



# LEFTOVERS FOR LIVESTOCK:

A Legal Guide for Using Food Scraps as Animal Feed



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# LEFTOVERS FOR LIVESTOCK: A Legal Guide for Using Food Scraps as Animal Feed<sup>1</sup>

## I. Introduction

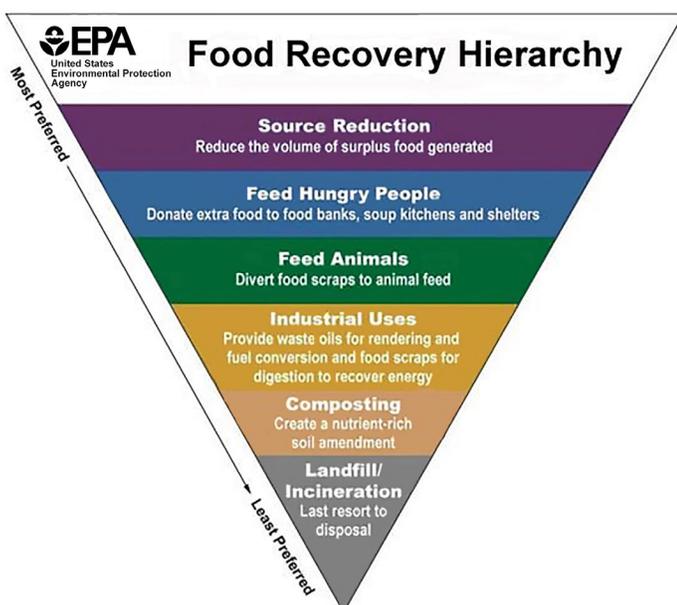
In the United States, approximately 160 billion pounds of food are wasted every year.<sup>2</sup> The U.S. spends \$218 billion each year growing, processing, transporting, and disposing of this food.<sup>3</sup> As wasted food breaks down in landfills, it emits methane, a potent greenhouse gas with 56 times the atmospheric warming power of carbon dioxide.<sup>4</sup> Given the significant environmental impacts of wasted food, there has been increasing interest and investment in diverting food from landfills in creative ways.

The Environmental Protection Agency (EPA) has developed the “Food Recovery Hierarchy” (pictured below), a hierarchy of methods for recovering excess food. The Hierarchy displays that wholesome, edible food should be kept in the human food supply whenever possible. When food is no longer edible for humans but still safe and wholesome for animals, the hierarchy recommends diverting these food scraps to feed animals. This guide aims to provide both generators of food scraps and livestock farmers with a basic understanding of the laws and regulations bearing on the practice of feeding food scraps to animals, in particular, swine. By acquainting stakeholders with the relevant legal requirements, this guide further aims to encourage the appropriate and lawful diversion of food scraps to animals, which in turn can create mutually beneficial partnerships between food-waste generators and livestock growers, and, ultimately, to reduce the negative environmental impacts of wasted food.



The use of food scraps as animal feed has been a common practice worldwide for centuries.<sup>5</sup> The vision of a classic agrarian homestead often features the farmer’s children bringing dinner scraps out to “slop the pigs” and feed the chickens. Yet the practice of feeding food scraps to animals has declined precipitously since the 1980s, when several disease outbreaks were linked to animal feed (specifically, animal products in livestock feed), including foot-and-mouth disease in swine and bovine spongiform encephalopathy (BSE), commonly referred to as mad cow disease, in cattle. In an attempt to prevent the spread of such diseases, federal and state laws and regulations that restricted what is often pejoratively referred to as “garbage feeding” were enacted. Some of these policies were overly restrictive, and many of them impose conflicting requirements among neighboring states. Thus, they contributed to a decline in the amount of leftover food being used in animal feed. Indeed, by 2007, just three percent of U.S. hog farms fed food scraps to their livestock.<sup>6</sup>

Although recent decades have seen a decline in the traditional, informal farm-scale practice of “garbage feeding” in the U.S., large-scale food processing and feed production facilities continue to capture the byproducts of human food manufacturing and repurpose these human-inedible or unpalatable portions of our food supply into commercial feedstock for animals.<sup>7</sup> The practice of utilizing excess food to feed livestock never fully disappeared, it just changed scale and became more industrialized. However, as a result of the shift in scale, scope and methods, many smaller but substantial sources of food scraps suitable for use as animal feed have gone unused. Recently, there has been rising interest in the practice of using a wider array of safe, properly-treated food scraps from a range of sources—including unsold retail food and post-consumer food scraps—as animal feed. This practice can be mutually



EPA Food Recovery Hierarchy: <https://www.epa.gov/sustainable-management-food/food-recovery-hierarchy> (last accessed June 2, 2016)

beneficial for food businesses and regional farms that partner to reduce their respective waste disposal and feed costs and enhance the sustainability of their operations.

As increasing numbers of farmers, food entrepreneurs, and consumers become aware of and concerned about the environmental and economic problems associated with food waste, there is renewed enthusiasm for the use of food scraps as animal feedstock or feed supplement. Using food scraps as animal feed in a safe, resource-efficient way can be an environmentally friendly and energy-efficient alternative with multiple benefits for farm and food businesses, consumers, and communities:

- **Farmers can save money.** Feed is often the most costly, and certainly the most constant input needed for animal agriculture. As commodity prices continue to rise, farmers may be able to economize by sourcing excess food to be used as a feedstock or feed supplement. While some studies show that the nutritional quality of food scraps can be comparable or even superior to traditional feeds,<sup>8</sup> it is important to be mindful about the sourcing, selection, and handling of non-commercial or non-traditional feed sources. Farmers who carefully select types and combinations of food scraps that are nutritionally appropriate for and readily digestible by their animals should be able to simultaneously promote animal health and wellbeing, secure a reasonable rate of growth, make use of food that would otherwise go to waste, and save money.
- **Businesses can save money in garbage disposal costs.** From the perspective of many businesses and institutions that produce, process, sell, and serve food, diverting food scraps as animal feed presents the opportunity for significant cost savings in the form of reduced tipping fees that landfills and waste haulers charge for disposal of food scraps. Waste-generating facilities typically realize savings after comparing the costs of feeding food scraps to animals to the costs of

conventional waste disposal (that is, sending food scraps to landfills). The experience of the MGM Grand Buffet in Las Vegas is apt, as it demonstrates that diverting food scraps for animal feed can generate significant cost savings.<sup>9</sup> MGM increased its food recovery amounts from 3,350 tons in 2007 to over 14,000 tons in 2011<sup>10</sup> while saving between \$6,000 and \$8,000 per month.<sup>11</sup> Through partnerships with a local farm, these food scraps helped feed 3,000 pigs.<sup>12</sup>

- **New partnerships could result in educational opportunities.** Partnerships between businesses and farms create educational opportunities and mutually beneficial exchanges. There are several universities and primary schools that divert food scraps to local farms.

### Rutgers University dining halls divert food scraps to a nearby farm at half the cost of sending the waste to landfills.

Rutgers University, for example, has been able to implement a system in its dining halls where food scraps are diverted to a nearby farm at half the cost of sending the waste to landfills.<sup>13</sup> The University of California at Berkeley has had similar success in its dining halls.<sup>14</sup> Once a business relationship is established between the school and the farm, other exchanges may follow. For example, farmers/growers could participate in school career days at elementary and secondary schools. Students could take field trips to the farm and use the farm for research or 4-H projects.

- **Diversion may shift commodity demand and reduce the environmental impact.** Using food scraps as animal feed can help reduce food waste while saving farmers money by reducing the amount they spend on commodity crop feed and hauling costs.<sup>15</sup> The majority of commodity crops, including over 80 percent of U.S. grains (such as wheat and other cereal crops), corn, and soy, are dedicated to feeding animals.<sup>16</sup> These commodities are consumed by domestic and overseas livestock, poultry, and fish. In the “finishing” phase of pig growth, during which pigs more than double in weight, a pig typically consumes 5-8 pounds of feed per day, which takes large amounts of land and natural resources to produce,<sup>17</sup> and growing hogs eat 5-6 pounds per day.<sup>18</sup> At the same time, the water footprint of irrigated soybeans is 2600 square meters per ton.<sup>19</sup> Feeding food scraps to livestock could lessen the amount of commodity crops needed to support the livestock industry. As more food scraps are recycled for animal feed, lower amounts of energy, water, and other



resources could be dedicated to growing crops to feed animals.<sup>20</sup> A recent study shows that roughly 4.4 million acres in the European Union—currently dedicated to the production of soybeans and grain to feed pigs—could be spared by instead feeding pigs treated, recycled food scraps.<sup>21</sup> In particular, significantly less land would be needed for crop production. This land could be reforested or used for other agriculture, such as growing more diverse crops to feed humans. Additional environmental benefits are realized by diverting food from landfills where it decomposes and emits methane, an extremely potent greenhouse gas.

**A recent study shows that roughly 4.4 million acres in the European Union could be spared by instead feeding pigs treated, recycled food scraps.**

When done responsibly—by ensuring that waste-based feed is properly treated, stored, and handled—directing leftovers to livestock has many economical, educational, and environmental benefits. For these reasons, EPA promotes this practice as one of several methods of reducing food waste.

To provide guidance to food scrap generators, farmers, and other stakeholders interested in using food scraps as animal feed, the next section discusses federal and state regulations bearing on animal feed safety. This paper concludes by laying out a core set of considerations for those interested in feeding food scraps to animal feed.

## II. Federal and State Regulations

Both the federal government and state governments regulate the use of food scraps in animal feed by setting requirements, which largely concern the type of animals that may be fed food scraps and the kind of food scraps that may be fed to animals. The federal regulations function as a floor, and most state regulations go beyond them. State regulations take many different forms and vary widely. This guide identifies and analyzes these regulations in order to provide clarity on this field of law. First, this guide will examine the federal statutes and regulations on feeding food scraps to animals, which are encompassed in the Swine Health Protection Act and all of its implementing regulations, as well as the Ruminant Feed Ban Rule, the Food Safety Modernization Act Rules on Preventive Controls, and FDA regulations regarding adulteration. Next, it will examine the state statutes and regulations regarding food scraps in animal feed, and it will describe several types of provisions

that commonly appear in these state laws. For descriptions of each state’s law, please consult Appendix A.

### A. Federal Laws for Using Food Scraps in Animal Feed

#### a. Federal Swine Health Protection Act

The federal Swine Health Protection Act (SHPA)<sup>22</sup> aims to protect human and animal health by ensuring that food scraps fed to swine are free of active disease organisms that could sicken consuming swine.<sup>23</sup> SHPA requires that meat and animal-byproduct-containing food scraps are heat-treated in a manner that is sufficient to kill disease-causing bacteria.<sup>24</sup> In practice, this generally means that, before it can be fed to swine, most animal-based “garbage”<sup>25</sup> must be heated at boiling temperature (212 degrees Fahrenheit/100 degrees Celsius at sea level) for at least 30 minutes by someone who holds a valid license or permit for the treatment of garbage.<sup>26</sup>

**SHPA requires that meat and animal-byproduct-containing food scraps are heat-treated in a manner that is sufficient to kill disease-causing bacteria.**

Food scraps consisting of animal products that were industrially processed or rendered need not be subjected to this second kill-step before being fed to swine.<sup>27</sup> Industrially processed products are those that have “undergone an industrial manufacturing procedure to prevent spoilage or add shelf stability” and have been either cooked to a temperature of 167 degrees Fahrenheit for at least 30 minutes or “subjected to an industrial process demonstrated to provide an equivalent level of inactivation of disease organisms.”<sup>28</sup> Rendered products include waste material derived from the meat or material of any animal (including fish and poultry) and any associated refuse that has been ground and heated to at least 230 degrees Fahrenheit to make products such as animal, poultry, or fish protein meal, grease, or tallow.<sup>29</sup> Moreover, certain categories of food scraps are exempted from SHPA’s half-hour boiling protocol: bakery items, candy, eggs, domestic dairy products (including milk), Atlantic Ocean fish caught within 200 miles of the continental United States or Canada, and fish from inland waters of the United States or Canada that do not flow into the Pacific Ocean.<sup>30</sup>

SHPA also aims to prevent swine from coming into contact with untreated garbage. Regulations require construction of facilities that prevent swine of all ages and sizes from entering areas where garbage is handled, stored, transported, or



treated.<sup>31</sup> Untreated garbage must be stored in covered, leak-proof containers until it is treated.<sup>32</sup> Treated garbage must not come into contact with untreated garbage or with containers or vehicles that were used for untreated garbage before disinfection with either a permitted brand of sodium orthophenylphenate, a permitted cresylic disinfectant, or a disinfectant registered under the Federal Insecticide, Fungicide, and Rodenticide Act with tuberculocidal claims labeled as efficacious against any Herpes virus.<sup>33</sup>

SHPA does not regulate direct feeding of household food scraps to swine grown on the same premises where the waste was generated.<sup>34</sup> Thus, a family farm can directly supplement the diet of its pigs with its own kitchen scraps, including those that contain unprocessed meat, without first undergoing the SHPA boiling procedure.

SHPA sets federal minimum standards but does not prevent states from imposing their own, more stringent procedures or from flatly prohibiting the feeding of food scraps to any animals, including swine.<sup>35</sup> Indeed, many states have legislated in this space. For more details on state policies, see Appendix A.

#### ***b. Ruminant Feed Ban Rule***

The Food and Drug Administration’s (FDA) Bovine Spongiform Encephalopathy (BSE)/Ruminant Feed Ban Rule<sup>36</sup> prohibits

the use of mammalian protein (i.e., animal tissue) in feeds for ruminant animals. This ban covers all “ruminants,” meaning animals that have a stomach with four chambers through which feed passes during digestion, such as cattle, sheep, goats, deer, elk, and antelopes, among others (Swine and fowl are not ruminants).<sup>37</sup> The regulations apply to any “protein derived from mammalian tissue.”<sup>38</sup> The ban specifically lays out the types of products that can and cannot be fed to particular types of ruminants.<sup>39</sup>

• **(BSE)/Ruminant Feed Ban Rule prohibits the use of almost all mammalian protein (i.e., animal tissue) in feeds for ruminant animals.**

Producers of waste-based ruminant feed must certify compliance and keep detailed records of inputs and processes; they are also subject to inspection by FDA.<sup>40</sup> The regulations require any company or individual that processes animal products unfit for human consumption or meat scraps to 1) follow specified labeling guidelines indicating that the products are not to be fed to other ruminants and 2) maintain records tracking the receipt, processing, and distribution of the products.<sup>41</sup> Alternatively, processors can use manufacturing and testing methods approved by FDA to prevent transmissible spongiform encephalopathy

diseases, including BSE.<sup>42</sup> Those who intend to separate qualifying protein products from other food scraps are subject to additional processing and inspection guidelines.<sup>43</sup> Finally, ruminant-feeding operations must maintain copies of purchase invoices and labeling for all feeds containing animal protein products, which may be subject to FDA inspection.<sup>44</sup>

### **c. The Food Safety Modernization Act Preventive Controls Rules for Animals**

The Food Safety Modernization Act (FSMA), signed into law in January 2011, is a broad reform of U.S. food safety laws. FSMA vests FDA with authority to develop regulations that aim to prevent foodborne illness at the processing stage of food production. One of FDA's FSMA regulations—Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Food for Animals<sup>45</sup>—addresses animal food safety.

The Preventive Controls rule for animal food is complex, and individuals in the feed industry may struggle in determining whether and to what extent they are subject to the rule. In general, the two most determinative features of the rule are the type of (1) food being produced and (2) facility producing it.

#### i. Food covered by the Preventive Controls rule for animal food

The Preventive Controls rule for animal food regulates byproducts of human food production that will be used

as animal food.<sup>46</sup> FDA has described such byproducts as portions of processed food that may not be nutritious, suitable, or desirable for human consumption, but that still may be a source of energy and nutrition for certain species of animals.<sup>47</sup> Examples include culls, peels, trimmings, and pulp from vegetable manufacturing/processing; chaff, bran, and middlings from grain milling; wet brewer's grains from beverage brewing operations; and liquid whey from dairy facilities.<sup>48</sup> This definition embraces food unfit for human consumption, which might include animal meat, but recall that the SHPA and the BSE/Ruminant Feed Ban Rule respectively prohibit the feeding of meat containing active disease organisms to swine<sup>49</sup> and the feeding of mammalian protein to ruminant animals such as cows, sheep, and goats.<sup>50</sup> A facility that wishes to use human food byproducts as animal feed must ensure it complies with these regulations—as well as any relevant state laws and regulations—in addition to the Preventive Controls rule for animal food.

#### ii. Facilities covered by the Preventive Controls rule for animal food

In general, different rules apply to facilities falling into one of the following groupings: (1) facilities that are not already in compliance with the Preventive Controls rule for human food, (2) facilities that are already in compliance with the Preventive Controls rule for human food, (3) primary and secondary farms, (4) qualified facilities, and (5) facilities that are not required to register with FDA. This section describes the rules for each of the five types of facilities in turn.

### **Example: Human Food Facilities Using Spent Grain & Brewery Mash As Animal Feed**

Spent grain, brewery mash, fruit or vegetable peels, and liquid whey are byproducts of alcoholic-beverage brewing and distilling. They are commonly used as animal feed. This practice is a subset of the much broader practice of human food manufacturers sending their peels, trimmings, and other edible byproducts to local farmers and feed manufacturers for animal feed uses. As such, and like all human food facilities already in compliance with the Preventive Controls rule for human food, brewers need not comply with the Preventive Control rule for animal food's HARPC requirement, the supply-chain program requirement, or a large portion of the CGMPs for animal food, provided that these facilities satisfy the following requirements: (1) the brewers are already subject to and in compliance with human food CGMPs and other applicable laws; (2) the brewers do not further process the brewing byproducts; and (3) the brewers follow those specified CGMPs for preventing physical and chemical contamination when holding and distributing the brewing byproducts. This regulation applies to brewers that either donate or sell brewing byproducts for use in animal food.

Note that the above reflects federal guidance on feeding brewing byproducts to animals. State laws may vary on this issue. Contact your state department of agriculture for clarification and further guidance. Your state veterinarian may be a particularly helpful resource.

SOURCE: *Questions and Answers for Brewers/Distillers on the Original FSMA Proposed Rule for Preventive Controls for Animal Food*, FDA, Apr. 2014, <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm394991.htm>.



identify the byproducts by their common name.<sup>56</sup> Finally, facilities that either themselves ship or arrange with third parties to ship the byproducts must examine shipping containers (such as totes, drums, and tubs) and bulk vehicles to make sure the byproducts will not be contaminated.<sup>57</sup>

### 3. Primary and secondary production farms

The Preventive Controls rules for both human and animal food exempt primary and secondary production farms from the CGMP, HARPC, and supply-chain program requirements.<sup>58</sup> “Primary production farm” and “secondary production farm” are defined as follows:

#### Primary production farm

A primary production farm is under one management and sits in one general, but not necessarily one contiguous, location.<sup>59</sup> It may be devoted to growing and harvesting crops, raising animals, or both.<sup>60</sup> It can also pack or hold raw agricultural commodities and minimally manufactured or processed food. FDA has provided informal guidance as to what manufacturing/processing activities are allowed under the farm definition. For example, a primary production farm can dry grapes to make raisins and still remain exempt from the rule, but a farm is not exempt if it irradiates or slices food.

#### Secondary Activities Farm

A secondary production farm is an operation not located on the primary production farm that is also devoted to farming operations.<sup>62</sup> A secondary production farm must be majority owned (at least 51 percent) by the primary production farm that provides the secondary production farm with raw agricultural commodities.<sup>63</sup> For example, an off-orchard facility where nuts are hulled and dehydrated before going to a processing plant would be considered a secondary activities farm if the farmer that owns the orchards and supplies the majority of the nuts is also a majority owner of the hulling/dehydrating facility.

For additional guidance as to whether a facility is exempt as either a primary or secondary production farm, consult the language of the rule<sup>64</sup> and the “Guidance & Regulation” section of the FDA website.<sup>65</sup> Other guidance includes FDA’s presentations on the definition of a farm<sup>66</sup> and significant provisions of the rule.<sup>67</sup>

#### 1. Facilities not in compliance with the human food rule

In general, the Preventive Controls rule for animal food requires animal food facilities—which are not otherwise covered and in compliance with the Preventive Controls rule for human food—to (1) establish current Good Manufacturing Practices (CGMPs), (2) develop a plan that analyzes potential hazards and establishes Hazard Analysis and Risk-Based Preventive Controls (the HARPC requirement), and, if the facility receives food from a supply chain, (3) coordinate with other entities in the chain in order to control identified hazards.<sup>51</sup>

#### 2. Facilities already in compliance with the human food rule

The Preventive Controls rule for animal food states that human food facilities that will use human food byproducts as animal food need not comply with the HARPC requirement, the supply-chain program requirement, and a large portion of the CGMPs for animal food, provided that these facilities satisfy the following requirements:

1. The facilities are already subject to and in compliance with human food CGMPs and other applicable laws;<sup>52</sup>
2. The facilities do not further process the byproducts, for example, by cooking, freezing, or pelleting the food;<sup>53</sup> and
3. The facilities follow those specified CGMPs for holding and distributing human food byproducts, as described by the Preventive Controls rule for animal food.<sup>54</sup>

The last requirement—regarding CGMPs for holding and distribution—provides that facilities must hold, label, and distribute human food byproducts in a way that prevents the food from becoming contaminated (by trash or cleaning chemicals, for example). In particular, such facilities must hold the byproducts in containers that are designed to protect their contents from contamination.<sup>55</sup> Moreover, when distributing byproducts, facilities must use labels to

#### 4. Qualified facilities

FDA has created special requirements for “qualified facilities”—most notably, “very small businesses.”<sup>68</sup> Very small businesses are those businesses whose combined food sales and market value of unsold food falls under a specified dollar amount (\$2.5 million per year for animal food producers and \$1 million per year for human food producers).<sup>69</sup> Qualified facilities are only exempt from the HARPC and supply-chain program requirements of the Preventive Controls rules.<sup>70</sup> This means that the qualified facilities exemption has little bearing on facilities that wish to use human food byproducts as animal food, because qualified facilities are still subject to CGMP requirements.<sup>71</sup> Per the Preventive Controls rule for animal food, qualified facilities likely must comply with holding, labeling, and distribution requirements in order to use human food byproducts as animal food.<sup>72</sup>

#### 5. Facilities not required to register with FDA

Not all facilities endeavoring to use human food byproducts as animal food must comply with the above requirements, because the Preventive Controls rules for both human and animal food only apply to facilities that are required to register with FDA.<sup>73</sup> By implication, the Preventive Controls rules create a wholesale exemption for facilities that are not required to register.<sup>74</sup> This means that facilities such as

farms (defined above), private residences of individuals, and restaurants, which are not required to register with FDA,<sup>75</sup> also do not need to comply with the Preventive Controls rule and therefore may use human food byproducts as animal food without being subject to the above FSMA holding, labeling, and distribution requirements.<sup>76</sup>

#### d. FDA Regulations Regarding Adulteration & Labeling

FDA’s Center for Veterinary Medicine (CVM) regulates animal food products, including livestock feed, in cooperation with state and local partners. Under the federal Food Drug & Cosmetic Act (FDCA), animal feed, like human food, cannot be adulterated.<sup>77</sup> This means that food and ingredients cannot be filthy or decomposed, packaged or held under unsanitary conditions, or contain any poisonous or deleterious substance.<sup>78</sup> Food also cannot be misbranded, meaning that its labeling cannot be false or misleading in any way, and that it must include required information.<sup>79</sup> Products marketed as dietary supplements or “feed supplements” for animals are considered “foods” or “new animal drugs,” depending on the intended use, as determined by CVM on a case-by-case basis.<sup>80</sup>

FDA cooperates with state and local partners—in particular, the Association of American Feed Control Officials (AAFCO)—to implement uniform feed ingredient definitions and



proper labeling to assure the safe use of feeds.<sup>81</sup> In general, a feed label should contain information describing the feed product and any details necessary for the safe and effective use of the feed,<sup>82</sup> including the name and place of the feed manufacturer, packer, or distributor;<sup>83</sup> certain warning statements;<sup>84</sup> and statements of artificial flavoring, artificial coloring, or chemical preservatives.<sup>85</sup> The FDCA defines “labeling” broadly to include all labels and other written, printed, or graphic matter upon any article or any of its containers or wrappers.<sup>86</sup> Courts have interpreted “labeling” to encompass brochures, promotional pamphlets, product information sheets, books, and more.<sup>87</sup>

Animal feed products are subject to both the aforementioned federal laws as well as state laws regarding labeling. Animal feed products are subject to both the aforementioned federal laws as well as state laws. Many state regulations mandate that feed labels must include the brand name (if any), product name, purpose statement, guaranteed analysis, list of ingredients, directions for use, warning or caution statements, name and address of manufacturer, and quantity statement.<sup>88</sup> Animal feed producers can find more information on state labeling requirements by contacting the state where the products will be distributed or by consulting the Official Publication of the AAFCO.<sup>89</sup>

## B. State Regulations

### a. Interaction between state and federal law

Under federal law, food scraps can generally be fed to animals, so long as they are heat-treated if they contain meat or animal products. States can maintain these federal standards or go above the federal floor to develop stricter laws on feeding leftovers to livestock (for details on each state law, please see Appendix A). In the states that are silent on feeding food scraps to animals or only regulate the feeding of food scraps to one type of animal, the practice is governed by federal laws and regulations (the SHPA, the Ruminant Feed Ban Rule, the Preventive Controls rule for animal food, etc.). For example, Alaska does not legislate or regulate the feeding of food scraps to animals at all. Although Alaska state law does not regulate the feeding of food scraps

to animals, the SHPA and the Ruminant feed ban govern the feeding of food scraps to swine and ruminants, respectively.

### b. Overview of state laws

Forty-eight states and Puerto Rico regulate the feeding of food scraps to animals. However, most of these laws only address the feeding of food scraps to swine; only a few apply to other animals, such as poultry and cattle.

In general, state laws regulate the feeding of “putrescible” (that is, perishable) animal-derived waste and, in some states, vegetable waste, to swine. States have either enacted outright bans on the feeding of animal-derived and/or vegetable waste to animals, or have in place requirements that one or both types of waste be heat-treated before being fed to swine.

In particular, fifteen states<sup>90</sup> have exceeded the federal approach to feeding food scraps to animals by flatly prohibiting individuals and facilities from feeding animal-derived food scraps to swine. Nine of these states<sup>91</sup> go a step further and also ban the feeding of vegetable waste to swine. However, these states either implicitly or explicitly still allow the feeding of bakery waste, candy, and other non-animal, non-vegetable waste items to swine. Alabama, for example, prohibits the feeding of animal-derived and vegetable waste to swine, but allows the feeding of citrus pulps, pea vines, bakery waste, candy kitchen waste, and dairy waste.

The majority of states that allow the feeding of food scraps to swine require certain food scraps to be heat treated before they can be fed to swine. In particular, thirty-one states<sup>92</sup> as well as Puerto Rico mandate that animal-derived food scraps must be heat-treated before being feed to swine. In those states, the laws imply that vegetable and other kinds of food scraps can be fed to swine without being heat-treated, so long as it is done in accordance with applicable federal laws. Twelve of the thirty-one states<sup>93</sup> have taken a stricter approach by mandating that both animal-derived and vegetable food scraps must be heat-treated before using them as feed for swine.

Some states have taken unique approaches to feeding food scraps to animals. For example, South Dakota does not regulate the feeding of food scraps to swine, but it does ban the feeding of any kind of food scraps to cattle enrolled in the Dakota Certified Beef Program. Massachusetts bans feeding of animal-derived food scraps to ruminants, but allows them to be fed to swine if the scraps are heat-treated and processed in a licensed facility. Note that for all states, however, federal laws and regulations still apply as well.

**15** states have exceeded the federal approach by prohibiting individuals and facilities from feeding food scraps to swine that contains any animal parts or material.

**9** of the 15 states go a step further and also ban the feeding of vegetable waste to swine.

# Overview of State Laws for Feeding Food Scraps to Swine\*

Table 1

State	Specific Food Bans		Heat-treatment Requirements**		Licensure Requirements			Individual Use Regs.
	Full prohibition on animal/veg. waste	Full prohibition on animal waste only	Animal and veg. must be heat-treated	Animal waste must be heat-treated	License required to heat-treat waste	License required to feed waste to swine	License required for both	May feed household garbage to own swine
Alabama	X							X
Alaska***								X
Arizona				X		X		X
Arkansas			X			X		X
California				X		X		X
Colorado			X			X		X
Connecticut				X		X		X
Delaware		X						X
Florida				X		X		X
Georgia						X		X
Hawaii				X		X		X
Idaho		X						X
Illinois	X							X
Indiana				X	X			X
Iowa			X					X
Kansas	X							X
Kentucky	X							
Louisiana	X							
Maine				X		X		X
Maryland				X		X		X
Massachusetts				X		X		X
Michigan				X				
Minnesota			X			X		X
Mississippi	X							X
Missouri			X			X		X
Montana				X			X	X
Nebraska		X						X
Nevada				X	X			X
New Hampshire				X		X		X
New Jersey			X				X	X
New Mexico				X			X	X
New York				X				X
North Carolina				X		X		X
North Dakota	X							X
Ohio				X			X	X

# Overview of State Laws for Feeding Food Scraps to Swine\*

Table 1

State	Specific Food Bans		Heat-treatment Requirements**		Licensure Requirements			Individual Use Regs.
	Full prohibition on animal/veg. waste	Full prohibition on animal waste only	Animal and veg. must be heat-treated	Animal waste must be heat-treated	License required to heat-treat waste	License required to feed waste to swine	License required for both	May feed household garbage to own swine
Oklahoma			X			X		X
Oregon	X							X
Pennsylvania				X		X		X
Puerto Rico				X		X		
Rhode Island			X			X		X
South Carolina		X						X
South Dakota	X							X
Tennessee			X					X
Texas		X				X		X
Utah***								X
Vermont		X						X
Virginia			X				X	
Washington				X		X		X
West Virginia			X			X		X
Wisconsin	X							X
Wyoming			X			X		X

\* The following states also regulate the feeding of food scraps to other animals, such as cattle and poultry: California, Georgia, Illinois, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Jersey, New York, Pennsylvania, Puerto Rico, South Dakota.

\*\* Note that some states provide not that garbage must be “heat-treated,” but rather that it must be treated in other ways (i.e., “processed”) before it can be fed to livestock.

\*\*\* Alaska and Utah have no regulations.

It is important to note that most states have an exception for individuals who want to feed household food scraps to their own swine. All states except Kentucky, Louisiana, Michigan, Puerto Rico, and Virginia allow individuals to feed household food scraps to their own swine without heat-treating the food scraps first. This exception equally applies in all of the states that ban the feeding of food scraps to commercial livestock outright.

Before feeding food scraps to livestock, it is important that you contact your state's department of agriculture or board of health to ensure that you or your business is in compliance with your state's heat-treatment, licensure, and commercial feed requirements.

### III. Recommendations for Using Food Scraps as Animal Feed

A multitude of laws and regulations bear on the practice of feeding food scraps to animals. The requirements under this framework can be daunting to a facility that is interested in using excess human food as animal feed. But, taken as a whole, the relevant laws and regulations point to a core set of considerations that help livestock facilities develop a legal food scrap feeding program. The applicability and importance of these considerations will vary depending on the type and size of the facility and its role in the larger food

scrap-feeding enterprise. Individuals feeding household food scraps to their own swine, for example, probably need not consider many items on this list. But the majority of food scrap-feeding operations that intend to market their animal products as food would benefit from reviewing the recommendations for food scrap feeding included herein. These recommendations support the development of scrap feeding programs that are economically viable, environmentally sensitive, and legally compliant.

#### *Preliminary considerations:*

1. **Identify the type of animals being fed.**
2. **Identify the type of food that will be fed to the animals.**
3. **Articulate reasons for feeding food scraps to animals and assess the feasibility of doing so.**

Food scrap feeders must identify the type of animals they will be feeding to understand which federal and state laws apply to their operation. Moreover, food scrap feeders must identify the kinds of foods that will be fed to animals. Most important will be the distinction between animal-derived food scraps and other food scraps (such as vegetable, fruit, and bakery waste). This distinction typically determines whether the scraps (i) can be fed to animals in the first place, and (ii) must be heat-treated or processed.





**Operational considerations:**

- 4. Separate animals that may be fed food scraps from those that may not.**
- 5. Develop a plan for acquiring, heat-treating, transporting, and/or storing food.**
- 6. Obtain—or ensure partner facilities have obtained— requisite permits, licenses, and/or certifications.**

As explained in this guide, certain federal and state laws require food scrap operations to take steps to prevent the spread of infectious disease by controlling the manner in which food scraps are obtained, heat-treated, transported, and stored. In particular, operations must ensure that certain animals are not fed—and, in some jurisdictions, are not placed in close proximity to—food scraps. It is also advisable to develop a detailed feeding plan. First, assess available sources of allowable and appropriate food scraps. Next, consider the nature, quality, and quantity of the food scraps and consider the regularity with which the food scraps can be made available to animals. Then, determine how allowable and properly treated foods will be separated from prohibited foods. For more guidance on developing a feeding plan, see *Food Waste Across the Supply Chain*, a guide put out by the Council for Agricultural Science and Technology (CAST).<sup>94</sup> Also consult your local veterinary school and/or your local or county agricultural extension office.

Developing a plan for heat-treating and subsequently storing food will be crucial for most operations engaged in food scrap feeding. State and federal law generally requires hybrid food scrap-generating, animal-raising facilities to obtain a license to heat-treat and feed food scraps to animals. But if the food scrap-generating and animal-raising entities are separate entities, licensure requirements may vary by state. In general, most states require animal-raising facilities to obtain a license to feed food scraps to animals, but they remain silent on licensure requirements for heat-

treatment facilities. But a small group of states specifically require heat-treatment facilities, and not animal-raising facilities, to obtain licenses.

**Other legal/regulatory considerations:**

- 7. Ensure that your food scrap-feeding model complies with all applicable federal laws.**
- 8. Contact the relevant state regulatory body (usually your state department of agriculture) to confirm compliance with state laws and for further advice.**

This guide lays out the broad strokes of state and federal law as it pertains to feeding food scraps to animals, but food scrap feeders must take further action to ensure that they are in compliance with the most current state and federal laws. State departments of agriculture and state veterinarians are good starting places. Appendix A also provides website links to the regulatory body within each state that is tasked with administering state food scrap-feeding rules.

## IV. Appendix A

### ALABAMA

*Alabama prohibits the feeding of animal-derived and vegetable waste to swine. Food waste that consists only of citrus pulps, pea vines, bakery waste, candy kitchen waste, and dairy waste that have not been mixed with other waste may be fed to swine. Individuals may feed household garbage to their own swine.*

#### ALA. CODE § 2-15-211 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable waste resulting from the handling, preparation, cooking and consumption of foods including animal and fowl carcasses or parts thereof; provided, that citrus pulps, pea vines, bakery waste, candy kitchen waste and dairy products waste from milk processing plants shall not be included in this definition when such waste has not been mixed with or in contact with other animal or vegetable waste. § 2-15-211 (2015).
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage. § 2-15-211 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	Whoever feeds garbage to swine will be guilty of a misdemeanor and fined up to \$500 and imprisoned for up to 6 months. § 2-15-211 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Alabama Department of Agriculture & Industries (§ 2-15-211 (2015)), <a href="http://agi.alabama.gov/">http://agi.alabama.gov/</a> .

### ALASKA

*Alaska does not have any laws that bear on the feeding of garbage to animals.<sup>95</sup>*

<b>Relevant state regulatory body</b>	Alaska Department of Natural Resources, Division of Agriculture, <a href="http://dnr.alaska.gov/ag/">http://dnr.alaska.gov/ag/</a> .
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## ARIZONA

*Arizona allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### ARIZ. REV. STAT. §§ 3-2661–69 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Waste consisting in whole or in part of animal waste resulting from handling, preparing, cooking and consuming of foods, including the offal from animal or poultry carcasses or parts thereof. § 3-2661 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. §§ 3-2661–69 (2015).
<b>Licensure</b>	No person shall feed garbage to swine without first obtaining an annual permit from the associate director. § 3-2664 (2015).
<b>Enforcement</b>	<p>If an individual or facility violates the garbage-feeding rule, the state may revoke or refuse to issue a permit to that individual or facility. § 3-2663 (2015). Such individual or facility is also guilty of a class 2 misdemeanor and may be enjoined from continuing the violation. Each day upon which the violation occurs counts as a separate offense. § 3-2669 (2015).</p> <p>An authorized representative of the state may investigate private or public property on which garbage is treated. The representative also may examine records pertaining to garbage-feeding operations, may require maintenance of such records, and may request copies. § 3-2668 (2015).</p>
<b>Treatment requirements</b>	All garbage must be heated to at least 212 degrees Fahrenheit or boiling point for at least 30 minutes or else treated in some other manner approved by the state. § 3-2667 (2015).
<b>Relevant state regulatory body</b>	Arizona Department of Agriculture, Animal Services Division (§ 3-2661 (2015)), <a href="https://agriculture.az.gov/animal-services-division">https://agriculture.az.gov/animal-services-division</a> .

## ARKANSAS

*Arkansas allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### Arkansas Livestock & Poultry Commission, Reg. No. 14 §§ 1–8 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Any animal or vegetable waste resulting from handling, preparation, cooking and consumption of foods, including parts of animal carcasses, or contents of offal. Reg. No. 15 § 1 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. Reg. No. 14 §§ 1–8 (2015).
<b>Licensure</b>	Each garbage-feeding establishment shall be required to obtain a feeding permit. Reg. No. 14 § 2 (2015).
<b>Enforcement</b>	<p>The state may revoke or refuse to issue garbage-feeding permits to any individual or facility that violates the garbage-feeding rule. Reg. No. 14 § 4 (2015).</p> <p>An authorized representative of the livestock and poultry commission may inspect at reasonable times any private property to determine that the garbage-feeding rule is being followed. Reg. No. 14 § 6 (2015).</p> <p>The livestock and poultry commission may quarantine for 30 days swine that have been fed improperly cooked or raw garbage. Reg. No. 14 § 7 (2015).</p>
<b>Treatment requirements</b>	All garbage must be thoroughly heated to at least 212 degrees for at least 30 minutes before being fed to swine. Reg. No. 14 § 5 (2015).
<b>Relevant state regulatory body</b>	Arkansas Livestock & Poultry Commission, <a href="http://alpc.arkansas.gov/Pages/default.aspx">http://alpc.arkansas.gov/Pages/default.aspx</a> .

## CALIFORNIA

*California allows the feeding of pasteurized milk to farm animals, and the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### CAL. FOOD & AGRIC. CODE §§ 32, 10901–90, 34006 (2015)

<b>Animals covered</b>	Farm animals; swine
<b>Definition of “garbage”</b>	Any waste which consists in whole or in part of any animal waste that results from the handling, preparing, cooking, and consuming of food, including the offal from any animal carcass or from any part of an animal carcass. It does not, however, include such waste from ordinary household operations that is fed directly to swine on the premises. § 10901 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine or unpasteurized milk to farm animals. Exception for individuals feeding household garbage. §§ 10901–90, 34006 (2015).
<b>Licensure</b>	An individual or facility must obtain an annual license from the state before feeding garbage to swine. § 10981 (2015).
<b>Enforcement</b>	<p>The state may inspect any premises where garbage is fed to swine and may order a facility to cease garbage-feeding operations. § 10922 (2015).</p> <p>The state may inspect records pertaining to garbage-feeding operations. § 10923 (2015).</p> <p>The state may refuse to issue, revoke, or suspend the license of an individual or facility that violates the garbage-feeding rule. § 10987 (2015).</p>
<b>Treatment requirements</b>	All garbage must be heated to at least 212 degrees Fahrenheit or boiling point for at least 30 minutes or else treated in some other manner approved by the state. § 10952 (2015).
<b>Relevant state regulatory body</b>	California Department of Food and Agriculture (§ 32 (2015)), <a href="https://www.cdfa.ca.gov/">https://www.cdfa.ca.gov/</a> .

## COLORADO

*Colorado allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without obtaining a permit.*

**COLO. REV. STAT. § 35-52-101–115 (2015);  
8 CCR 1201-1 (2015)**

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	All refuse, animal or vegetable, and includes all waste material, byproducts of a kitchen, restaurant, hospital, hotel, or slaughterhouse, and every refuse accumulation of animal, fruit, or vegetable matter, liquid or otherwise but excludes such vegetable products as leaves and tops of vegetable plants which have not been mixed with or exposed to or which do not contain any other garbage or waste product prior to feeding to swine. § 35-52-101 (2015). “Garbage” excludes waste from ordinary household operations that is fed directly to swine on the same premises. 8 CCR 1201-1 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. § 35-52-114 (2015).
<b>Licensure</b>	An individual or facility must obtain a permit from the state before feeding garbage to swine. § 35-52-114; 8 CCR 1201-1 (2015).
<b>Enforcement</b>	Any individual or facility that violates this law will lose their permit following a hearing. § 35-52-115 (2015). Such individual or facility is also guilty of a misdemeanor and will be fined \$500 or less. § 35-52-111 (2015). Such individual or facility may further be subject to a civil penalty to be determined in court. § 35-52-111.1 (2015).  The agricultural commissioner is responsible for enforcement of this law, and he or she may issue a cease and desist order, seek a restraining order, or seek an injunction. § 35-52-111.2 (2015).
<b>Treatment requirements</b>	All garbage must be heated for at least 30 minutes or else treated in some other manner approved by the state. § 35-52-113 (2015).
<b>Relevant state regulatory body</b>	Colorado Department of Agriculture (§ 35-52-118 (2015)), <a href="https://www.colorado.gov/agmain">https://www.colorado.gov/agmain</a> .

## CONNECTICUT

*Connecticut allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without obtaining a permit.*

### CONN. GEN. STAT. §§ 22-320a–g (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Any material containing meat resulting from the handling, preparation, cooking and consumption of foods including animal carcasses or parts thereof, but the term “garbage” shall not apply to waste materials from slaughterhouses which go directly to rendering plants for processing. § 22-320a (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. §§ 22-320a–g (2015).
<b>Licensure</b>	An individual or facility must register with the state before feeding garbage to swine. § 22-320c (2015).
<b>Enforcement</b>	Any individual or facility that violates the garbage-feeding rule will be fined \$100 or less for a first offense and \$200 or less for a second offense. § 22-320h (2015).  Violation of the garbage-feeding rule also may result in the department of agriculture suspending, revoking, or withholding registration from a garbage-feeding swine farm. § 22-320d (2015).
<b>Treatment requirements</b>	All garbage must be heated to at least 212 degrees Fahrenheit or boiling point for at least 30 minutes or else treated in some other manner approved by the state. §§ 22-320b–g (2015).
<b>Relevant state regulatory body</b>	Connecticut Department of Agriculture (§ 22-320a), <a href="http://www.ct.gov/doag/site/default.asp">http://www.ct.gov/doag/site/default.asp</a> .

## DELAWARE

*Delaware prohibits the feeding of animal-derived waste and vegetable waste that has been mixed with animal-derived waste to swine. Food waste that consists of only vegetable matter may be fed to swine. Individuals may feed household garbage to their own swine.*

### DEL. CODE ANN. 3. 71, §§ 7101, 7108 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable waste resulting from the handling, preparation, cooking and consumption of foods, swine carcasses and parts thereof, but not waste exclusively vegetable in nature. § 7108 (2015).
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage. § 7108 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	Any individual or facility that willfully violates the garbage-feeding ban shall be fined not less than \$200 and not more than \$500. Each day’s violation will be considered a separate offense. § 7108 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Delaware Department of Agriculture (§ 7101 (2015)), <a href="http://dda.delaware.gov/">http://dda.delaware.gov/</a> .

## FLORIDA

*Florida allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Food waste that consists of only fruit or vegetable matter may be fed to swine without being heat-treated. Individuals may feed household garbage to their own swine without heat-treating it and without obtaining a permit.*

### FLA. STAT. §§ 585.01, 585.50–.59 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	All refuse matter, animal or vegetable, byproducts of a restaurant, kitchen, or slaughterhouse; and shall include every accumulation of animal, fruit, or vegetable matter, liquid, or otherwise. “Garbage” shall also include “swill” as commonly used; provided, however, “garbage” shall not include fruit or vegetable matter which does not contain or has not been in contact or mixed with meat or meat parts. § 585.01 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. §§ 585.01, 585.50–.59 (2015).
<b>Licensure</b>	An individual or facility must obtain an annual permit from the state before feeding garbage to swine. § 585.51 (2015).
<b>Enforcement</b>	The department of agriculture may refuse revoke, cancel, or suspend the license of any individual or facility that violates the garbage-feeding rule. § 585.53 (2015).
<b>Treatment requirements</b>	Garbage must be heated, cooked, treated, or processed under such temperature, pressure, process, or method and for such period of time as is necessary to render garbage free of disease before being fed to swine. § 585.50 (2015).
<b>Relevant state regulatory body</b>	Florida Department of Agriculture, Division of Animal Industry (§ 585.01 (2015)), <a href="http://www.freshfromflorida.com/Divisions-Offices/Animal-Industry">http://www.freshfromflorida.com/Divisions-Offices/Animal-Industry</a> .

## GEORGIA

*Georgia allows the feeding of animal-derived and vegetable waste to swine provided that it is fed by a licensed facility that does not import or export swine or swine products to or from the premises. Individuals may feed household garbage to their own swine.*

### GA. CODE ANN. §§ 4-4-20–24 (2015)

<b>Animals covered</b>	All animals; exception for swine
<b>Definition of “garbage”</b>	All refuse matter, animal or vegetable; byproducts of a restaurant, kitchen, or slaughterhouse; and every refuse accumulation of animal, fruit, or vegetable matter, liquid or otherwise. This term includes the word “swill” as commonly used. § 4-4-20 (2015).
<b>Prohibitions</b>	No feeding garbage to any animal besides swine. § 4-4-21 (2015).  Georgia prescribes specific rules for feeding garbage to swine: licensed individuals and facilities may feed garbage to swine where (1) the swine are raised solely for slaughter and consumption on the farm on which they are raised, or (2) the individual or facility feeding garbage to swine does not import or export swine or swine products to or from the farm. § 4-4-22 (2015).
<b>Licensure</b>	An individual or facility must obtain a permit from the state before feeding garbage to swine. § 4-4-23 (2015).
<b>Enforcement</b>	An individual or facility that violates the garbage-feeding rule is guilty of a misdemeanor. Each day on which such violation occurs constitutes a separate offense. § 4-4-22 (2015).  An individual or facility that violates the garbage-feeding rule will have its license revoked, cancelled, or suspended upon a notice and hearing. § 4-4-24 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Georgia Department of Agriculture (§ 4-4-2 (2015)), <a href="http://agr.georgia.gov/">http://agr.georgia.gov/</a> .

## HAWAII

*Hawaii allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

**HAW. REV STAT. §§ 142-3, 142-12, 142-23.5 (2015);  
HAW. ADMIN. RULES §§ 4-17-16–23 (2015);  
9 C.F.R. § 166.1 (2016)**

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	All waste material derived in whole or in part from the meat of any animal (including fish and poultry) or other animal material, and other refuse of any character whatsoever that has been associated with any such material, resulting from the handling, preparation, cooking or consumption of food, except that such term shall not include waste from ordinary household operations which is fed directly to swine on the same premises where such household is located. 9 C.F.R. § 166.1 (2016) This is the federal definition of “garbage,” as “garbage” is undefined by Hawaii state law and Hawaii regulators indicated that they look to the federal definition. <sup>96</sup>
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. HAW. REV STAT. § 142-23.5 (2015); 9 C.F.R. § 166.1 (2015).
<b>Licensure</b>	An individual or facility must obtain a permit from the state before feeding garbage to swine. HAW. ADMIN. RULES § 4-17-17 (2015).
<b>Enforcement</b>	The state has the authority to inspect garbage-feeding premises and take action to prevent and eradicate disease among animals. HAW. REV STAT. § 142-3 (2015).  Any individual or facility that violates the garbage-feeding rule is guilty of a misdemeanor. HAW. ADMIN. RULES § 4-17-23 (2015); HAW. REV STAT. § 142-12 (2015). Such individual or facility shall be fined not more than \$1,000 or imprisoned not more than one year, or both. HAW. REV STAT. §§ 142-12, 142-23.5 (2015).
<b>Treatment requirements</b>	Garbage fed to swine must be heated to a temperature of at least 200 degrees Fahrenheit for at least two hours, or heat-treated to at least 212 degrees Fahrenheit for at least thirty minutes. HAW. ADMIN. RULES § 4-17-20 (2015).
<b>Relevant state regulatory body</b>	Hawaii Department of Agriculture (HAW. REV STAT. § 142-3 (2015)), Animal Industry Division, Animal Disease Control Branch, <a href="http://hdoa.hawaii.gov/ai/ldc/">http://hdoa.hawaii.gov/ai/ldc/</a> .

## IDAHO

*Idaho prohibits the feeding of animal-derived waste to swine. Individuals may feed household garbage to their own swine.*

**IDAHO CODE ANN. § 25-234 (2015);  
IDAHO ADMIN. CODE R. 02.04.03.400 (2015)**

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	<p>Putrescible animal or vegetable wastes containing animal parts, resulting from the handling, preparation, processing, cooking or consumption of food and which is collected from any source and includes animals or parts thereof as defined in section 25-3201, Idaho Code.</p> <p>The term shall not apply to private household wastes not removed from the premises where produced. IDAHO CODE ANN. § 25-234 (2015); IDAHO ADMIN. CODE R. 02.04.03.400 (2015).</p>
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage. IDAHO CODE ANN. § 25-234 (2015); IDAHO ADMIN. CODE R. 02.04.03.400 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	Any individual or facility that violates the garbage-feeding rule is guilty of a misdemeanor. Each day the individual or facility violates the rule shall count as a separate offense. IDAHO CODE ANN. § 25-234 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Idaho Department of Agriculture, Division of Animal Industries (§ 25-235 (2015)), <a href="http://www.agri.idaho.gov/AGRI/">http://www.agri.idaho.gov/AGRI/</a> .

## ILLINOIS

*Illinois prohibits the feeding of animal-derived and vegetable waste to animals. Individuals may feed household garbage to their own swine.*

### 720 ILL. COMP. STAT. § 5/48-7 (2015)

<b>Animals covered</b>	All animals; narrow household-based exception for swine
<b>Definition of “garbage”</b>	All waste material derived in whole or in part from the meat of any animal (including fish and poultry) or other animal material, and other refuse of any character whatsoever that has been associated with any such material, resulting from the handling, preparation, cooking, or consumption of food, except that such term shall not include waste from ordinary household operations which is fed directly to swine on the same premises where such household is located. Garbage also includes putrescible vegetable waste. “Garbage” does not include the contents of the bovine digestive tract. § 5/48-7 (2015).
<b>Prohibitions</b>	No feeding garbage to animals. Exception for individuals feeding household garbage to swine. § 5/48-7 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	Feeding garbage to animals is a Class B misdemeanor and for the first offense an individual or facility shall be fined \$100-\$500. For a second offense, the individual or facility shall be fined \$200-\$500, imprisoned for not more than 6 months, or both. A violator also may be enjoined from continuing the violation. The department of agriculture may make reasonable inspections necessary to enforce the garbage-feeding rule. § 5/48-7 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Illinois Department of Agriculture (§ 5/48-7 (2015)), <a href="https://www.agr.state.il.us/">https://www.agr.state.il.us/</a> .

## INDIANA

*Indiana allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated by a licensed facility. All other waste, including bakery waste, may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it.*

### IND. CODE ANN. §§ 15-17-2-34, 3-15, 10-16, 16-5, 19-3 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Any waste material derived in whole or in part from, or associated with waste material derived in whole or in part from any animal, including fish and poultry. Garbage does not include bakery waste, candy waste, eggs, domestic dairy products, processed products, rendered products, or waste from ordinary household operations that is fed directly to swine on the same premises where the household is located. § 15-17-2-34 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. § 15-17-10-16 (2015).
<b>Licensure</b>	No individual or facility may feed garbage to swine unless the garbage is processed by a license-holding facility. § 15-17-10-16 (2015).
<b>Enforcement</b>	The state has the power to inspect private and public property to enforce the garbage-feeding rule. § 15-17-3-15 (2015). They state may revoke a garbage feeder’s license for violation of the rule. § 15-17-16-5 (2015). The state also may issue an injunction against a violator of the garbage-feeding rule. § 15-17-19-3 (2015).
<b>Treatment requirements</b>	Garbage fed to swine must be heat-treated to kill disease organisms. § 15-17-10-16 (2015).  Individuals may feed without heat-treating the following items: bakery waste, candy waste, eggs, domestic dairy products, processed products, rendered products, or waste from ordinary household operations that is fed directly to swine on the same premises where the household is located. § 15-17-2-34 (2015).
<b>Relevant state regulatory body</b>	Indiana State Board of Animal Health (§ 15-17-3-1 (2015)), <a href="http://www.in.gov/boah/">http://www.in.gov/boah/</a> .

## IOWA

*Iowa allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated. Individuals may feed household garbage to their own swine without heat-treating it.*

### IOWA CODE §§ 163.1–.62 (2015)

<b>Animals covered</b>	All animals; exception for swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable wastes resulting from the handling, preparation, cooking, and consumption of foods, including animal carcasses or parts. “Garbage” includes all waste material, byproducts of a kitchen, restaurant, hotel, or slaughterhouse, every refuse accumulation of animal, fruit, or vegetable matter, liquids or otherwise, or grain not consumed, that is collected from hog sales pen floors in public stockyards. Animals or parts of animals, which are processed by slaughterhouses or rendering establishments, and which as part of the processing are heated to not less than 212 degrees Fahrenheit for thirty minutes, are not garbage for purposes of this chapter. § 163.26 (2015).
<b>Prohibitions</b>	No feeding garbage to animals, but heat-treated garbage may be fed to swine and individuals may feed untreated household garbage to their own swine. §§ 163.26–.27 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	The department of agriculture or attorney general may obtain an injunction to restrain an individual or facility from violating the garbage-feeding rule. § 163.62 (2015).  Violators of the garbage-feeding rule will be subject to a civil penalty of at least \$100 but no more than \$1,000. Each day of a continuing violation counts as a separate violation, but an individual or facility may not be subject to a civil penalty totaling more than \$25,000. § 163.61 (2015).
<b>Treatment requirements</b>	Garbage fed to swine must be heated to at least 212 degrees Fahrenheit for 30 minutes. § 163.26 (2015).
<b>Relevant state regulatory body</b>	Iowa Department of Agriculture & Land Stewardship (§ 163.1 (2015)), <a href="http://www.iowaagriculture.gov/">http://www.iowaagriculture.gov/</a> .

## KANSAS

*Kansas prohibits the feeding of animal-derived and vegetable waste to animals. Food waste that consists of only pasteurized dairy products may be fed to animals. Individuals may feed household garbage to their own swine.*

### KAN. STAT. ANN. §§ 47-1301–05 (2015)

<b>Animals covered</b>	All animals; exception for swine
<b>Definition of “garbage”</b>	All waste material derived in whole or in part from the meat of any animal, including fish and poultry, other waste animal material, and other refuse of any character whatsoever that has been associated with any such material, resulting from the handling, preparation, cooking or consumption of food. Garbage does not include pasteurized dairy products. § 47-1301 (2015).
<b>Prohibitions</b>	No feeding garbage to animals. Exception for individuals feeding household garbage to swine. § 47-1302 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	The state animal health commissioner is authorized to enforce the garbage-feeding ban. § 47-1304 (2015).  Any individual or facility that violates the garbage-feeding ban will be fined \$100-\$500. Each day that the individual or facility violates the ban is considered a separate offense. § 47-1305 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Kansas Department of Agriculture, Division of Animal Health (§ 47-1304 (2015)), <a href="https://agriculture.ks.gov/divisions-programs/division-of-animal-health">https://agriculture.ks.gov/divisions-programs/division-of-animal-health</a> .

## KENTUCKY

*Kentucky prohibits the feeding of animal-derived and vegetable waste to swine. Kentucky does not appear to exempt the feeding of household garbage to swine from the garbage-feeding rules.*

### 302 K.A.R. 20:100 (2015); KRS § 246.020 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	All animal and vegetable waste resulting from the handling, preparation, consuming, and cooking of food; unconsumed food in all public and private establishments and residences; and the offal and carcasses of dead animals, poultry, and fish or parts thereof. 20:100 (2015).
<b>Prohibitions</b>	No feeding garbage to swine. 20:100 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	The department of agriculture may seek to enjoin an individual or facility in violation of the garbage-feeding rule. Each day upon which the violation occurs counts as a separate violation. 20:100 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Kentucky Department of Agriculture (§ 246.020 (2015)), <a href="http://www.kyagr.com/">http://www.kyagr.com/</a> .

## LOUISIANA

*Louisiana prohibits the feeding of animal-derived and vegetable waste to swine. Louisiana does not appear to exempt the feeding of household garbage to swine from the garbage-feeding rules.*

### 51 LA. ADMIN. CODE pt. XXVII, §§ 101, 105, 1701 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	The putrescible components of refuse which are subject to spoilage, rot, or decomposition. It includes wastes from the preparation and consumption of food, vegetable matter, and animal offal and carcasses. § 101 (2015).
<b>Prohibitions</b>	No feeding garbage to swine. § 105 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	The Office of Public Health enforces the garbage-feeding rule. § 1701 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Louisiana Department of Health and Hospitals, Office of Public Health (§ 1701 (2015)), <a href="http://www.dhh.state.la.us/index.cfm/subhome/16/n/330">http://www.dhh.state.la.us/index.cfm/subhome/16/n/330</a> .

## MAINE

*Maine allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### 7-4-303-05 ME. CODE R. §§ 1753, 1813, 1814-A (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	All waste material derived in whole or in part from the meat of any animal, including fish and poultry, or other animal material and other refuse of any character whatsoever that has been associated with any such material resulting from the handling, preparation, cooking or consumption of food, except that “garbage” does not include waste from ordinary household operations that is fed directly to swine on the same premises where such a household is located. § 1813 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. § 1814-A (2015).
<b>Licensure</b>	An individual or facility may not feed garbage to swine without procuring a license from the state. § 1814-A (2015).
<b>Enforcement</b>	The commissioner may enter at reasonable times any private or public property to investigate conditions related to treating or feeding of garbage. § 1814-A (2015).  Feeding garbage to swine without a license is a civil violation warranting a fine between \$250 and \$500 for the first violation and \$500 and \$1,000 for the second violation. § 1814-A (2015).
<b>Treatment requirements</b>	Garbage must be thoroughly heated to at least 212 degrees Fahrenheit for at least 30 minutes or treated in some other manner that is approved in writing by the state before being fed to swine. § 1814-A (2015).
<b>Relevant state regulatory body</b>	Maine Department of Agriculture, Conservation, and Forestry (§ 1753 (2015)), <a href="http://www.maine.gov/dacf/">http://www.maine.gov/dacf/</a> .

## MARYLAND

*Maryland allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a license.*

### MD CODE ANN. AGRIC. § 3-404 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Any putrescible animal and fowl waste resulting from the handling, preparation, cooking, and consumption of foods, including any animal and fowl carcass, part of it, and any other substance that has been mixed with or been in contact with any animal or fowl waste or carcass. § 3-404 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to animals. Exception for individuals feeding household garbage. § 3-404 (2015).
<b>Licensure</b>	An individual or facility may not feed garbage to swine without procuring an annual license from the state. § 3-404 (2015).
<b>Enforcement</b>	The secretary of the department of agriculture enforces the garbage-feeding rule. If any individual or facility violates the garbage-feeding rule, the swine may not be sold or removed from its location within 30 days of having consumed the garbage or longer if prescribed by the secretary. § 3-404 (2015).
<b>Treatment requirements</b>	“Garbage” does not include waste that has been heat-treated such that it either contains less than ten percent moisture or has been deemed safe to feed animals by the secretary of the department of agriculture. § 3-404 (2015).
<b>Relevant state regulatory body</b>	Maryland Department of Agriculture (§ 3-404 (2015)), <a href="http://mda.maryland.gov/Pages/default.aspx">http://mda.maryland.gov/Pages/default.aspx</a> .

## MASSACHUSETTS

*Massachusetts allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without a permit, provided the swine will not be sold or removed from the premises. Massachusetts prohibits (1) the feeding to any animal, besides swine, of animal-derived garbage, refuse, or offal collected by a city of more than 30,000 inhabitants, and (2) the feeding to cows of garbage, refuse, or offal collected by a town.*

**MASS. GEN. LAWS ch. 129, § 14B (2015);  
MASS. GEN. LAWS ch. 270, § 9 (2015)**

<b>Animals covered</b>	All animals; ruminants; exception for swine
<b>Definition of “garbage”</b>	Any meat waste, or meat waste combined with any other food waste, resulting from handling, preparation, cooking and consumption of foods, including animal carcasses or parts thereof. Ch. 129, § 14B (2015).
<b>Prohibitions</b>	No feeding any garbage to any ruminants. No feeding any garbage collected from a large town to any animal, besides swine, which may be fed treated garbage. Individuals may feed untreated household garbage to swine. Ch. 270, § 9; Ch. 129, § 14B (2015).
<b>Licensure</b>	An individual or facility may not feed garbage to swine without procuring a permit from the state. Permits must be renewed on the first day of January each year. Ch. 129, § 14B (2015).
<b>Enforcement</b>	<p>Violators of the general garbage-feeding rule will be fined not more than \$50 or imprisoned for not more than one month. Ch. 129, § 14B (2015). Violators of the garbage-feeding ban for ruminants will be fined not more than \$100 or imprisoned for not more than two months. Ch. 270, § 9 (2015).</p> <p>The state shall inspect the premises of all permit-holding garbage treatment facilities semi-monthly. The state may revoke or refuse to issue a permit to an individual or facility that has violated the garbage-feeding rule. Ch. 129, § 14B (2015).</p> <p>The state may require maintenance of records pertaining to the equipment used for heat-treating garbage fed to swine. Copies of these records must be submitted to the division upon request, and the division may examine these records. Ch. 129, § 14B (2015).</p> <p>Any individual or facility who feeds to cows garbage, refuse, or offal collected by a town shall be fined not more than \$100 or imprisoned for not more than two months. Ch. 270, § 9 (2015)</p>
<b>Treatment requirements</b>	All garbage fed to swine must be thoroughly heated to at least 212 degrees Fahrenheit for at least 30 minutes or be treated in some other manner that has been approved by the director of the division of animal health. Ch. 129, § 14B (2015).
<b>Relevant state regulatory body</b>	Massachusetts Department of Agriculture, Division of Animal Health (Ch. 129, § 14B (2015)), <a href="http://www.mass.gov/eea/agencies/agr/animal-health/">http://www.mass.gov/eea/agencies/agr/animal-health/</a> .

## MICHIGAN

*Michigan allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated. All other waste, including rendered products, bakery waste, and manure, may be fed to swine without heat-treatment. Michigan does not appear to exempt the feeding of household garbage to swine from the garbage-feeding rules. Pasteurized dairy plant byproducts may be fed to farm animals.*

### MICH. COMP. LAWS ANN. §§ 287.704, 287.717a, 288.538 (2015)

<b>Animals covered</b>	Farm animals; exception for swine
<b>Definition of “garbage”</b>	<p>Any animal origin products, including those of poultry and fish origin, or other animal material resulting from the handling, processing, preparation, cooking, and consumption of foods. Garbage includes, but is not limited to, any refuse of any type that has been associated with any such material at any time during the handling, preparation, cooking, or consumption of food. Garbage does not include rendered products or manure (both of which may be fed to swine). § 287.704 (2015).</p> <p>“Rendered products” excluded from the garbage definition are animal-derived waste products that have been ground and heat-treated to a minimum temperature of 230 degrees Fahrenheit to make animal protein meal, poultry protein meal, fish protein meal, grease, or tallow. Rendered products also include bakery wastes, eggs, candy wastes, and domestic dairy products including, but not limited to, milk. § 287.706 (2015).</p>
<b>Prohibitions</b>	No feeding unpasteurized dairy plant byproducts to farm animals. No feeding untreated garbage to swine. §§ 288.538, 287.717a (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	The director of the department of agriculture has full access to inspect any premises if he or she has any grounds to believe or suspect that garbage, offal, or carcasses are being used to feed swine or may expose swine to a communicable disease. The director will quarantine swine that have been exposed to, in contact with, or fed garbage, offal, or carcasses. § 287.717a (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Michigan Department of Agriculture & Rural Development (§ 287.717a (2015)), <a href="http://www.michigan.gov/mdard">http://www.michigan.gov/mdard</a> .

## MINNESOTA

*Minnesota allows the feeding of animal-derived and vegetable waste to livestock and poultry provided that it has been properly heat-treated and fed by a licensed facility. Food waste that consists of only canned or frozen food byproducts may be fed to livestock and poultry without being heat-treated provided that the feeding individual or facility obtains an “exempt materials” permit. Individuals and facilities must obtain a license to transport garbage over the public highways for the purpose of feeding it to livestock or poultry. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### MINN. STAT. §§ 35.73–.78 (2015)

<b>Animals covered</b>	Livestock and poultry
<b>Definition of “garbage”</b>	Animal or vegetable refuse, including all waste material, byproducts of a kitchen, restaurant, or slaughter house, and refuse accumulation of animal, fruit, or vegetable matter, liquid or solid, but does not mean vegetable waste or byproducts resulting from the manufacture or processing of canned or frozen vegetables or materials exempted under section 35.751. § 35.73 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to livestock or poultry. Exception for individuals feeding household garbage to swine. § 35.74, .76 (2015).
<b>Licensure</b>	<p>No individual or facility may feed garbage to livestock or poultry without first obtaining a license from the board of animal health. Individuals who transport garbage over the public highways of Minnesota for the purpose of feeding it to livestock or poultry must obtain a license from the board of animal health to do so. The license must be renewed on or before the first day of July each year. § 35.75 (2015).</p> <p>An individual or facility may feed byproducts of canned or frozen foods to livestock or poultry provided that the individual or facility has obtained an “exempt materials” permit. §§ 35.73, 35.751 (2015).</p>
<b>Enforcement</b>	<p>The board of animal health may revoke or refuse to issue a permit to any individual who has violated the garbage-feeding rule. § 35.751 (2015).</p> <p>An authorized representative of the board may enter any property at reasonable times for purposes of inspecting and investigating conditions relating to the feeding and treating of garbage to be fed to livestock or poultry. The board also may require garbage-feeding facilities to maintain records, and an authorized representative also may examine such records. Copies of the records must be submitted to the board upon request of them. § 35.78 (2015).</p>
<b>Treatment requirements</b>	Garbage fed to livestock or poultry must be thoroughly heated to 212 degrees Fahrenheit for at least 30 minutes or treated in some other manner approved by the board of animal health. § 35.76 (2015).
<b>Relevant state regulatory body</b>	Minnesota Board of Animal Health (§§ 35.78–.751 (2015)), <a href="https://www.bah.state.mn.us/">https://www.bah.state.mn.us/</a> .

## MISSISSIPPI

*Mississippi prohibits the feeding of animal-derived or vegetable waste to swine. Individuals may feed household garbage to their own swine.*

### MISS. CODE ANN. §§ 69-11-3–15 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable waste resulting from the handling, preparation, cooking and consumption of foods including animal and fowl carcasses or parts thereof. § 69-11-3 (2015).
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage to swine. § 69-11-5 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	<p>The commissioner of agriculture and commerce and the state veterinarian enforce the garbage-feeding rule. Either official may enter any private or public property to inspect and investigate conditions relating to the feeding of swine to determine whether there has been a violation of the garbage-feeding rule. § 69-11-11 (2015). Either official also may quarantine any premises on which swine are fed garbage. § 69-11-13 (2015).</p> <p>Whoever violates the garbage-feeding rule is guilty of a misdemeanor and shall be fined \$50-\$250 dollars and may also be imprisoned for a period not to exceed 90 days. § 69-11-15 (2015).</p>
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Mississippi Board of Animal Health, <a href="http://www.mbah.ms.gov/">http://www.mbah.ms.gov/</a> ; Mississippi Department of Agriculture & Commerce, <a href="https://www.mdac.ms.gov/">https://www.mdac.ms.gov/</a> (§ 69-11-11 (2015)).

## MISSOURI

*Missouri allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### MO. REV. STAT. §§ 261.020, 266.410–.460 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	All refuse matter, animal or vegetable, and shall include all waste material, byproducts of a kitchen, restaurant, or slaughterhouse, every refuse accumulation of animal, fruit, or vegetable matter, liquid or otherwise. § 266.410 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. §§ 266.420–.430 (2015).
<b>Licensure</b>	No individual or facility may feed garbage to swine without first obtaining an annual permit from the department of agriculture. § 266.430 (2015).
<b>Enforcement</b>	Violation of the garbage-feeding rule is a misdemeanor. Each day of the violation counts as a separate offense. § 266.460 (2015).  The state may seek an injunction to restrain violations of the rule. § 266.450 (2015).
<b>Treatment requirements</b>	Garbage fed to swine must be heated to a temperature of 212 degrees Fahrenheit. An individual may feed household garbage to his or her own swine. § 266.420 (2015).
<b>Relevant state regulatory body</b>	Missouri Department of Agriculture (§ 261.020 (2015)), <a href="http://agriculture.mo.gov/">http://agriculture.mo.gov/</a> .

## MONTANA

*Montana allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### MONT. CODE ANN. §§ 81-2-501–511 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Wastes resulting from the handling, preparation, cooking, and consumption of animal products, including animal carcasses or parts of animal carcasses, or other refuse of any character that has been associated with any animal products, including animal carcasses or parts of animal carcasses. § 81-2-501 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage to swine. § 81-2-502 (2015).
<b>Licensure</b>	No individual or facility may feed garbage to animals or treat garbage to feed to animals without first obtaining an annual license from the department of agriculture. An individual may feed household garbage to his or her own swine without obtaining a license. § 81-2-502 (2015).
<b>Enforcement</b>	<p>The department of agriculture enforces the garbage-feeding rule. An authorized representative of the department may enter private or public property at reasonable times to inspect and investigate garbage-treating and garbage-feeding operations. An authorized representative also may examine records pertaining to those operations, may require maintenance of those records, and may require copies of those records to be submitted to the department periodically. § 81-2-505 (2015).</p> <p>The department of agriculture has the authority to restrain garbage-feeding operations in violation of the garbage-feeding rule. § 81-2-507 (2015).</p> <p>The department may revoke garbage-feeding licenses if the department determines that an individual or facility has violated the garbage-feeding rule and other state laws. § 81-2-508 (2015).</p> <p>Any individual or facility who violates the garbage-feeding rule is guilty of a misdemeanor and shall be fined \$50-\$250 or imprisoned for six months or less. Violators may also be enjoined from continuing such violation. Each day of the violation counts as a separate offense. § 81-2-511 (2015).</p>
<b>Treatment requirements</b>	Garbage fed to swine must be heated to a temperature of 212 degrees Fahrenheit for at least 30 minutes or treated in some other manner approved by the department of agriculture. § 81-2-509 (2015).
<b>Relevant state regulatory body</b>	Montana Department of Agriculture (§ 81-2-505 (2015)), <a href="http://agr.mt.gov/">http://agr.mt.gov/</a> .

## NEBRASKA

*Nebraska prohibits the feeding of animal-derived waste to animals. Food waste that consists of only plant materials, fruit, vegetables, and any other nonmeat food byproduct may be fed to animals. Individuals may feed household garbage to their own animals.*

**NEB. REV. STAT. §§ 53-753.01, 753.04; 54-701 (2015);  
NEB. ADMIN. R. & REGS. Tit. 23, Ch. 14, § 002 (2015)**

<b>Animals covered</b>	All animals
<b>Definition of “garbage”</b>	<p>All waste material derived in whole or in part from fruits, vegetables, meats, or other plant or animal material, including poultry material, and any other refuse of any character whatsoever that has been associated with any such material, resulting from the handling, preparation, cooking, or consumption of food, except that such term shall not include material exempted by the Department of Agriculture. Only nonmeat materials may be so exempted. NEB. REV. STAT. § 54-753.01 (2015).</p> <p>Plant materials, fruit, vegetables, and any other food byproducts of a nonmeat nature that do not consist of meat or poultry are exempt from the definition of “garbage.” NEB. ADMIN. R. &amp; REGS. Tit. 23, Ch. 14, § 002 (2015).</p>
<b>Prohibitions</b>	No feeding garbage to animals. Exception for individuals feeding household garbage to animals. NEB. REV. STAT. § 54-753.01 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	Any individual who violates the garbage-feeding rule is guilty of a misdemeanor. Each day the rule is violated is considered a separate offense. NEB. REV. STAT. § 54-753.04 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Nebraska Department of Agriculture (NEB. REV. STAT. § 54-701 (2015)), <a href="http://www.nda.nebraska.gov/">http://www.nda.nebraska.gov/</a> .

## NEVADA

*Nevada allows the feeding of animal-derived waste to animals provided that it has been properly heat-treated by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own animals without heat-treating it and without a permit.*

**NAC 571.004–.190 (2015);  
NRS 571.135 (2015)**

<b>Animals covered</b>	All animals
<b>Definition of “food waste”</b>	Any waste, discarded or byproduct material resulting from handling, preparation, cooking and consumption of foods, or the slaughtering and processing of animals for food, which contains or may contain, meat or meat scraps. NAC 571.150 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to animals. Exception for individuals feeding household garbage to animals. NRS 571.135 (2015).
<b>Licensure</b>	An individual or facility must obtain an annual permit in order to treat food waste for animal consumption. NAC 571.160 (2015). But this requirement does not apply to individuals feeding household garbage to their own swine. NRS 571.135 (2015).
<b>Enforcement</b>	<p>The state will inspect licensed food waste treatment facilities at least once every three months. NAC 571.180 (2015).</p> <p>The state may cancel a food waste treatment permit if the permit holder violates the waste-feeding rule. NAC 571.160 (2015).</p> <p>The state may quarantine and treat any animal that is fed food waste and develops any contagious or infectious disease. NAC 571.190 (2015).</p>
<b>Treatment requirements</b>	All food waste must be cooked within 72 hours after its arrival on the premises. NAC 571.170 (2015).
<b>Relevant state regulatory body</b>	Nevada Department of Agriculture (NAC 571.004 (2015)), <a href="http://agri.nv.gov/">http://agri.nv.gov/</a> .

## NEW HAMPSHIRE

*New Hampshire allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### N.H. REV. STAT. ANN. §§ 435:32–37 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Waste consisting in whole or in part of animal waste, including any waste animal carcasses or offal from such carcasses or parts thereof, but excluding waste from ordinary household operations that is fed directly to swine on the same premises where such household is located. § 435.32 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. §§ 435.32, .36 (2015).
<b>Licensure</b>	An individual or facility must obtain an annual permit in order to feed garbage to swine. § 435.33 (2015).
<b>Enforcement</b>	<p>Any individual or facility that violates the garbage-feeding rule is guilty of a misdemeanor, may be enjoined for continuing the offense, and may be subject to a fine under \$5,000. Each day of the violation counts as a separate offense. § 435.40 (2015).</p> <p>The commissioner of agriculture may revoke the permit of an individual or facility that violates the garbage-feeding rule. § 435.35 (2015).</p> <p>Any individual or facility that feeds raw garbage to swine shall be required to have such swine quarantined and tested for disease. § 435.36-a (2015).</p> <p>An authorized representative of the commissioner or the state veterinarian has the power to investigate garbage-treatment facilities, examine records pertaining to heat-treatment of garbage, require maintenance of such records, and request submission of such records to the state. § 435.37 (2015).</p>
<b>Treatment requirements</b>	All garbage must be heated to 212 degrees Fahrenheit for at least 30 minutes or else treated in some other manner approved by the commissioner of agriculture or the state veterinarian. § 435.36 (2015).
<b>Relevant state regulatory body</b>	New Hampshire Department of Agriculture, Markets & Food (§ 435.37 (2015)), <a href="http://agriculture.nh.gov/">http://agriculture.nh.gov/</a> .

## NEW JERSEY

*New Jersey allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated and fed by a licensed facility. There are separate heat-treatment requirements for garbage and dairy byproducts. Garbage that goes directly from rendering plants for processing need not be heat-treated before being fed to swine. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### 4 N.J. STAT. ANN. §§ 2:2-4.11, 4:4-22–23, 4:5-106.1–.14 (2015)

<b>Animals covered</b>	Farm animals; exception for swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of foods including animal carcasses or parts thereof; but the term “garbage” shall not apply to waste materials from slaughterhouses which go directly to rendering plants for processing. § 4:5-106.1 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine or unpasteurized dairy products to farm animals. Exception for individuals feeding household garbage to swine. §§ 4:5-106.1, .4; 4:4-22 (2015).
<b>Licensure</b>	No individual or facility may operate a garbage-feeding hog farm without first obtaining an annual license. An individual who feeds household garbage to swine raised for the individual’s own use need not obtain a license. §§ 4:5-106.4, 4:5-106.7 (2015).
<b>Enforcement</b>	<p>The department of agriculture licenses garbage-feeding hog farms and enforces the garbage-feeding rule. § 4:5-106.3 (2015).</p> <p>The department will inspect the premises of each licensee as often as it deems necessary and at least once per year. § 4:5-106.11 (2015).</p> <p>An authorized representative of the department may examine records pertaining to garbage-feeding operations. Copies of such records shall be submitted to the department upon request. § 4:5-106.12 (2015).</p> <p>The department may refuse to issue or restore, or to revoke or suspend the license of an individual or facility that violates the garbage-feeding rule. § 4:5-106.13 (2015).</p> <p>Any individual or facility that violates the garbage-feeding rule will be fined up to \$100 for the first penalty and \$200 for each subsequent penalty. § 4:5-106.14 (2015).</p> <p>Any individual or facility that violates the pasteurization rule will be fined up to \$50 for the first offense and up to \$100 for each subsequent offense. § 4:4-23 (2015).</p>
<b>Treatment requirements</b>	<p>Garbage must be heated either on the premises of the garbage-feeding hog farm where such garbage will be fed or at a location approved by the department of agriculture. The garbage must be heated to a temperature high enough and for long enough to kill disease organisms. § 4:5-106.1 (2015). Garbage must be heat-treated within 48 of receipt of the garbage and fed to swine within 72 hours of cooking. § 2:2-4.11 (2015).</p> <p>Dairy byproducts must be pasteurized by heating them to 145 degrees Fahrenheit and held at that temperature for at least 30 minutes, or heated to 185 degrees without holding. By byproducts from cheese factories or creameries that pasteurize milk or cream prior to manufacturer need not be re-heated. § 4:4-22 (2015).</p>
<b>Relevant state regulatory body</b>	New Jersey Department of Agriculture (§ 4:5-106.3 (2015)), <a href="http://www.nj.gov/agriculture/">http://www.nj.gov/agriculture/</a> .

## NEW MEXICO

*New Mexico allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### N.M. STAT. ANN. § 77-7-16–18 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Waste consisting in whole or in part of animal waste resulting from handling, preparing, cooking and consuming of food, including the offal from animal carcasses or parts thereof, but excluding such waste obtained by an individual from his own household operations and fed to his own swine on the same premises. § 77-7-16 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. § 77-7-16, 18 (2015).
<b>Licensure</b>	Individuals and facilities must obtain a certificate of registration or a permit for special processing in order to feed garbage to swine. § 77-7-18 (2015).
<b>Enforcement</b>	Any individual or facility in violation of the garbage-feeding rule is guilty of a petty misdemeanor. Each day of violation counts as a separate offense. § 77-7-17 (2015).  The state can make periodic inspections of cooking facilities and premises. § 77-7-18 (2015).
<b>Treatment requirements</b>	All garbage fed to swine must be brought to the boiling point or equivalent temperature for a period of not less than 30 minutes. § 77-7-18 (2015).
<b>Relevant state regulatory body</b>	New Mexico Livestock Board (§ 77-7-18 (2015)), <a href="https://www.nmlbonline.com/">https://www.nmlbonline.com/</a> .

## NEW YORK

*New York allows the feeding of animal-derived waste to cattle, swine, and poultry provided that it has been properly heat-treated by a rendering facility. All other waste may be fed to cattle, swine, and poultry without heat-treatment. Individuals may feed household garbage to their own cattle, swine, and poultry without heat-treating it.*

### N.Y. AGM. LAW §§ 72-a, 76 (2015)

<b>Animals covered</b>	Cattle, swine, and poultry
<b>Definition of “garbage”</b>	Putrescible animal and poultry wastes from the handling, processing, preparation, cooking and consumption of foods. § 72-a (2015).
<b>Prohibitions</b>	No feeding untreated garbage to cattle, swine, or poultry. Exception for individuals feeding household garbage to cattle, swine, or poultry. § 72-a (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	Violation of the garbage-feeding rule is a class A misdemeanor. § 72-a (2015).  The department of agriculture may quarantine the premises on which animals are kept if it has reasonable grounds to believe that the animals are being fed untreated garbage. § 76 (2015).
<b>Treatment requirements</b>	Food waste that is heat rendered by a rendering plant at a temperature sufficient to make the product commercially sterile is not considered “garbage” and may be fed to animals. § 72-a (2015).
<b>Relevant state regulatory body</b>	New York State Department of Agriculture & Markets (§ 76 (2015)), <a href="http://www.agriculture.ny.gov/">http://www.agriculture.ny.gov/</a> .

## NORTH CAROLINA

*North Carolina allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a permit. Individuals in charge of food service facilities must not allow any garbage to be removed from the premises unless the individual moving the garbage has a permit, has been authorized by the department of agriculture to remove the garbage, or is an employee of the city engaged in the regular collection of garbage.*

### N.C. GEN. STAT. ANN. §§ 106-405.1–9 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Consisting in whole or in part of animal waste resulting from handling, preparing, cooking and consuming food, including the offal from or parts thereof. § 106-405.1 (2015).
<b>Prohibitions</b>	<p>No feeding untreated garbage to swine. Exception for individuals feeding household garbage to swine. § 106-405.2 (2015).</p> <p>Individuals in charge of restaurants, cafes, schools, hospitals, or other public or private places where food is served must not allow garbage to be removed from the premises unless the individual moving the garbage has a valid garbage-feeding permit or is otherwise authorized by the department of agriculture to remove the garbage. § 106-405.7 (2015).</p>
<b>Licensure</b>	No individual or facility may feed garbage to swine without first securing an annual permit from the commissioner of agriculture. An individual who feeds household garbage to his or her own swine need not secure a permit. § 106-405.2 (2015).
<b>Enforcement</b>	<p>The commissioner of agriculture is charged with enforcing the garbage-feeding rule. § 106-405.8 (2015).</p> <p>Any individual or facility that violates the garbage-feeding rule is guilty of a Class 1 misdemeanor and may be enjoined from continuing the violation. § 106-405.9 (2015).</p> <p>The commissioner of agriculture may revoke an individual or facility’s permit if they violate the garbage-feeding rule. § 106-405.4 (2015).</p> <p>Any authorized representative of the commissioner of agriculture may at reasonable times enter and investigate garbage heat-treatment and garbage-feeding facilities. Garbage feeders must keep a complete record of their operations. § 106-405.7 (2015).</p>
<b>Treatment requirements</b>	Garbage fed to swine must be heated to at least 212 degrees Fahrenheit for at least 30 minutes or else treated in some other manner approved by the commissioner of agriculture. § 106-405.6 (2015).
<b>Relevant state regulatory body</b>	North Carolina Department of Agriculture & Consumer Services (§ 106-405.8 (2015)), <a href="http://www.ncagr.gov/">http://www.ncagr.gov/</a> .

## NORTH DAKOTA

*North Dakota prohibits the feeding of animal-derived and vegetable waste to swine. Food waste that consists of only dairy products from a licensed creamery or dairy may be fed to swine. Individuals may feed household garbage to their own swine.*

### N.D. CENT. CODE §§ 36-01-01–28 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Animal and vegetable waste matter resulting from the handling, preparation, cooking, and consumption of foods, including animal carcasses or parts of animal carcasses, except that dairy products from a licensed creamery or dairy is not considered garbage for the purposes of this section. § 36-01-22 (2015).
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage to swine. § 36-01-22 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	Any individual or facility that violates the garbage-feeding rule is guilty of an infraction. § 36-01-28 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	North Dakota Department of Agriculture, State Board of Animal Health (§ 36-01-01 (2015)), <a href="http://www.nd.gov/ndda/program/animal-health">http://www.nd.gov/ndda/program/animal-health</a> .

## OHIO

*Ohio allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated by a licensed facility. All other waste may be fed to swine without heat-treatment. Food waste that consists of only certain food products, including bakery waste, may be fed to swine without being heat-treated. Individuals may feed household garbage to their own swine without heat-treating it and without a license.*

### OHIO REV. CODE ANN. §§ 942.01–.99 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	<p>All waste material derived in whole or in part from the meat of any animal, including fish and poultry, or other animal material, and other refuse of any character that has been associated with such waste material resulting from the handling, preparation, cooking, or consumption of food. § 942.01 (2015).</p> <p>The garbage-feeding rule does not apply to an individual who feeds household garbage to his or her own swine, or feeds only bakery waste, candy waste, eggs, vegetables, or dairy products to swine. Nor does the rule apply to individuals who feed rendering products to swine, where “rendering products” means raw rendering material that has been ground and heated to a minimum temperature of 212 degrees Fahrenheit to make products such as animal, poultry, or fish protein; grease; or tallow. § 942.13 (2015).</p>
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. §§ 942.04, .13 (2015).
<b>Licensure</b>	<p>No person shall heat-treat or feed garbage to swine without an annual license to do so. §§ 942.02 (2015); 942.04 (2015).</p> <p>Each licensed garbage heat-treatment facility shall maintain records relating to heat-treatment operations for one year. § 942.07 (2015).</p>
<b>Enforcement</b>	<p>Whoever violates the garbage-feeding rule will be fined \$100 for the first offense and \$200 for each subsequent offense or imprisoned for 90 days to six months, or both. § 942.99 (2015).</p> <p>The department of agriculture may inspect garbage heat-treatment facilities during regular business hours. § 942.06 (2015).</p> <p>The director of agriculture may refuse to grant, or may suspend or revoke a license for any violation of the garbage-feeding rule. § 942.03 (2015).</p>
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Ohio Department of Agriculture (§ 942.06 (2015)), <a href="http://www.agri.ohio.gov/">http://www.agri.ohio.gov/</a> .

## OKLAHOMA

*Oklahoma allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

**2 OKL. ST. ANN. §§ 6-1, 6-21–27 (2015);  
OKLA. ADMIN. CODE 35:15-35-2 (2015)**

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable wastes resulting from the handling, preparation, cooking, and consumption of foods, including fish, poultry, or animal carcasses or parts. 2 OKL. ST. ANN. § 6-21 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. 2 OKL. ST. ANN. §§ 6-22, 27 (2015).
<b>Licensure</b>	No individual or facility may feed garbage to swine unless it has obtained a permit from the state veterinarian. 2 OKL. ST. ANN. § 6-22 (2015).
<b>Enforcement</b>	The state veterinarian may refuse to renew or may suspend any permit, and the state may revoke any permit has been issued if the holder violates the garbage-feeding rule. 2 OKL. ST. ANN. § 6-22 (2015).
<b>Treatment requirements</b>	Before being fed to swine, all garbage, regardless of previous processing, must be thoroughly heated to at least 212 degrees Fahrenheit and maintained at this temperature for at least 30 minutes, or else be treated in some other manner approved by the state. OKLA. ADMIN. CODE 35:15-35-2 (2015).
<b>Relevant state regulatory body</b>	Oklahoma Department of Agriculture & Forestry (§ 6-1 (2015)), <a href="http://www.oda.state.ok.us/">http://www.oda.state.ok.us/</a> .

## OREGON

*Oregon prohibits the feeding of animal-derived and most vegetable waste to swine. Food waste that comes from a fruit or vegetable cannery, processing plant, sorting establishment, or bakery may be fed to swine. Individuals may feed household garbage to their own swine.*

### OR. REV. STAT. §§ 600.010–.120 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage” and “offal”</b>	<p>“Garbage” means waste accumulations of vegetable matter. “Offal” means animal tissue of any kind and from any source. 600.010 (2015).</p> <p>An individual or facility may feed garbage to swine only if the garbage is accumulated from the domestic household of the individual who owns the swine; solely from a fruit or vegetable cannery, processing plant, or sorting establishment; solely from a bakery; or a combination of these garbage types. 600.095 (2015).</p>
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage. 600.095, .105 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	<p>The state department of agriculture may quarantine any swine that are being fed garbage or offal. 600.105 (2015).</p> <p>The state also may restrain any actual or threatened violation. 600.120 (2015).</p>
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Oregon Department of Agriculture (600.105, 600.120 (2015)), <a href="http://www.oregon.gov/oda/Pages/default.aspx">http://www.oregon.gov/oda/Pages/default.aspx</a> .

## PENNSYLVANIA

*Pennsylvania allows the feeding of animal-derived waste to domestic animals provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without obtaining a permit.*

### 3 PA. STAT. AND CONS. STAT. ANN. § 2303 (WEST)

<b>Animals covered</b>	All domestic animals
<b>Definition of “garbage”</b>	All waste or residuals resulting from the handling, preparation, cooking or consumption of food derived in whole or in part from the meat of any animal, including poultry and fish, or other animal material and other refuse of any character that has been associated with the meat of any animal or other animal material. The term does not include waste from ordinary household operations that is fed directly to swine on the same premises where the household is located. § 2303 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to domestic animals. Exception for individuals feeding household garbage to swine. §§ 2303, 2324 (2015).
<b>Licensure</b>	Individuals and facilities must obtain an annual license from the department of agriculture before feeding garbage to domestic animals. § 2371 (2015).  All state and federal agencies or commissions are exempt from the licensure rules for garbage feeding. § 2388 (2015).
<b>Enforcement</b>	The department of agriculture may inspect a license applicant’s or licensee’s facilities for compliance with the garbage-feeding rule. § 2378 (2015).  The department of agriculture may deny, suspend, or revoke the license of any individual or facility that violates the garbage-feeding rule. § 2379 (2015).  Individuals or facilities engaged in heating garbage must maintain records of the heating operations for at least one year and provide it to the department upon request. § 2376 (2015).
<b>Treatment requirements</b>	Before being fed to domestic animals, garbage must be heated to a temperature of at least 212 degrees Fahrenheit for at least 30 minutes or else treated in some other manner approved by the department of agriculture. § 2376 (2015).
<b>Relevant state regulatory body</b>	Pennsylvania Department of Agriculture (§ 2378 (2015)), <a href="http://www.agriculture.pa.gov/Pages/default.aspx#Vo-3uJMrLVo">http://www.agriculture.pa.gov/Pages/default.aspx#Vo-3uJMrLVo</a> .

## PUERTO RICO

*Puerto Rico allows the feeding of animal-derived waste to swine and barnyard fowl provided that it has been properly heat-treated and fed by a licensed facility. Waste derived from animals that died from any infectious, contagious disease may never be fed to swine or barnyard fowl. All other waste may be fed to swine and barnyard fowl without heat-treatment. Puerto Rico does not appear to exempt the feeding of household garbage to swine from the garbage-feeding rules.*

### 5 L.P.R.A. §§ 1301–1308 (2011)

<b>Animals covered</b>	Swine and barnyard fowl
<b>Definition of “garbage”</b>	Waste totally or partially derived from animal meat, including fish and poultry and other residues of any other type related thereto, resulting from the handling, preparation, cooking and consumption of food, including carcasses of animals or parts thereof and the spoils of dead cattle and fowl or their viscera or entrails, it being understood, that in no case shall there be used as feed for swine or barnyard fowl, carcasses, parts, spoils or viscera of animals that have died from any infectious, contagious disease. § 1301 (2011).
<b>Prohibitions</b>	No feeding untreated garbage to swine or barnyard fowl. § 1305 (2011).
<b>Licensure</b>	No individual or facility may feed garbage to swine or barnyard fowl without obtaining an annual, special written permit from the secretary of agriculture to do so. § 1302 (2011).
<b>Enforcement</b>	Authorized representatives of the secretary of agriculture have the power to investigate private or public premises engaged in heat-treating garbage to be fed to swine or barnyard fowl. § 1306 (2011).  The secretary of agriculture may impose administrative fines of \$25-\$100 on any individual or facility that violates the garbage-feeding rule. § 1307a (2011). Subsequent violations of the garbage-feeding rule constitute a misdemeanor and violators will be fined \$100-\$500, imprisoned for less than 15 days, or both. § 1308 (2011).
<b>Treatment requirements</b>	Before being fed to swine or barnyard fowl, all garbage must be heat-treated to at least 212 degrees Fahrenheit for at least 30 minutes or else treated in some other manner approved by the secretary of agriculture. § 1305 (2011).
<b>Relevant regulatory body</b>	Puerto Rico Department of Agriculture (§§ 1306, 1308 (2011)), <a href="http://www.agricultura.pr.gov/">http://www.agricultura.pr.gov/</a> .

## RHODE ISLAND

*Rhode Island allows the feeding of animal-derived and vegetable waste to four or fewer swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to an unlimited number of their own swine without heat-treating it and without a permit.*

### R.I. GEN. LAWS §§ 4-3-1–11 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of foods including animal carcasses or parts. § 4-3-1 (2015).
<b>Prohibitions</b>	No individual or facility may feed garbage to more than four swine. Individuals may feed household garbage to their own swine, even if they feed more than four swine. § 4-3-2 (2015).
<b>Licensure</b>	No individual or facility may feed garbage to swine without obtaining an annual permit from the state. § 4-3-3 (2015).
<b>Enforcement</b>	<p>The director is charged with enforcing the garbage-feeding rule. § 4-3-10 (2015).</p> <p>Any individual or facility that violates the garbage-feeding rule is guilty of a misdemeanor and will be fined not more than \$200. That person also may be enjoined from continuing the violation. Each day on which the violation occurs counts as a separate violation. § 4-3-11 (2015).</p> <p>The director may revoke or refuse to issue a permit to an individual or facility that has violated the garbage-feeding rule. § 4-3-7 (2015).</p> <p>Any authorized representative of the director may inspect any private or public property used to treat garbage that will be fed to swine. § 4-3-8 (2015).</p> <p>Any authorized representative of the director may examine records pertaining to garbage-feeding operations. The director may require maintenance of such records, which must be submitted to the director upon request. § 4-3-9 (2015).</p>
<b>Treatment requirements</b>	All garbage must be heat-treated to 212 degrees Fahrenheit for at least 30 minutes or else treated in some manner approved by the director. § 4-3-6 (2015).
<b>Relevant state regulatory body</b>	Rhode Island Department of Environmental Management (§ 4-3-10 (2015)), <a href="http://www.dem.ri.gov/">http://www.dem.ri.gov/</a> .

## SOUTH CAROLINA

*South Carolina prohibits the feeding of animal-derived waste and unpasteurized milk products to swine. Individuals may feed household garbage to their own swine.*

### S.C. CODE ANN. §§ 47-15-3–130 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Any animal wastes resulting from handling, preparation, cooking, or consumption of foods, including animal carcasses, parts of animal carcasses, or contents of offal. Unpasteurized milk and unpasteurized milk products are animal waste. § 47-15-10 (2015).
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage to swine. §§ 47-15-20, 60 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	<p>The state livestock-poultry health commission is charged with enforcing the garbage-feeding ban. § 47-15-70 (2015).</p> <p>Any person who violates the garbage-feeding ban is guilty of a misdemeanor and may be enjoined from continuing the violation. Each day on which the violation occurs counts as a separate offense. The violator also will be fined or imprisoned. §§ 47-15-80, 47-4-130 (2015).</p> <p>Any authorized representative of the state livestock-poultry health commission may enter at reasonable times upon private or public property where swine are kept to inspect the premises. § 47-15-50 (2015).</p>
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Clemson Livestock-Poultry Health Commission (§ 47-15-70 (2015)), <a href="http://www.clemson.edu/public/lph/">http://www.clemson.edu/public/lph/</a> .

## SOUTH DAKOTA

*South Dakota prohibits the feeding of food waste to cattle that are enrolled in the Dakota Certified Beef Program. But South Dakota has no other laws relating to the feeding of food waste or garbage to animals. It repealed its ban on feeding garbage to animals in 2013.*

**A.R.S.D. 12:79:03:06 (2015);  
H.B. 1058, 2013 Leg., 88th Sess. (S.D. 2013)**

<b>Animals covered</b>	Cattle
<b>Definition of “garbage”</b>	N/A
<b>Prohibitions</b>	Cattle that are certified and enrolled in the Dakota Certified Beef Program may not be fed any feed products containing food processing waste, restaurant food waste, dried poultry waste, dried poultry litter, dried ruminant waste, dried swine waste, undried processed animal waste products, or processed animal waste. A.R.S.D. 12:79:03:06 (2015).
<b>Repeal of licensure, enforcement, treatment requirements</b>	South Dakota repealed many of its laws pertaining to garbage feeding. Before the repeal, these laws prohibited the feeding of garbage to swine and livestock; there was no exception for heat-treated garbage. The state decided to repeal this law in order to loosen the reigns on animal disease control generally, as many animal diseases have been eradicated and better managed in recent years. H.B. 1058, 2013 Leg., 88th Sess. (S.D. 2013).
<b>Relevant state regulatory body</b>	South Dakota Department of Agriculture, <a href="https://sdda.sd.gov/">https://sdda.sd.gov/</a> .

## TENNESSEE

*Tennessee does not recommend feeding animal-derived waste to swine.<sup>97</sup> But Tennessee allows the feeding of animal-derived and vegetable waste to swine provided that it has been processed in accordance with federal law (that is, heat-treated and fed by a licensed facility). Feeders must submit a plan to the commissioner detailing how garbage will be processed. Food waste that consists of only bakery waste, whey, and dairy waste from milk processing plants may be fed to swine without being further processed. Individuals may feed household garbage to their own swine without processing it.*

### TENN. CODE ANN. §§ 44-2-401–08 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Animal or plant waste resulting from the handling, preparation, cooking or consumption of foods, including animal and fowl carcasses or parts thereof, and all waste material and byproducts of a kitchen, restaurant, hospital, hotel, motel, or slaughterhouse; except, however, bakery waste, whey, or other dairy waste from milk processing plants shall not be included in this definition. § 44-2-402 (2015).
<b>Prohibitions</b>	No feeding unprocessed garbage to swine. Exception for individuals feeding household garbage. § 44-2-404 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	<p>The commissioner of agriculture enforces the garbage-feeding rule. § 44-2-403 (2015).</p> <p>The commissioner or an authorized representative may investigate any public or private premises to determine whether the garbage-feeding rule has been violated. § 44-2-406 (2015).</p> <p>A violation of the garbage-feeding rule is a Class C misdemeanor. Each illegal feeding of garbage counts as a separate offense. § 44-2-407 (2015).</p> <p>The commissioner may seek to enjoin any individual or facility that violates the garbage-feeding rule. § 44-2-408 (2015).</p>
<b>Treatment requirements</b>	<p>Garbage must be processed in accordance with federal law, meaning that garbage must be boiled (212 degrees Fahrenheit/100 degrees Celsius at sea level) for at least 30 minutes. 9 C.F.R. § 166 (2015).</p> <p>Garbage must be processed in a manner prescribed and approved by the commissioner, meaning that feeders must submit a written plan to the commissioner detailing treatment of garbage in a manner prescribed under 9 C.F.R. § 166. § 44-2-404 (2015).<sup>98</sup></p>
<b>Relevant state regulatory body</b>	Tennessee Department of Agriculture (§ 44-2-403 (2015)), <a href="https://www.tn.gov/agriculture/">https://www.tn.gov/agriculture/</a> .

## TEXAS

*Texas prohibits the feeding of animal-derived waste to swine. Food waste that consists of only vegetable, fruit, dairy, or baked goods waste may be fed to swine by a licensed facility. Individuals may feed household garbage to their own swine without a permit.*

**TEX. AG. CODE ANN. §§ 165.001, 165.026 (2015);  
see also TEX. ADMIN. CODE tit. 4, § 55.3 (2015)**

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	<p>“Restricted garbage” includes (A) the animal refuse matter and the putrescible animal waste resulting from handling, preparing, cooking, or consuming food containing all or part of an animal carcass;</p> <p>(B) the animal waste material byproducts or commingled animal and vegetable waste material byproducts of a restaurant, kitchen, cookery, or slaughterhouse; and</p> <p>(C) refuse accumulations of animal matter or commingled animal and vegetable matter, liquid or otherwise.</p> <p>“Unrestricted garbage” includes vegetable, fruit, dairy, or baked goods refuse matter and vegetable waste and refuse accumulations resulting from handling, preparing, cooking, or consuming food containing only vegetable matter, liquid or otherwise. § 165.026 (2015).</p>
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage. § 165.026 (2015).
<b>Licensure</b>	An individual or facility can only feed unrestricted garbage to swine if it secures a permit from the state. But an individual feeding household garbage to his or her own swine need not obtain a permit. § 165.026 (2015).
<b>Enforcement</b>	The commission may suspend a registration or require the immediate quarantine and closure of a garbage-feeding facility if the operation presents a danger to public health or the livestock industry. § 165.026 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Texas Animal Health Commission (§165.001 (2015)), <a href="http://www.tahc.texas.gov/">http://www.tahc.texas.gov/</a> .

## UTAH

*Utah has repealed its ban on feeding food waste to swine on May 10, 2016. Currently, Utah does not have any laws that bear on the feeding of garbage to animals.*

<b>Relevant state regulatory body</b>	Utah Department of Agriculture & Food (§ 4-31-109 (2015)), <a href="http://ag.utah.gov/">http://ag.utah.gov/</a> .
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## VERMONT

*Vermont prohibits the feeding of animal-derived waste to swine. Food waste that consists of only processed (that is, pasteurized) dairy products may be fed to swine. Individuals may feed household garbage to their own swine.*

### VT. STAT. ANN. tit. 6, §§ 1671–77 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “prohibited food waste”</b>	All waste material derived in whole or in part from the meat of any animal (including fish and poultry) or other animal material, other than processed (that is, pasteurized) dairy products, and other refuse of any character whatsoever that has been associated with any such material, resulting from the handling, preparation, cooking, disposal, or consumption of food, except that such term shall not include waste from ordinary household operations which is fed directly to swine raised exclusively for the use in the household of the owner of the swine by members of the household and nonpaying guests and employees. § 1671 (2015).
<b>Prohibitions</b>	No feeding garbage to swine. Exception for individuals feeding household garbage. § 1672 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	<p>The agency of agriculture, food, and markets enforces the garbage-feeding ban. § 1676 (2015).</p> <p>An authorized representative of the Vermont agency of agriculture, food, and markets or the U.S. Department of Agriculture may investigate private or public property at reasonable times to ensure prohibited food waste is not being fed to swine. § 1675 (2015).</p> <p>An individual or facility that violates the garbage-feeding ban will be fined \$10-\$100 for each offense. Each day on which the violation occurs counts as a separate offense. Such individual or facility also may be enjoined from further violation. § 1677 (2015).</p>
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Vermont Agency of Agriculture, Food, & Markets (§ 1676 (2015)), <a href="http://agriculture.vermont.gov/">http://agriculture.vermont.gov/</a> .

## VIRGINIA

*Virginia allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated by a licensed commercial feed facility. Virginia does not appear to exempt the feeding of household garbage to swine from the garbage-feeding rules.*

### 3.2 VA. ADMIN. CODE §§ 4803, 6001–34 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Animal and vegetable wastes resulting from the handling, preparation, cooking, and consumption of foods containing animal carcasses or parts thereof. § 3.2-6031 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. § 3.2-6032 (2015).
<b>Licensure</b>	Any person who manufactures commercial feed must obtain a license from the commissioner. § 3.2-4803 (2015).
<b>Enforcement</b>	Any individual or facility that violates the garbage-feeding rule is guilty of a Class 1 misdemeanor. Each day upon which the violation occurs counts as a separate offense. Violators may be enjoined from continuing such violation. § 3.2-6034 (2015).
<b>Treatment requirements</b>	The commissioner may in his or her discretion exclude from the definition of “garbage” such wastes that have been heat-treated to the extent that the resultant material is of a uniform consistency, contains by analysis not more than 10 percent moisture, and that he has determined to be “non-putrescible.” Such treated “non-putrescible” wastes shall be “commercial feed.” § 3.2-6031 (2015).
<b>Relevant state regulatory body</b>	Virginia Department of Agriculture & Consumer Services (§ 3.2-6001 (2015)), <a href="http://www.vdacs.virginia.gov/">http://www.vdacs.virginia.gov/</a> .

## WASHINGTON

*Washington allows the feeding of animal-derived waste to swine provided that it has been properly heat-treated and fed by a licensed facility. All other waste may be fed to swine without heat-treatment. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### WASH. ADMIN. CODE 16.36.005, 16.36.105–.113, 246.203.180 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Solid animal and vegetable waste and offal together with the natural moisture content resulting from the handling, preparation, or consumption of foods in houses, restaurants, hotels, kitchens, markets, meat shops, packing houses and similar establishments or any other food waste containing meat or meat products. 16.36.005 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. 16.36.105 (2015).
<b>Licensure</b>	No individual or facility may feed garbage to swine without first obtaining an annual license from the director. 16.36.105 (2015).
<b>Enforcement</b>	Any individual or facility that violates the garbage-feeding rule is guilty of a gross misdemeanor. Each day upon which a violation occurs counts as a separate offense. The director may enjoin the violation and may also deny, revoke, or suspend any licenses issued to an individual or facility. 16.36.110 (2015).  Any individual or facility that violates the garbage-feeding rule may also be subject to a civil penalty of \$1,000 or less for each violation. 16.36.113 (2015).
<b>Treatment requirements</b>	All garbage, offal, and flesh fed to swine must be sterilized by cooking before feeding. 246.203.180 (2015).
<b>Relevant state regulatory body</b>	Washington State Department of Agriculture (16.36.110 (2015)), <a href="http://agr.wa.gov/">http://agr.wa.gov/</a> .

## WEST VIRGINIA

*West Virginia allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### W. VA. CODE R. §§ 19-9A-1-8 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable wastes resulting from the handling, preparation, cooking, and consumption of foods including animal carcasses or parts thereof. § 19-9A-1 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individual feeding household garbage. § 19-9A-2 (2015).
<b>Licensure</b>	No individual or facility may feed garbage to swine without first obtaining an annual license from the state. § 19-9A-2 (2015).
<b>Enforcement</b>	<p>The commissioner enforces the garbage-feeding rule. § 19-9A-7 (2015).</p> <p>The commissioner may revoke or refuse to issue a permit to any individual or facility that has violated the garbage-feeding rule. § 19-9A-4 (2015).</p> <p>Any authorized representative of the commissioner has the power to investigate private or public property on which garbage is being heat-treated to be fed to swine. The commissioner also may require garbage heat-treating facilities to maintain records, to allow the commissioner to inspect such records, and to submit copies of such records to the commissioner upon request. § 19-9A-6 (2015).</p> <p>Any individual or facility that violates the garbage-feeding rule is guilty of a misdemeanor and may be punished by a fine of \$25-\$300. The individual or facility also may be enjoined from continuing the violation. Each day upon which the violation occurs counts as a separate offense. § 19-9A-8 (2015).</p>
<b>Treatment requirements</b>	All garbage fed to swine must be thoroughly heated to 212 degrees Fahrenheit for at least 30 minutes or else treated in some other manner approved by the commissioner. § 19-9A-5 (2015).
<b>Relevant state regulatory body</b>	West Virginia Department of Agriculture (§ 19-9A-7 (2015)), <a href="http://www.agriculture.wv.gov/Pages/default.aspx">http://www.agriculture.wv.gov/Pages/default.aspx</a> .

## WISCONSIN

*Wisconsin prohibits the feeding of animal-derived and vegetable waste to swine. It is also unlawful for any individual or facility to deposit or receive garbage where swine are kept. Individuals may feed household garbage to their own swine.*

### WIS. STAT. ANN. 95.10 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Putrescible animal or vegetable wastes containing animal parts, resulting from the handling, preparation, processing, cooking or consumption of food and which is collected from any source, and includes dead animals as defined in s. 95.72(1)(c). The term does not apply to private household wastes not removed from the premises where produced. 95.10 (2015).
<b>Prohibitions</b>	No feeding garbage to or placing it near swine. Exception for individuals feeding household garbage. 95.10 (2015).
<b>Licensure</b>	N/A
<b>Enforcement</b>	The department of agriculture may order any swine to be condemned or destroyed because of any infectious or communicable disease resulting from the swine’s consumption of garbage. 95.10 (2015).
<b>Treatment requirements</b>	N/A
<b>Relevant state regulatory body</b>	Wisconsin Department of Agriculture, Trade, & Consumer Protection (95.10 (2015)), <a href="http://datcp.wi.gov/">http://datcp.wi.gov/</a> .

## WYOMING

*Wyoming allows the feeding of animal-derived and vegetable waste to swine provided that it has been properly heat-treated and fed by a licensed facility. Individuals may feed household garbage to their own swine without heat-treating it and without a permit.*

### WYO. STAT. ANN. §§ 11-27-101–107 (2015)

<b>Animals covered</b>	Swine
<b>Definition of “garbage”</b>	Putrescible animal and vegetable wastes resulting from the handling, preparation, cooking, and consumption of foods including animal carcasses or parts thereof. § 11-27-101 (2015).
<b>Prohibitions</b>	No feeding untreated garbage to swine. Exception for individuals feeding household garbage. § 11-27-106 (2015).
<b>Licensure</b>	An individual or facility must obtain an annual permit to feed garbage to swine. § 11-27-103 (2015). But individuals that feed household garbage to swine on their own premises need not obtain a permit. § 11-27-104 (2015).
<b>Enforcement</b>	<p>An authorized representative of the board may at reasonable times inspect private or public property upon which garbage is being treated to be fed to swine. The representative also may examine records pertaining to feeding the garbage to swine, may require maintenance of records pertaining to heat-treatment of garbage, and may request that copies of such records be submitted to the board. § 11-27-102 (2015).</p> <p>The board may revoke or refuse to issue a permit to any individual or facility that violates the garbage-feeding rule. § 11-27-105 (2015).</p> <p>Any individual or facility that violates the garbage-feeding rule may be fined \$25-\$250, imprisoned for 6 months or less, or both. The individual or facility also may be enjoined from continuing the violation. Each day upon which the violation occurs counts as a separate offense. § 11-27-107 (2015).</p>
<b>Treatment requirements</b>	All garbage fed to swine must be thoroughly heated to 212 degrees Fahrenheit for at least 30 minutes or else treated in some other manner approved by the commissioner. § 11-27-106 (2015).
<b>Relevant state regulatory body</b>	Wyoming Livestock Board (§§ 11-27-102–105 (2015)), <a href="https://wlsb.state.wy.us/public">https://wlsb.state.wy.us/public</a> .

## Endnotes

- <sup>1</sup> This publication provides information only; it does not contain legal advice. It is not intended to create, and receipt of it does not constitute, a lawyer-client relationship. Please consult an attorney licensed in your jurisdiction for advice regarding the subject matter addressed herein.
- <sup>2</sup> ReFED, A Roadmap to Reduce U.S. Food Waste by 20 Percent (2016), [http://www.refed.com/downloads/ReFED\\_Report\\_2016.pdf](http://www.refed.com/downloads/ReFED_Report_2016.pdf).
- <sup>3</sup> *Id.*
- <sup>4</sup> *Global Warming Potentials*, U.N. Framework Convention on Climate Change, [http://unfccc.int/ghg\\_data/items/3825.php](http://unfccc.int/ghg_data/items/3825.php) (last visited Jan. 11, 2016).
- <sup>5</sup> See Tristram Stuart, *Waste: Uncovering the Global Food Scandal* 243–44 (First American Edition 2009).
- <sup>6</sup> Swine Health Protection; Feeding of Processed Product to Swine, 6 C.F.R. § 166 (2009), [https://www.aphis.usda.gov/animal/health/animal\\_dis\\_spec/swine/downloads/interim\\_rule\\_pro-products.pdf](https://www.aphis.usda.gov/animal/health/animal_dis_spec/swine/downloads/interim_rule_pro-products.pdf).
- <sup>7</sup> For example, a Quaker Oats plant in Iowa sells oat hulls, flaked-off oat fibers, and cereal seconds to third-party companies that send repurposed food scraps to livestock producers. Kathleen Masterson, *Cows munch on recycled Captain Crunch*, Harvest Public Media (Jan. 29, 2012), <http://harvestpublicmedia.org/article/991/food-waste-into-livestock-feed/5>.
- <sup>8</sup> Tomoyuki Kawashima, *The use of food waste as a protein source for animal feed - current status and technological development in Japan*, Food & Agric. Org. of the U.N. (2002), <http://www.fao.org/3/a-y5019e/y5019e0i.htm>.
- <sup>9</sup> Jesse Hirsch & Reyhan Harmanci, *Food Waste: The Next Food Revolution*, Modern Farmer (Sept. 30, 2013), <http://modernfarmer.com/2013/09/next-food-revolution-youre-eating/>; *Feeding Animals: The Business Solution to Food Scraps*, EPA, <http://www2.epa.gov/sites/production/files/2015-08/documents/rutgers.pdf> (last updated Sept. 14, 2015).
- <sup>10</sup> Ashley Zanolli, *Sustainable Food Management in Action*, BioCycle (Mar. 2012), <http://www.biocycle.net/2012/03/14/sustainable-food-management-in-action/>.
- <sup>11</sup> Sigrid Wright & Sarah Antonelli, *Rebalancing the Food Waste Equation: A Case Study for Santa Barbara* (Oct. 2015), <http://www.cecsb.org/food-waste/>.
- <sup>12</sup> *How Tracking Helped a Vegas Legend Lead the Way in Sustainability*, Benedictine Univ. (Jan. 21, 2014), <http://www.cvd.org/blog/tracking-helped-vegas-legend-lead-sustainability/>.
- <sup>13</sup> United States Environmental Protection Agency, *Reduce Wasted Food by Feeding Animals*, <http://www2.epa.gov/sustainable-management-food/reduce-wasted-food-feeding-animals> (last updated April 25, 2016).
- <sup>14</sup> Hirsch & Harmanci, *supra* note 9.
- <sup>15</sup> United States Environmental Protection Agency, *Reduce Food Waste by Feeding Animals*, <https://www.epa.gov/sustainable-management-food/reduce-wasted-food-feeding-animals> (last updated April 25, 2016).
- <sup>16</sup> Marlow Vesterby & Kenneth S. Krupa, Resource Economics Division, Economic Research Service, U.S.D.A., *Major Uses of Land in the United States*, Statistical Bulletin. No. 973 (1997) [http://www.ers.usda.gov/media/252395/sb973\\_1.pdf](http://www.ers.usda.gov/media/252395/sb973_1.pdf).
- <sup>17</sup> Dani Peters, Oregon University Extension Services, *The Market Hog Guide to Success* (January 2011) [https://extension.unh.edu/resources/files/Resource002335\\_Rep3430.pdf](https://extension.unh.edu/resources/files/Resource002335_Rep3430.pdf).
- <sup>18</sup> *Id.*
- <sup>19</sup> M.M. Mekonnen & Hoekstra, A.Y., *The green, blue and grey water footprint of crops and derived crop products*, Value of Water Research Report Series No. 47, UNESCO-IHE (2010) <http://waterfootprint.org/media/downloads/Report47-WaterFootprintCrops-Vol1.pdf>.
- <sup>20</sup> Cong. Res. Service, *Fruits, Vegetables, and Other Specialty Crops: Selected Farm Bill and Federal Programs 1–2* (July 11, 2014), <http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R42771.pdf>.
- <sup>21</sup> See Erasmus K.H.J. zu Ermgassen, Ben Phalan, Rhys E. Green, & Andrew Balmford, *Reducing the land use of EU pork production: Where there's swill, there's a way*, 58 Food Pol'y 35 (2016).
- <sup>22</sup> 7 U.S.C. § 3801 *et seq.* (2012).
- <sup>23</sup> *Id.*
- <sup>24</sup> 9 C.F.R. § 166 (2016).
- <sup>25</sup> *Id.* § 166.1. SHPA regulates and refers to excess food fed to swine as “garbage,” defined as “waste derived from the meat of an animal (including fish or poultry), or other animal material, and other refuse . . . that has been associated with any such material, resulting from the handling, preparation, cooking or consumption of food . . . .” *Id.*
- <sup>26</sup> *Id.* §§ 166.2, 166.7.
- <sup>27</sup> *Id.* § 166.2.
- <sup>28</sup> *Id.* § 166.1.
- <sup>29</sup> *Id.*
- <sup>30</sup> *Id.* § 166.2.
- <sup>31</sup> See *e.g.*, *id.* § 166.3(a) (“Access by swine to garbage handling and treatment areas shall be prevented by construction of facilities to exclude all ages and sizes of swine”); *id.* § 166.3(b) (“All areas and drainage therefrom, used for the handling and treatment of untreated garbage shall be inaccessible to swine on the premises. This shall include the roads and areas used to transport and

handle untreated garbage on the premises.”); *id.* § 166.6 (“Untreated garbage shall not be allowed into swine feeding areas”); *id.* § 166.8 (“Vehicles used . . . to transport untreated garbage, except those that have also been used to treat the garbage so moved, shall not be used for hauling animals or treated garbage until cleaned and disinfected.”).

*Id.* § 166.4(a).

*Id.* § 166.17.

*Id.* § 166.1 (excluding household food waste generated on the premises where the swine are fed from the definition of garbage).

*Id.* § 166.2(c) (“The regulations of this part shall not be construed to repeal or supersede State laws that prohibit feeding of garbage to swine or to prohibit any State from enforcing requirements relating to the treatment of garbage that is to be fed to swine or the feeding thereof which are more stringent than the requirements contained in this part. In a State which prohibits the feeding of garbage to swine, a license under the Act will not be issued to any applicant.”).

21 C.F.R. § 589.2000 (2016), <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?fr=589.2000>.

*Id.*

*Id.*

*Id.* FDA has issued guidance on foods that cannot be fed to ruminants, which is available at <http://www.fda.gov/AnimalVeterinary/GuidanceComplianceEnforcement/ComplianceEnforcement/BovineSpongiformEncephalopathy/ucm114453.htm>. The Washington State Department of Agriculture has issued similar guidance, which is available at <http://agr.wa.gov/FoodAnimal/AnimalFeed/Publications/ProhibMatDefs.pdf>.

*Id.*

*Id.*

*Id.* Certain inspection exceptions are made for those that “blend” multiple protein products.

*Id.*

*Id.*

21 C.F.R. § 507.12.

*See id.* § 507.12(a).

Supplemental Animal Preventive Controls Notice, 79 Fed. Reg. 58476 at 58487–58489 (Sept. 29, 2014).

*Id.*

9 C.F.R. § 166.

21 C.F.R. § 589.2000.

21 C.F.R. § 507.

*Id.* § 507.12(a)(1).

*Id.* § 507.12(a)(2). FDA indicates that “further processing” includes any manufacturing/processing (as defined in 21 C.F.R. § 507.3) and any other activities such as cooking, freezing, pelleting, and milling. Certain “passive” activities—such as dewatering by holding a byproduct in a container with a screened bottom which allows water to escape, or holding byproducts in a perforated container which allows natural drying to occur—are not considered “further processing.” Nor is holding byproducts at particular temperatures (to facilitate easier transportation of the byproducts) considered “further processing.” But cooking or freezing a byproduct to prevent deterioration or adulteration is considered “further processing.” Current Good Manufacturing Practice, Hazard Analysis, and Risk- Based Preventive Controls for Food for Animals, 79 Fed. Reg. 56170 at 56224 (Sept. 17, 2015).

21 C.F.R. § 507.12(b).

*Id.* § 507.28(a).

*Id.* § 507.28(b).

*Id.* § 507.28(c).

*See id.* §§ 117.3, 507.3.

*Id.* § 1.227.

*See id.*

*See* FDA, Food Safety Modernization Act (FSMA) Frequently Asked Questions, <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm247559.htm> (last visited Jan. 4, 2016).

*See* 21 C.F.R. § 1.227.

*See id.*

*Id.*

FSMA Final Rule for Preventive Controls for Animal Food, FDA, <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm366510.htm> (last visited Jan. 12, 2016); Final Rules for Preventive Controls for Human and Animal Food: Who is Covered? What is the Definition of a Farm?, FDA, <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm247546.htm> (last visited Jan. 12, 2016).

Final Rules for Preventive Controls for Human and Animal Food: Who is Covered? What is the Definition of a Farm?, FDA, <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm247546.htm> (last visited Jan. 12, 2016).

Final Rule for Preventive Controls for Animal Food: Significant Provisions of the Rule, FDA, <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm461512.htm> (last visited Jan. 4, 2016).

<sup>68</sup> See 21 C.F.R. § 507.5(d).  
<sup>69</sup> *Id.* §§ 117.3, 507.3.  
<sup>70</sup> *Id.* §§ 117.5, 507.5(d).  
<sup>71</sup> *Id.*  
<sup>72</sup> See *id.* § 507.28(a)–(c).  
<sup>73</sup> See *id.* §§ 117.3, 507.3 (defining a “facility” as “a domestic facility or foreign facility that is required to register under section 415 of the Federal Food, Drug, and Cosmetic Act . . .”).  
<sup>74</sup> See *id.* § 507.5; see also *id.* § 117.3.  
<sup>75</sup> See *id.* § 117.5, 507.5.  
<sup>76</sup> Note that this rule is consistent with the SHPA and many state garbage-feeding restrictions that exempt individuals who feed household garbage to their own swine. See 9 C.F.R. § 166.1; Appendix A.  
<sup>77</sup> FDA defines food as “articles used for food or drink for man or other animals.” 21 U.S.C. § 321(2)(f) (2012). Hence, any article that is intended to be used in animal feed or drinking water is considered “food” and thus subject to the FFCA.  
<sup>78</sup> *Id.* § 342(1).  
<sup>79</sup> *Id.* § 343.  
<sup>80</sup> FDA Product Regulation, <http://www.fda.gov/AnimalVeterinary/Products/AnimalFoodFeeds/ucm050223.htm> (last visited Mar. 12, 2016).  
<sup>81</sup> FDA Animal Food & Feeds Product Regulation, <http://www.fda.gov/AnimalVeterinary/Products/AnimalFoodFeeds/ucm050223.htm> (last visited Jan. 4, 2016).  
<sup>82</sup> See 21 C.F.R. § 501.  
<sup>83</sup> *Id.* § 501.5.  
<sup>84</sup> *Id.* § 501.17.  
<sup>85</sup> *Id.* § 501.22.  
<sup>86</sup> *Id.* § 321(2)(m).  
<sup>87</sup> FDA Animal Food & Feeds Product Regulation, *supra* note 81.  
<sup>88</sup> *Id.*  
<sup>89</sup> The Official Publication of the AAFCO is updated yearly and can be obtained by contacting the AAFCO at AAFCO@aafco.org. See also the AAFCO website, <http://www.aafco.org/> (last visited Jan. 4, 2016).  
<sup>90</sup> Alabama, Delaware, Idaho, Illinois, Kansas, Kentucky, Louisiana, Mississippi, Nebraska, North Dakota, Oregon, South Carolina, Texas, Vermont, and Wisconsin; see also Table 1 for a summary of each state’s law.  
<sup>91</sup> Alabama, Illinois, Kansas, Kentucky, Louisiana, Mississippi, North Dakota, Oregon, and Wisconsin.  
<sup>92</sup> Arizona, Arkansas, California, Colorado, Connecticut, Florida, Hawaii, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Virginia, Washington, West Virginia, and Wyoming;; see also Table 1.  
<sup>93</sup> Arkansas, Colorado, Iowa, Minnesota, Missouri, New Jersey, Oklahoma, Rhode Island, Tennessee, Virginia, West Virginia, and Wyoming; see also Table 1.  
<sup>94</sup> James D. Ferguson, *Food Waste as Animal Feed*, in *Food Waste Across the Supply Chain: A U.S. Perspective on a Global Problem* 235 (Zhengxia Dou et al. eds., 2016); see also M.L. Westendorf & R.O. Myer, *Feeding Food Wastes to Swine* 3 (Univ. of Florida Animal Sciences Dept., Paper No. AS143, 2015); Food & Agriculture Org. of the U.N., *Farmer’s Hand Book on Pig Production*, GCP/NEP/065/EC (2009), [http://www.fao.org/ag/againfo/themes/documents/pigs/Handbook%20on%20Pig%20Production\\_English%20layout-Vietnam-Draft.pdf](http://www.fao.org/ag/againfo/themes/documents/pigs/Handbook%20on%20Pig%20Production_English%20layout-Vietnam-Draft.pdf).  
<sup>95</sup> Telephone Interview with David Driscoll, Development Specialist, Alaska Department of Natural Resources, Division of Agriculture (Nov. 23, 2015).  
<sup>96</sup> Telephone Interview with Laura Ayers, Livestock Inspector, Hawaii Department of Agriculture, Animal Industry Division (Jan. 13, 2016).  
<sup>97</sup> Email from Jay Miller, Attorney 3, Ellington Agricultural Center, Tennessee Department of Agriculture, to author (Apr. 21, 2016, 11:50 EST) (on file with author).  
<sup>98</sup> *Id.*

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