



ANIMAL
SCIENCES

Animal Biotechnologist: Reproductive or Nutritional Specialist

An Animal Biotechnologist studies the impact of nutrients in feed and/or animal reproductive processes to develop methods for improved animal health and more efficient production.



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Inspiring Minds to Grow


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career profile


*Name: Phillip McIntosh
Job Title: Animal Scientist/
Biotechnologist*

Employer: Spangler Mountain Farms

*Education: BS, Illinois State University: Bloomington-Normal;
MS, Iowa State University: Ames*

 I am an animal scientist/biotechnologist with Spangler Mountain Farms—a large poultry integrator producing broilers for markets in the United States and abroad. While growing up, my family kept a few free-range chickens on our small part-time farm. These chickens were always interesting to me. I loved to watch how they scratched and pecked in the grass and soil searching for something to eat. (Of course, we always had poultry feed available for them in a self-feeder.) When I was in the ninth grade, I recall hearing my agriscience teacher talk about various careers in the poultry industry. That got my interest.

 My work deals with developing new and improved strains of chickens that grow rapidly and efficiently in broiler house conditions. I maintain small flocks of breeder hens and cockerels in a research-oriented facility somewhat like a miniature poultry farm. I carefully record and maintain pedigree information. Although natural mating is typical, artificial insemination is sometimes used. With growing birds, I regularly weigh them, determine “meatiness,” and keep records on daily gain and feed intake. My goal is to have a strain of chickens that will reach harvest weight of 4 pounds within five weeks of hatching. I know that some strains can now reach this weight in about 36 days on about 9 pounds of feed. I want to shorten it by a day or more which, in doing so, will result in feed savings for the days saved. I also want the chickens to dress out at 77 percent of live weight—a gain of a couple of percentage points over the current best.

 I sometimes get questions about my work, such as, “Do you like what you do?” I enjoy working with chickens and developing new strains of birds that will grow rapidly and have a high yield of desirable meat. In effect, I combine reproductive sciences with nutrition sciences to achieve my goal. The two go together—I cannot achieve my goal (even if I develop the “right” chicken) without feed that meets nutritional needs for growth. And, of course, I work as a team member with other dedicated people.



Animal Scientist/ Biotechnologist

overview



An **animal scientist/biotechnologist** is a scientist who is devoted to seeking new and more efficient ways of meeting human needs for food.

suggested high school courses



[biology](#) and [advanced biology](#), animal science or poultry science, mathematics, computer applications, and communications

experience needed



Practical experience on a poultry farm and/or with chickens is definitely beneficial. Job shadowing or working part-time during the summer with an animal scientist is also useful in learning research methods.

degree(s) required



A BS degree in poultry science or animal science is required, followed by an MS degree in poultry science that combines genetics, animal breeding, and nutrition.

potential employers



poultry integrators, university research departments, feed manufacturers

salary range



\$35,000 to \$72,000

employment outlook and trends



The demand for animal scientists/biotechnologists is **good**.

professional organizations



American Academy of Veterinary Nutrition www.aavn.org/
Poultry Science Association poultryscience.org/
American Society of Animal Science www.asas.org/
American Federation of Apiculture, Inc. afabirds.org/



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