



Large Animal Veterinarian Loan Programs

Do large animal veterinarian loan programs reduce veterinary shortages in MO?

Missouri has eight veterinarian shortage areas.

Large animal veterinarians help keep farm animals (e.g., horses, cows, sheep, goats, pigs) healthy and ensure that the food derived from farm animals is safe for human consumption. They consult with farmers about best practices for animal nutrition and housing, vaccinate food animals from disease, treat sick animals, and ensure that food from formerly sick animals is safe for consumption (FDA 1 2022).

- About 8% of veterinarians care primarily for large animals, while 4.2% care for large animals part-time (AVMA n.d.).

Most available workforce data for veterinarians does not distinguish large animal veterinarians from other types.

- There are about 86,000 U.S. veterinarians (BLS 1 2022); around 1,500 veterinarians practice in Missouri (BLS 2 2022).
- Around 3,200 veterinarians work in various federal agencies to ensure that drugs provided to animals are safe and that food from animals is safe to eat (FDA 2 2022).

Research Highlights

There are 8 veterinarian shortage areas in MO.

Veterinarians graduate with an average of \$150,000 in debt.

Increasing the amount of money a student can borrow increases bachelor's completion rates.

It is not clear how large animal veterinarian loan programs affect veterinarian shortage areas.

- Employment for veterinarians of all types is expected to grow by 19% from 2021 - 2031, which is almost 4x the expected growth for all occupations over that time (BLS 1 2022).

In 2023, the U.S. National Institute of Food and Agriculture (NIFA) designated eight veterinarian shortage areas in MO (Figure 1). These areas have needs for 30% - 80% of a full-time equivalent veterinarian.

- Missouri has three statewide shortages for teaching professors, state regulatory veterinarians, and public health veterinarians.
- Missouri also has five county-specific shortages areas for veterinarians that serve beef and dairy cattle, swine, and poultry.

The average veterinary student graduates with \$150,000 in debt.

The median annual wage for a veterinarian in the U.S. is about \$100,000 (BLS 3 2022). In MO, the average salary was \$83,830 (BLS 2 2022).

- In 2022, veterinary students graduated with an average debt of \$150,000 (Burns 2022).

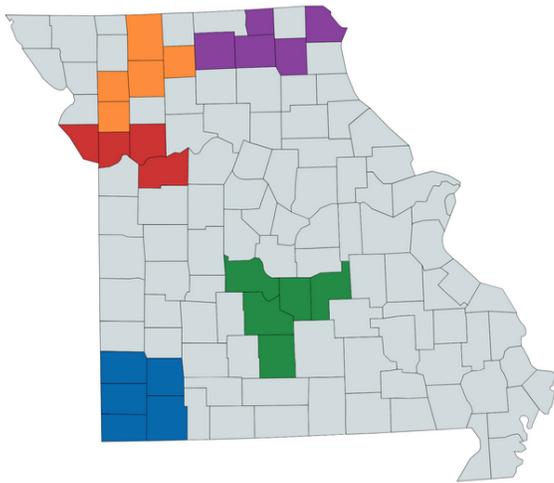


Figure 1. County specific veterinarian shortage areas in MO (colors). There are also three veterinarian shortage areas for the entire state. Created with data from the [U.S. NIFA](#).

The University of Missouri contains the state’s only Doctor of Veterinary Medicine program. The estimated annual cost of attendance is about \$51,000 for Missouri residents, and about \$93,000 for out-of-state residents ([UM 1 n.d.](#)).

- In 2022, 115 students graduated from the program and 116 new students were admitted ([UM 2 n.d.](#); [UM 2022](#)).
- It is not clear how many graduates stay in state to pursue work.

It is not clear how large animal veterinarian loan programs affect veterinarian shortage areas.

Removing student borrowing constraints (e.g., loan limits) can increase bachelor’s completion rates by 2.4% ([Johnson 2013](#)). A similar increase in the amount of money available to students in the form of a grant can increase bachelor’s completion rates by 5.3%. Additionally, students who have limited financial support from their parents increase the average time that they stay in school when provided with access to loans and grants ([Brown 2011](#)).

Graduate students held 47% of federal

education loans between 2020–2021 ([Ma 2021](#)). There is relatively less research on the effects of student loan programs on attendance and completion of advanced degree programs compared to the effects on bachelor’s degree programs.

Veterinary Loans & Grants. The MO Department of Agriculture runs the [Large Animal Veterinary Student Loan Program](#). It provides \$20,000 in veterinary education loans to six Missourians per year. The loans are forgiven if the student practices large animal veterinary services in an area that has employment opportunities for large animal veterinarians; can economically support a veterinarian; whose veterinarian population is decreasing; or has had requests from individuals, communities, or organizations for more veterinarians ([SOS 2009](#)).

NIFA runs a [veterinary medicine loan repayment program](#) that pays up to \$25,000 per year for veterinarians who serve for at least three years in a veterinarian shortage area; priority is given to veterinarians who serve food animals.

NIFA also runs a [veterinary educational grant program](#) to bolster veterinary services for food animals in shortage areas. Grants are used to establish or expand veterinary education programs; provide continued education for veterinarians for food safety and public health; cover travel and living expenses for veterinary students; and expose high school students to food animal medicine. The program is expecting approximately \$4 million dollars to be available for grants in 2023.

There is not enough evidence to determine how these loan and grant programs impact (1) enrollment and graduation rates from veterinary programs, or (2) the number and/or severity of veterinarian shortage areas within Missouri.

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