

# **Animal Agriculture in South Carolina: A Fact Book**

M. L. Warner, Ph.D., Research Assoc./Assis. Prof., Ag and Applied Economics

H. Harris, Professor, Ph.D. Ag and Applied Economics

B.J. Vander Mey, Ph.D. Assoc. Prof., Sociology

J. Allen, Director, SC Water Resources Center

C. M. Sieverdes, Ph.D. Professor, Ag and Applied Economics

C. Mobley, Ph.D. Asst. Prof., Sociology

P. Skewes, Ph.D. Professor, Animal and Veterinary Sciences

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# Other Sources of Nonpoint Pollution

*Mellie L. Warner*

Animal agriculture is not the only source of “non-industrial” water pollution. Crop and other plant agriculture can also have a significant, negative impact on water quality. And there are significant nonpoint sources of pollution that have nothing to do with commercial agriculture, especially waste water treatment systems, home septic tanks, and urban stormwater runoff.

Recent newspaper articles have reported the impacts of some of these enterprises. On May 9, 1998, the *Washington Post* reported that a 1,400-acre nursery and composting facility in Loudon County, Virginia, has “violated environmental laws and polluted a nearby stream, killing fish and other aquatic life.” Runoff from the piles of composting yard waste has turned the nearby stream an oily black. Neighbors have been complaining about odors for years. A lack of sensitivity and knowledge is demonstrated by a quote from Keith H. Stewart, CEO of the operation who said, “We’re talking about natural products decomposing. It’s not like we’re talking about chemicals.”<sup>69</sup>

In February 1997, *US Water News Online* reported on a study by the USGS which found that fertilizers were the largest source of nitrogen in the White River watershed of Indiana, accounting for 61 percent of the total input of nitrogen. Farm animal wastes accounted for 19 percent, rainfall for 17 percent, and municipal sewage-treatment plants and industrial discharges for 3 percent.<sup>70</sup>

The November 9, 1997 edition of *Florida Today* reported growing concern over leaking septic tanks around the Indian River Lagoon. Rapid development has caused an increase in the number and density of septic tanks. A high groundwater table and sandy, porous soil contribute to the problem of waste reaching groundwater and then surface water before sufficient decomposition has taken place. *Florida Today* reports that septic tanks have been linked to pollution in such widely dispersed areas as Puget Sound, Chesapeake Bay, and Sarasota Bay.<sup>71</sup> A study of Lake Weatherford in Texas that was reported in *Toxicological and Environmental Chemistry* found that both septic tanks and agriculture were sources of contamination.<sup>72</sup>

According to the South Carolina Department of Health and Environmental Control, South Carolina has over 700,000 septic tanks. In addition, there are over 200 human waste lagoons. These add to the potential for water pollution. Also, human sewage systems are known to incur spills and overflows.

The County of Los Angeles issued a press release on May 4, 1998, outlining the problem of pet waste which is washed by rain into streets and gutters and then into storm drains, only to end up **untreated** in the ocean.<sup>73</sup> The impact of 125,000 dogs leaving waste behind them should not be taken lightly. In Encino, California, June 6, 1998, was marked as a day for pets to “sign” a petition stating that they value the environment and will make sure their owners clean up after them.<sup>74</sup> On June 8, 1998, the *Washington Post* reported that pollution in Four Mile Run which meanders through Northern Virginia is likely due to dog waste left in parks and yards. Don Waye, senior water resources planner with the Northern Virginia planning commission and George M. Simmons of Virginia Tech have applied for a state grant to investigate the pollution genetically.<sup>75</sup>

Simmons has developed DNA fingerprinting techniques to identify the sources of fecal coliform.<sup>76</sup> In a study of pollution in a clam bed on Virginia’s Eastern Shore, Simmons found the sources to be deer and raccoons. When large numbers of these and other animals were removed from the area, “fecal coliform . . . decreased by one to two orders of magnitude.”<sup>77</sup> (The number of deer in South Carolina is currently at least 1.6 million. Before restocking that began in 1954, the number of deer in South Carolina was about 10,000.)

Other urban pollutants that end up in stormwater include litter, debris, motor oil, fertilizers, and pesticides.

Keith Eshelman, a hydrologist at the University of Maryland center for Environmental Science, is studying the impact of forest defoliation by gypsy moths on the nitrogen content of runoff from the forests. He also thinks that over-browsing by deer could increase nitrogen runoff.<sup>78</sup>

The *San Diego Union-Tribune* reported on May 18, 1998, that the city of Thousand Oaks, California, has been fined \$2.1 million for a sewage spill that occurred when El Nino rains caused a wash-out of a sewer main.<sup>79</sup>

Florida's Broward County is threatening to fine the city of Fort Lauderdale up to \$15,000 per day if it does not enforce a city law that requires live-aboard boats to be hooked up to a city sewer line.<sup>80</sup>

All of these stories point to the fact that agriculture (particularly animal agriculture) is not the only source of water quality impairment. However, agriculture must not shirk its duty to control the amount of pollution it adds to the mix. All sectors of society must do their part.