

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

Table of Contents

Introduction	1
Current Status of Animal Agriculture in South Carolina: Comparison with Adjacent States	5
Adult South Carolinians' Opinions about Animal Agriculture	10
Depicting Trends in South Carolina Animal Agriculture	26
Spatial Relationships of Polluted Streams, Animal Agriculture, and Human Populations in South Carolina Watersheds	29
Economics of Regulating Animal Agriculture	41
How Governments Are Responding	44
South Carolina's New Regulations	44
What the Federal Government Is Doing	46
What's Happening in the States	47
What's Happening at the County and Local Levels	49
The Changing Structure of Animal Agriculture	50
Problems and Solutions	53
What Can Be Done?	53
Good News	54
Bad News	55
Other Sources of Nonpoint Pollution	56
Sources of Funding for Farmers	58
Websites of Interest for Agriculture and the Environment	61
Endnotes	65

Websites of Interest for Agriculture and the Environment

Consider these websites as places to begin. Once you start exploring the internet, you'll find more places. Be sure to bookmark the ones you like, because sometimes it's hard to remember how you got somewhere. Be sure to check back with sites from time to time to see if they have been updated or new features have been added. Happy surfing!

Federal Government

1. Ag Center Home Page—Office of Enforcement and Compliance Assurance-EPA (<http://es.epa.gov/oeca/ag/>). National Agriculture Compliance Assistance Center. "Your Source for Agricultural Environmental Compliance Assistance and Information." "The U.S. Environmental Protection Agency (EPA), with the support of the Department of Agriculture (USDA), has developed a National Agriculture Compliance Assistance Center (Ag Center) to provide a base for 'first-stop shopping' for the agriculture community—one place for the development of comprehensive, easy-to-understand information about approaches to compliance that are both environmentally protective and agriculturally sound."
2. List of funding sources for pollution prevention. http://www.epa.gov/earth1r6/6wq/at/nps/f_source.htm. USDA programs are described at <http://www.nhq.nrcs.usda.gov/OPA/FB96OPA/MiscFB.html>
3. Strategy for Addressing Environmental and Public Health Impacts from Animal Feeding Operations—Draft. March 4, 1998. USEPA draft AFO strategy. (<http://www.agriculture.com/contents/FFA/agman/>)
4. Compliance Assurance Implementation Plan For Concentrated Animal Feeding Operations (<http://es.epa.gov/oeca/strategy.html>) Draft proposal from EPA, March 5, 1998.
5. What's New at EPA. Links to new programs and publications at EPA. (<http://www.epa.gov/epahome/WhatsNew.html>)
6. Pollution Prevention News, EPA newsletter. What other people are doing. (<http://www.epa.gov/opptintr/ChemLibPPN/>)
7. Nonpoint Pollution Control Program—Office of Water—EPA (<http://www.epa.gov/OWOW/NPS/index.html>)
8. Agricultural Branch of EPA's Office of Enforcement and Compliance Assurance (<http://es.epa.gov/oeca/agbranch.html>) Includes *Enforceable State Mechanisms for the Control of Nonpoint Source Water Pollution* at <http://www.epa.gov/OWOW/NPS/elistudy/> which summarizes the laws under which states may regulate nonpoint source water pollution.
9. Clean Water Initiative: Restoring and Protecting America's Waters. EPA's Cleanwater Action Plan and resources. <http://www.epa.gov/cleanwater/>
10. Watershed Academy 2000, EPA. Distance learning. (<http://www.epa.gov/OWOW/watershed/wacademy/acad2000.html>)
11. Surf Your Watershed, South Carolina—information on watershed quality from EPA (<http://www.epa.gov/surf/stinfo/SC/>). Click on State Index of Watershed Indicators to see the watersheds in South Carolina in color indicating water quality. To get more information on a specific watershed, click on the map or scroll down to see a list of watersheds and then click.
12. Watershed advocacy groups in South Carolina. Part of Surf Your Watershed. (<http://yosemite.epa.gov/water/adopt.nsf/by+state?SearchView&Query=South+Carolina>)
13. EPA's Office of Wastewater Management. Links to various documents concerning wastewater. (<http://>

www.epa.gov/owm/new.htm) See especially <http://www.epa.gov/owm/afo.htm> for information on animal feeding operations.

14. Committee on Agriculture, Nutrition, and Forestry—U.S. Senate (<http://www.senate.gov/~agriculture/newleg.htm>). Also, <http://www.senate.gov/~agriculture/animalw.htm> for ANIMAL WASTE POLLUTION IN AMERICA: AN EMERGING NATIONAL PROBLEM. Environmental Risks Of Livestock & Poultry Production, December 1997, Report Compiled by the Minority Staff of the United States Senate Committee on Agriculture, Nutrition, & Forestry for Senator Tom Harkin (D-IA) Ranking Member.
15. Farm*A*Syst/Home*A*Syst (<http://www.wisc.edu/farmasyst/>)
16. Farm Inputs, Resources and Management Related to Water Quality (<http://www.nal.usda.gov/wqic/inputs.html>)
17. USDA, NRCS—Home Page (<http://www.nrcs.usda.gov/>)
18. Farm Service Agency (<http://www.fsa.usda.gov/pas/default.asp>)
19. NRCS Agricultural Waste Management Field Handbook (Contents and how to order) (<http://www.wcc.nrcs.usda.gov/water/quality/common/wastemgmt/wastetable.html>)
20. Animal Waste Management Software (<http://www.ncg.nrcs.usda.gov/tools/awm.html>)
21. Nutrients Available from Livestock Manure Relative to Crop Growth Requirements (USDA-NRCS) (<http://www.nhq.nrcs.usda.gov/land/pubs/nlweb.html>)
22. Manure Master: Decision Support System (<http://db007.ncg.nrcs.usda.gov:6789/ManureMaster/>)

Universities

23. Pollution Potential of Livestock Manure (Clemson) (<http://gaia.ageng.umn.edu/extens/ennotes/enwin95/manure.html>)
24. Swine Manure as a Fertilizer Source (http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag439_4.html)
25. Watershed Management: Planning and Managing a Successful Project To Control Nonpoint Source Pollution (NCSU publication) (<http://www2.ncsu.edu/bae/programs/extension/publicat/wqwm/ag522.html>)
26. MARK: Home to NCSU's Extension Swine Husbandry (<http://mark.asci.ncsu.edu/>)
27. Animal Waste and the Environment (GA.) (<http://www.ces.uga.edu/pubcd/c827-w.html>)
28. Florida Agricultural Information Retrieval System. Environmental Structures and Waste Mgmt. Topics: Links to papers out of UFL about animal waste topics. (<http://hammock.ifas.ufl.edu/txt/fairs/19768>) Also Water Quality Topics at <http://hammock.ifas.ufl.edu/txt/fairs/19634>
29. Virginia Cooperative Extension. Poultry Education Resources. Links to information about poultry farming. (<http://www.apsc.vt.edu/Faculty/Clauer/resource/resource.html>)

Laws

30. Legal Information Institute: Topical Index: State Statutes on the Internet (http://www.law.cornell.edu:80/topics/state_statutes.html#agriculture)

31. National Center for Agricultural Law (<http://law.uark.edu/arklaw/aglaw/>)
32. Environmental Information, Permits and Law on the WWW. Links to many environmental resources. (<http://ctcnet.net/gdsbm/environm.htm>)
33. Summary of EPA laws that may affect agriculture. (<http://es.epa.gov/oeca/lawsver1.pdf>)

Links

34. Swine Links—IWCC Swine Management Program (<http://www.nishna.net/iwccpig/smplinks.htm>)
35. Page of links—Agricultural/Biological/Environmental—ASAE (<http://asae.org/hotlist/abe/>)
36. Resource Economics and Policy (North Carolina State University) (<http://www.ces.ncsu.edu/PIE/outline.html>). Links to Policy Issues Education Homepage (<http://www.ces.ncsu.edu/PIE/>) and other resources.
37. Progressive Farmer’s list of their favorite internet sites. (<http://progressivefarmer.com/best/index.html>)
38. The Agriculture Webring. This is a circle of connected websites about agriculture. I haven’t really looked at it, but it may be useful. (<http://www.micoks.net/~agring/frames.html>)

Statistics

39. Fact Finders for South Carolina Agriculture (<http://www.nass.usda.gov/sc/>)
40. Statistics: Livestock, Poultry and Dairy—NC (<http://www.agr.state.nc.us/stats/livestoc.htm>)
41. Georgia Agricultural Statistics Service (<http://www.nass.usda.gov/ga/>)

Miscellaneous

42. FAPRI: Food and Agriculture Policy Research Institute (<http://www.fapri.missouri.edu/>)
43. The Ecological Society of America. (<http://esa.sdsc.edu/>) This website includes their latest publication, “Nonpoint Pollution of Surface Waters with Phosphorus and Nitrogen.”
44. Agricultural Conservation Innovation Center (<http://agconserv.com/>)
45. Iowa Hog Confinement (<http://www.salamander.com/~manyhogs/>) Grassroots opposition.
46. Center for Rural Affairs (<http://www.cfra.org/index.html>). Also see Spotlight on Pork III at http://www.cfra.org/spotlight_on_pork_III.htm for a summary of state regulations.
47. National Pork Producers Council (<http://www.nppc.org/>). They also have a chat room at <http://www.nppc.org/wwwboard/wwwboard.html>.
48. National Cattlemen’s Beef Association homepage. <http://www.cowtown.org/>. Also South Carolina Beef Board/South Carolina Cattlemen’s Association. <http://sc.beef.org/>
49. Guide to Environmental Quality in Pork Production (from NPPC) (<http://www.nppc.org/PROD/EnvironmentalSection/environguide.html>)
50. Boss Hog: North Carolina’s Pork Revolution—from the *News and Observer* (<http://www.nando.net/sproject/hogs/hoghome.html>)

51. Animal Waste Management—Idaho (<http://www.oneplan.state.id.us/stock/animal.htm>)
52. “Agriculturally correct” superhero Agman, comic strip designed to appeal to youth. (<http://www.agriculture.com/contents/FFA/agman/>)
53. Council for Agricultural Science and Technology, CAST homepage. (<http://www.cast-science.org/>)
54. Sustainable Farming Connection (<http://sunsite.unc.edu/farming-connection/index.html>) Information for farmers.
55. To see the Power Point slides that were a part of Steve Baker’s talk, “Agriculture is About to Get Very Small,” at Clemson on May 18, 1998, go to <http://hubcap.clemson.edu/scafrs/seminar.html>. Baker is a division head at AgriBank. He believes that we are on the verge of a new revolution in the structure of agriculture.