

# Agricultural System: Factory Farming Practices

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## *Introduction*

Factory farming is an agribusiness strategy that employs a variety of practices in order to maximize agribusinesses profits at the expense of society and of the environment.<sup>1</sup> Each year, nearly ten billion land animals are confined and raised in factory farms to produce meat, dairy, and eggs.<sup>2</sup> The animals raised on these over crowded farms are bred to grow unnaturally fast and undergo painful mutations in order to maximize the production of these items.<sup>3</sup>

Many factory farms are considered a part of the Concentrated Animal Feeding Operation (CAFO) category.<sup>4</sup> This category consists of our nation's largest factory farming operations.<sup>5</sup> A CAFO differs from an Animal Feeding Operation (AFO) in that CAFOs are regulated under the National Pollution Discharge Elimination System (NPDES) permitting program.<sup>6</sup>

CAFOs are giant livestock farms that hold thousands of animals such as cows, chickens, or pigs.<sup>7</sup> These close quartered animals produce staggering amounts of manure

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<sup>1</sup> *Factory Farming*, FARM SANCTUARY, <http://www.farmsanctuary.org/learn/factory-farming/> (last visited Jan. 7, 2014).

<sup>2</sup> *11 Facts about How Factory Farms Affect the Environment*, DO SOMETHING, <http://www.dosomething.org/tipsandtools/11-facts-about-factory-farms-and-environment> (last visited Oct. 3, 2013).

<sup>3</sup> *Factory Farming*, *supra* note 1.

<sup>4</sup> *Coalition Sues EPA for Abandoning Critical Factory Farm Rule*, HUMANE SOCIETY OF THE UNITED STATES (Aug. 28, 2013), *available at* [http://www.humanesociety.org/news/press\\_releases/2013/08/coalition-sues-epa-factory-farm-rule-abandonment-082813.html](http://www.humanesociety.org/news/press_releases/2013/08/coalition-sues-epa-factory-farm-rule-abandonment-082813.html).

<sup>5</sup> *Id.*

<sup>6</sup> Gerald May, *What Does It Take to Be a CAFO*, MSU EXTENSION (Oct. 8, 2013), *available at* [http://msue.anr.msu.edu/news/what\\_does\\_it\\_take\\_to\\_be\\_a\\_cafo](http://msue.anr.msu.edu/news/what_does_it_take_to_be_a_cafo).

<sup>7</sup> *11 Facts*, *supra* note 2.

that is then stored and used in numerous ways that have substantial effects on human health and the environment.<sup>8</sup> The manure produced by these animals is nearly 100 times the amount of waste treated by municipal wastewater plants.<sup>9</sup> It is also not processed like human waste is by the use of waste treatment facilities.<sup>10</sup> Among other dangers, the waste produced by these animals seeps into the water supply and the gases the waste emits harmfully affects air quality.<sup>11</sup>

The Environmental Protection Agency (EPA) still lacks pertinent data about specific waste management practices and locations of these factory farms.<sup>12</sup> However, after the threat to our water systems became evident, Congress mandated that the EPA regulate CAFOs in accordance with the Clean Water Act (CWA).<sup>13</sup> Even so, factory farms not meeting the criteria of CAFOs vary considerably from one another in terms of the restrictions placed on them.<sup>14</sup>

### *Effects on the Environment*

Because the animals are crowded into considerably small areas their wastes are channeled into massive waste lagoons.<sup>15</sup> These waste lagoons often leak or overflow sending dangerous microbes, nitrate pollutants, and drug-resistant bacteria's into our water supplies.<sup>16</sup> Factory-farm waste lagoons also emit toxic gases such as ammonia,

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<sup>8</sup> *Pollution from Giant Livestock Farms Threatens Public Health*, NRDC, <http://www.nrdc.org/water/pollution/nspills.asp> (last visited Jan. 7, 2014).

<sup>9</sup> *Environmental Info*, PLATE TO PLANET, <http://www.platetoplanet.org/environmental-info/> (last visited Jan. 7, 2014).

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Coalition Sues*, *supra* note 4.

<sup>14</sup> *Id.*

<sup>15</sup> *Pollution from Giant Livestock*, *supra* note 8.

<sup>16</sup> *Id.*

hydrogen sulfide, and methane.<sup>17</sup> The methane released into the environment accounts for thirty-seven percent of methane emissions worldwide, and these emissions have twenty times the global warming potential of carbon dioxide.<sup>18</sup>

The waste created by these animals at the CAFOs not only contaminate the groundwater, but factory farms also deplete it by using the groundwater for their cleaning, cooling, and drinking needs.<sup>19</sup> The federal government has chosen to forgo new regulatory laws for these CAFOs despite the millions of tons of animal waste that pollute our waterways.<sup>20</sup>

According to the Environmental Integrity Project, a study they conducted produced results confirming that some factory farm's produce emission levels well beyond the Clean Air Act health-based limits.<sup>21</sup> Despite this pollution, CAFOs further this contamination by spraying the waste onto their lands, as fertilizer by use of spray fields, and by doing so allow more of these harmful substances into our air and water systems.<sup>22</sup> For example, CAFOs emit ammonia into the atmosphere.<sup>23</sup> The EPA estimates that 80 percent of ammonia emissions in the United States comes from the waste of these farm animals.<sup>24</sup> These emissions have disastrous effects on the environment in that it may disrupt aquatic ecosystems, ruin soil quality, and cause damage to crops.<sup>25</sup>

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<sup>17</sup> *Id.*

<sup>18</sup> *11 Facts, supra* note 2.

<sup>19</sup> *Id.*

<sup>20</sup> Tommy Dean, *EPA Strikes down Proposed Factory Farm Regulations*, VEGNEWS (June 20, 2013), available at <http://vegnews.com/articles/page.do?pageId=5896&catId=8>.

<sup>21</sup> *11 Facts, supra* note 2.

<sup>22</sup> *Pollution from Giant Livestock, supra* note 8.

<sup>23</sup> *Environmental Info, supra* note 9.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

Despite these consequences, the EPA has chosen not to adopt a rule requiring these farms to report to them.<sup>26</sup> In response to this decision, environmentalist groups have threatened to sue the EPA.<sup>27</sup> The EPA then agreed to propose a reporting rule, but made no promises that it would be adopted.<sup>28</sup>

### *Effects on Society and Human Health*

In order to breed the animals to develop unnaturally fast, as well as allow them to combat illnesses and injuries conducive in this environment, CAFOs treat all the animals with sub-therapeutic levels of antibiotics.<sup>29</sup> These antibiotics may contribute to the creation of antibiotic resistant bacteria that may risk society's human health. For example, Roxarsone is an antimicrobial drug containing the human carcinogen arsenic, and is used to promote faster growth, improve color, and kill off diseases affecting these animals.<sup>30</sup>

In addition to being a carcinogen, Roxarsone exposure has also been attributed to cardiovascular disease, disabilities, and neurological disorders among the human population, even when individuals are exposed to it routinely in relatively low levels.<sup>31</sup> This affects human health on such a fundamental level because there is great possibility that the consumer-grade meat may be loaded with these antibiotic resistant bacteria.<sup>32</sup>

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<sup>26</sup> Megan Bedard, *EPA Has No Clue How Many Farm Exist*, TAKEPART (Aug. 02, 2012), available at <http://www.takepart.com/article/2012/08/03/epa-we-have-no-clue-how-many-farms-exist>.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Factory Farming*, *supra* note 1.

<sup>30</sup> *Legislation and Regulation Regarding Factory Farming*, PRESERVATION NATION, <http://www.preservationnation.org/information-center/saving-a-place/rural-heritage/factory-farms/legislation-and-regulation.html#.Ulhj22TXgVk> (last visited Jan. 7, 2014).

<sup>31</sup> Leah Zerbe, *Factory Farms Use 30 Million Pounds of Antibiotics a Year*, RODALE NEWS (Dec. 21, 2010), available at <http://www.rodale.com/antibiotics?page=0,0>.

<sup>32</sup> *Factory Farm, Take Action*, FOOD & WATER WATCH, <http://www.foodandwaterwatch.org/food/factoryfarms/> (last visited Jan. 7, 2014).

CAFOs also affect human health by the use of spray fields, which is when the manure produced by the animals are pumped out of the waste lagoons and sprayed onto the fields as fertilizer.<sup>33</sup> The combination of waste produced by the animals, and nitrates from the spray fields in these factory farms can pollute water supplies.<sup>34</sup> Drinking this polluted water increases society's vulnerability to different diseases.<sup>35</sup> For example, drinking the water contaminated with the waste and nitrates of these lagoons can increase the risk of death in infants from Blue Baby Syndrome.<sup>36</sup>

Aside from the effects of contamination of our water supply, gases that are emitted from these factory farms as the manure decomposes contain a number of harmful chemicals.<sup>37</sup> The individuals and families who are in close proximity to these factory farms breathe in harmful chemicals released by the waste lagoons, such as hydrogen sulfide.<sup>38</sup> Even at low levels of exposure, these chemical are quite dangerous and its effects are irreversible.<sup>39</sup>

Exposure at low levels can cause eye irritation, sore throat, shortness of breath and fluid to fill in the lungs. Further, at constant low levels these gases can cause irritability, memory loss, and dizziness.<sup>40</sup> At high levels of exposure, hydrogen sulfide may be deadly within just a few breaths.<sup>41</sup>

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<sup>33</sup> *11 Facts, supra* note 2.

<sup>34</sup> *Pollution from Giant Livestock, supra* note 8.

<sup>35</sup> *Id.*

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *Hydrogen Sulfide Gas*, ILL. DEPT. OF PUBLIC HEALTH, <http://www.idph.state.il.us/envhealth/factsheets/hydrogensulfide.htm> (last visited Jan. 7, 2014).

<sup>41</sup> *Id.*

## *Regulations on Factory Farming and CAFOs*

Because factory farms are industrial facilities, the government should regulate them as such.<sup>42</sup> The government at all its various levels must be involved in setting and enforcing regulations since all of its levels have contributed to the rise of factory farming.<sup>43</sup> The government should set regulations<sup>44</sup> for these factory farms addressing the issues of obtaining permits, monitoring water quality, and paying for the cleaning and disposing of their animal wastes.<sup>44</sup>

Currently some, but not all, factory farms are required to obtain a NPDES permit, pursuant to the CWA. The NPDES permit program goal is to control water pollution by regulating point sources, such as the waste lagoons, whose discharge enters the waters of the United States.<sup>45</sup> The factory farms that are required to obtain the NPDES permit are considered CAFOs.<sup>46</sup> Less than sixty percent of factory farms are currently permitted.<sup>47</sup> The EPA regulates these NPDES permits.<sup>48</sup> Even though the EPA regulates the NPDES permits, the CWA allows the EPA to give the states its permitting authority.<sup>49</sup>

Although the NPDES permit regulates the pollution to our waters, CAFOs have not been required to abide by current industrial emission standards, even though they are causing substantial damage our air quality.<sup>50</sup> Since CAFOs are considered farms they are

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<sup>42</sup> *Pollution from Giant Livestock*, *supra* note 8.

<sup>43</sup> *How Factory Farms Impact You*, FACTORY FARM MAP, <http://www.factoryfarmmap.org/problems> (last visited Jan. 7, 2014).

<sup>44</sup> *Pollution from Giant Livestock*, *supra* note 8.

<sup>45</sup> *National Pollutant Discharge Elimination System*, EPA, <http://cfpub.epa.gov/npdes/> (last visited Jan. 7, 2014).

<sup>46</sup> *Legislation and Regulation*, *supra* note 30.

<sup>47</sup> *11 Facts*, *supra* note 2.

<sup>48</sup> *Legislation and Regulation*, *supra* note 30.

<sup>49</sup> *Id.*

<sup>50</sup> *Environmental Info*, *supra* note 9.

currently exempt from these regulation standards, despite releasing extremely toxic and unregulated pollutants and greenhouse gases society breathes in every day.<sup>51</sup>

### *Conclusion*

In conclusion, the growth of CAFOs has contributed to variety of environmental and public health problems.<sup>52</sup> The animals housed in these farms pollute water and air by producing millions of tons of manure annually.<sup>53</sup> This pollution moves up the food chain, thereby imposing significantly detrimental dangers to our environment and society's human health.<sup>54</sup>

The federal government needs to better address the problem of factory farms to protect society's public health and the environment because they pose such a detrimental danger.<sup>55</sup> The EPA should strive to adopt a plan that collects basic information about CAFOs as a potential starting point, such as collecting information related to where these farms are located, who owns them, and the kind of pollution capabilities they have.<sup>56</sup> Although the EPA to some degree regulates factory farms, it needs to better control the environmental damage these factory farms cause.<sup>57</sup> The federal government may accomplish this by introducing more protection regulations and enforcing current ones.<sup>58</sup>

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<sup>51</sup> *Id.*

<sup>52</sup> *How Factory Farms Impact You*, *supra* note 43.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

<sup>55</sup> *Legislation and Regulation*, *supra* note 30.

<sup>56</sup> Bridget Huber, *As Factory Farms Spread, Government Efforts to Curb Threat From Livestock Waste Bog Down*, FAIR WARNING (May 30, 2013), <http://www.fairwarning.org/2013/05/as-factory-farms-spread-government-efforts-to-curb-threat-from-livestock-waste-bog-down/>.

<sup>57</sup> *Factory Farm, Take Action*, *supra* note 32.

<sup>58</sup> *Pollution from Giant Livestock*, *supra* note 8.