]; Elbridge Kingsley’s engraving of a Native American hunting a moose [Object 1980.418]; Denise Bellon’s photograph of rabbit hunters in 1930s France [Object 2021.0405]; and Evaristi Chikawe’s painting of tribal hunters in Tanzania [Object 2012.0045]


- **American Farming Prints, 1930-1950:** Thomas Hart Benton’s lithograph *White Calf* [Object 1966.0096]; Carlos Anderson’s lithograph *Western Saga* [Object 1968.079]; John Steuart Curry’s lithograph *Our Good Earth* [Object 1996.037]; Mac Raboy’s woodcut *Migratory Workers* [Object 2005.0165]; and Grant Wood’s lithograph *July Fifteenth* [Object 1996.0471]

- **British Pastoral:** Henry Morton’s print *of farmland below Ben Lawers mountain* [Object 2011.0072.4]; Charles Coiner’s oil painting *Wales* [Object 1998.058]; John Brunsdon’s 1973 print *Bale Oaks* [Object 1995.0139]; and Annabel Maunsell’s print of a farm field and gate [Object 1995.0349]


- **Farm animals:** Thomas Hart Benton’s lithograph *White Calf* [Object 1966.0096]; William de la Montagne Cary’s drawing of a *Farmyard Scene* [Object 1991.009]; and Alen MacWeeney’s photograph of a herd of cows relax beneath the palm trees, Africa [Object 2021.0344]; and Robert Rauschenberg’s screenprint *Calf Startena* [Object 1978.150]

Pairings and Groupings cont.


- **Drying/preserving**: Late-19th-century stereograph of sardines being dried in Japan [Object 1987.269]; Berenice Abbott’s photograph of fish filets being dried in Maine [Object 1981.2484]; and a stereograph of tea leaves being dried in Japan [Object 1991.180]


- **Food preparation**: Frederick Huth’s etching after Ander Zorn’s painting Baking the Bread, North Sweden [Object 1964.768]; Newton Alonzo Wells’s painting The Housewife [Object 1980.11]; Georges Schreiber’s lithograph Evening in South Carolina [Object 1965.1011]; and Edward Francis Kiiza’s drawing of bananas in Tanzania [Object 2012.0107];


- **Food scarcity and subsistence**: Berenice Abbott’s photograph of a subsistence homestead [Object 1981.2534]; Mac Raboy’s woodcut Migratory Workers [Object 2005.0165]; Karl Schrag’s print Meal of the Poor [Object 1970.674]; Georges Schreiber’s lithograph Evening in South Carolina [Object 1965.1011]; and Paul Almasy’s photographs Two grain silos, likely the Belgian Congo (now Democratic Republic of the Congo) [Object 2021.0338] and Young Men divide food in a hospital ward, Africa [Object 2021.0347]
Pairings and Groupings cont.

- **Industrial food supply**: Berenice Abbott’s photographs of fermentation in the Ballantine Ale plant and delivery trucks and freight cars at the Ballantine Ale plant [Objects 1981.2836 and 1981.2823; Note: these are two of thirteen photographs in the Syracuse University Art Museum that Abbott took of the production and distribution process at the Ballantine Ale Plant]; Robert Rauschenberg’s print *Calf Startena* [Object 1978.150]; Neal Slavin’s photograph of commercial hot dog vendors in New York City [Object 1982.008.07]; advertising mock-up for a Bran Chex cereal commercial [Object 1994.495]; advertising mock-up for a Honeycomb cereal commercial [Object 1994.495]; and Stephanie Shih’s ceramic sculpture *Extra Fancy Botan Calrose Rice* [Object 2022.0010]

- **Food and the Homefront (WWII)**: Joseph John Paul Meert’s screen print *Food for Victory* [Object 2011.0175]; and Dmitri Baltermants’s photograph *Protecting the Harvest* [Object 2021.0353]
Assignments and Further Resources

For general assignments related to this and other e-museums, consult "Art, Ecology, and Climate E-museums: A Teaching Guide." You can access the guide via the Project's webpage (under the “Learn” pulldown menu on the Syracuse University Art Museum’s website).

Here is a list of individual artworks in the “Food Systems” e-museum for which there are in-depth Art, Ecology, and Climate Project-produced teaching guides on the AEC Project’s webpage:

- Berenice Abbott, *Subsistence Homestead, Old Style* (photograph; American; c1936)
- Grant Wood, *July Fifteenth* (lithograph; American; 1939)
- Todd Webb, *Painting on a Charcuterie Window* (photograph; American; 1951)
- Robert Rauschenberg, *Calf Startena* (offset lithograph screen print; American; 1977)

Additional context for Tomikichirō Tokuriki’s 1960s woodcut of cormorant fishing on the Nagaragawa River [Object 2015.0605] can be found in the Art, Ecology, and Climate Project teaching guide for the “Entanglement” e-museum, which is on the Project’s webpage.

Many of the other e-museums in this project contain artworks related to food systems, including “Plants and Planting,” “Environmental Justice,” and “Water Use.”
Selected Recent Books

- Edible Series. Ed by Andre Smith. Reaktion Books. 2008-present. [A series that includes volumes on the cultural histories of many individual foods and food products, including potatoes, ice cream, lemons, olives, pudding, offal, liqueur, etc.]
Art, Ecology, & Climate Project

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