FISCAL YEAR 2023 ANNUAL REPORT USDA VETERINARY MEDICINE LOAN REPAYMENT PROGRAM

The United States Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA) Veterinary Medicine Loan Repayment Program (VMLRP) helps qualified veterinarians offset a significant portion of their educational debt incurred while obtaining their veterinary medical degrees (Doctor of Veterinary Medicine [DVM, VMD]) in return for their service in designated high-priority food animal veterinary shortage areas. The VMLRP is administered by NIFA and is authorized by the National Veterinary Medical Service Act (NVMSA, 2003).

The VMLRP supports NIFA's Animal Systems Division portfolio by facilitating professional workforce development in critical agricultural sectors related to animal health and well-being. The program contains two general categories of participation:

- Mitigation of private veterinary practice shortage situations
- Mitigation of public veterinary practice and specialty veterinary discipline shortage situations

VMLRP awardees commit to providing at least three years of food animal veterinary services in a designated veterinary shortage area in return for payments of up to \$25,000 of student loan debt per year with a maximum of \$75,000 for a three-year agreement. VMLRP awardees are eligible to reapply for continued program participation in their originally awarded shortage area in the last year of their agreement or in the year after the agreement has expired. A renewal agreement repayment amount varies based on the applicant's eligible veterinary school educational debt remaining after their first agreement period.

APPLICATIONS AND AWARDS

The amount available for loan repayments in Fiscal Year (FY) 2023 was approximately \$9 million. Of the \$8.6 million awarded, \$2.4 million was designated to offset federal tax liability for awardees (Table 1).

Loan repayment benefits are limited to payments of the principal and interest on government and commercial loans received for attendance at an American Veterinary Medical Association Council on Education (AVMA COE) accredited College of Veterinary Medicine, resulting in a degree of a DVM or the equivalent. Since the inception of the VMLRP in FY2010, NIFA has made 883 awards as new and renewal service agreements. In that time, NIFA received 2,197 applications from 1,530 unique applicants.

NIFA opened the annual application period with the release of the VMLRP Request for Applications (RFA) on March 1, 2023. The application period was closed on April 17, 2023. VMLRP received 136 applications, of which all passed NIFA's administrative review and were forwarded to an external peerreview panel (Table 1). Renewal applications were evaluated competitively with new applications using the same selection process and criteria, with an additional requirement to describe how the applicant's service has improved food animal care in the shortage area.



Table 1: Application and awards summary

| Total Applications Received | 136 |
|--|-------------|
| • New | 109 |
| Renewal | 27 |
| Ineligible | 0 |
| Total Awards Executed | 88 |
| • New | 68 |
| Renewal | 20 |
| Award Rate | 64.7% |
| • New | 62.4% |
| Renewal | 74.1% |
| Total Funding Awarded | \$8,603,803 |
| Federal Tax Liability Covered of Total Funding Awarded | \$2,414,016 |

Years Post-graduation of Applicants and Awardees

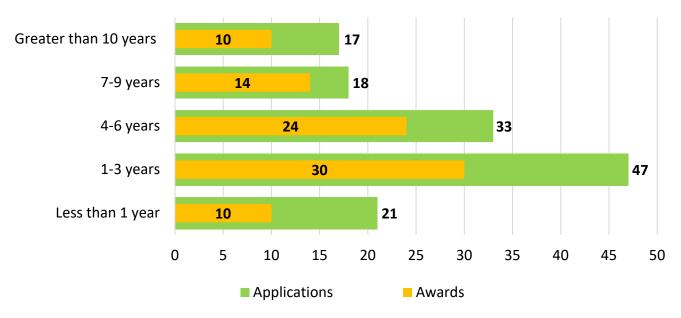
Applicants to VMLRP applied an average of 4 years after their year of graduation, with all applicants having graduated between 2003 and 2023. New applicants applied an average of 4 years after their graduation year, and renewal applicants, 7 years.

Those receiving awards averaged 4.6 years post-graduation, with graduation dates ranging from 2003 to 2023. The average number of years post-graduation for new awardees was 3.8 years, and for renewals, 7.4 years. New awardees had graduation dates between 2003 and 2023; renewal awardees graduated between 2009 and 2020.

Award Rate by Years Post-graduation

The award rates by the number of years post-graduation varied from a low of 47.6% for applicants in their first-year post-graduation to a high of 77.8% for applicants with 7-9 years post-graduation (Figure 1). The largest number of applications was received from those who had graduated within 1-3 years, and the smallest number was from applicants who had been out of school for more than 10 years.

Figure 1. Number of applications and awards by years post-graduation.



The award rates by years post-graduation for all (both new and renewal) applicants were:

- 47.6% for those within their first-year post-graduation,
- 63.8% in years 1 to 3 post-graduation,
- 72.7% in years 4 to 6 post-graduation,
- 77.8% in years 7 to 9 post-graduation, and
- 58.8% for those more than 10 years post-graduation.

VETERINARY COLLEGES REPRESENTED

One VMLRP eligibility requirement is a veterinary medical doctorate degree conferred by a College of Veterinary Medicine accredited by the AVMA COE. A list of all AVMA accredited Colleges of Veterinary Medicine is available at <u>AVMA Center for Veterinary Education Accreditation</u>.

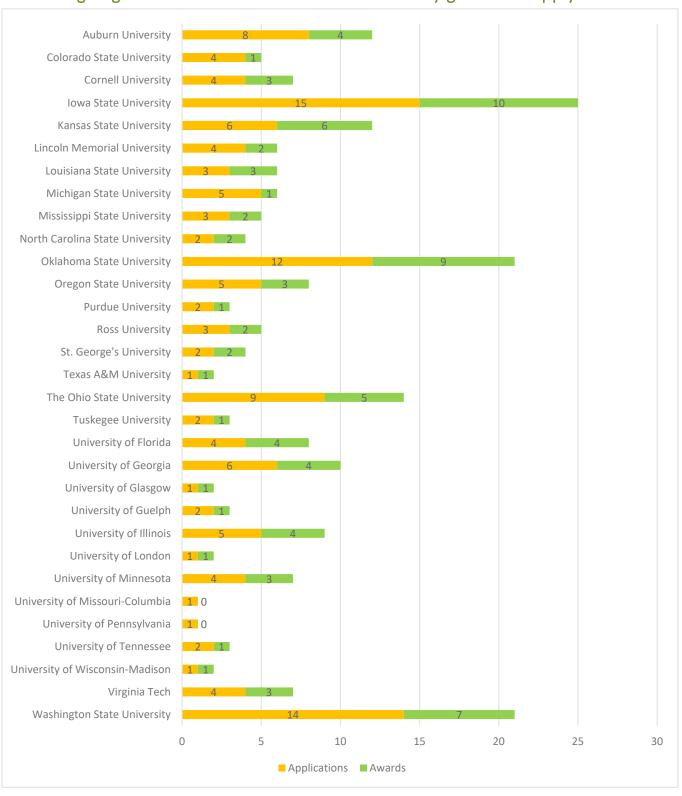
VMLRP applicants represented 31 AVMA-accredited veterinary medical colleges. New and renewal applications by veterinary college are shown in Table 2 and Figure 2. The largest number of applicants had graduated from Iowa State University and Washington State University.



Table 2. Number of applications and awards by veterinary medical school conferring degree. Schools not listed did not have any graduates apply.

| | New Applications | Renewal Applications | New Awards | Renewal Awards |
|---------------------------------|---------------------|----------------------|---------------|-------------------|
| Auburn University | 4 | 4 | 2 | 2 |
| Colorado State University | 2 | 2 | 0 | 1 |
| Cornell University | 4 | 0 | 3 | 0 |
| Iowa State University | 12 | 3 | 8 | 2 |
| Kansas State University | 5 | 1 | 5 | 1 |
| Lincoln Memorial University | 4 | 0 | 2 | 0 |
| Louisiana State University | 3 | 0 | 3 | 0 |
| Michigan State University | 5 | 0 | 1 | 0 |
| Mississippi State University | 2 | 1 | 1 | 1 |
| North Carolina State University | 2 | 0 | 2 | 0 |
| Oklahoma State University | 11 | 1 | 8 | 1 |
| Oregon State University | 3 | 2 | 1 | 2 |
| Purdue University | 1 | 1 | 1 | 0 |
| Ross University | 3 | 0 | 2 | 0 |
| St. George's University | 2 | 0 | 2 | 0 |
| Texas A&M University | 1 | 0 | 1 | 0 |
| The Ohio State University | 9 | 0 | 5 | 0 |
| Tuskegee University | 0 | 2 | 0 | 1 |
| University of Florida | 2 | 2 | 2 | 2 |
| University of Georgia | 6 | 0 | 4 | 0 |
| University of Glasgow | 1 | 0 | 1 | 0 |
| University of Guelph | 2 | 0 | 1 | 0 |
| University of Illinois | 3 | 2 | 2 | 2 |
| University of London | 1 | 0 | 1 | 0 |
| University of Minnesota | 4 | 0 | 3 | 0 |
| University of Missouri-Columbia | 1 | 0 | 0 | 0 |
| University of Pennsylvania | 1 | 0 | 0 | 0 |
| University of Tennessee | 2 | 0 | 1 | 0 |
| University of Wisconsin-Madison | 1 | 0 | 1 | 0 |
| Virginia Tech | 3 | 1 | 2 | 1 |
| Washington State University | 9 | 5 | 3 | 4 |
| Total | 109 | 27 | 68 | 20 |
| | | | | |

Figure 2. Number of applications and awards by veterinary medical school conferring degree. Schools not listed did not have any graduates apply.



APPLICANT & AWARDEE DEBT

All VMLRP applicants are required to submit veterinary educational loan information with their application package. The distribution of student debt for the 88 awardees shows that a large majority of applicants (77.1%), new awardees (73.5%) and half of renewal awardees had over \$100,000 in student loan debt (Table 3). The AVMA provides a comprehensive review of average veterinary student debt in the United States every year in their annual State of the Profession Report¹. According to the AVMA, in 2022 18% of new graduates had no debt; for those who had student debt, the average amount was \$179,505.

For the VMLRP in FY23,

- the average eligible veterinary student debt for applicants was \$148,900,
- the average eligible veterinary student debt for new awardees was \$162,785 and
- renewal awardees had an average eligible veterinary student debt of \$103,366.

Table 3. Distribution of applicant, new and renewal awardee debt.

| Awardee Debt | Percent of Applicants | Percent of New Awardees | Percent of Renewal Awardees |
|------------------------|-----------------------|----------------------------|--------------------------------|
| Under \$50,000 | 10.3% | 5.9% | 15.0% |
| \$50,001 to \$100,000 | 22.1% | 20.6% | 35.0% |
| \$100,001 to \$150,000 | 25.7% | 27.9% | 30.0% |
| Over \$150,000 | 51.4% | 45.6% | 20.0% |

VETERINARY SHORTAGE SITUATION AREA NOMINATIONS

VMLRP begins each fiscal year with the nominations of veterinary shortage areas by State Animal Health Officials (SAHO). Each state, the federal government, the District of Columbia, and each US Insular Area is allocated a maximum number of shortage nominations for submission to NIFA. Veterinary shortage situation area nominations are reviewed by a panel of food animal veterinary professionals through a non-competitive merit review process.

The deadline for nominations was November 14, 2022. NIFA received 237 veterinary shortage situation area nominations, and all were recommended for designation by the panel.

¹ Bain B, Ouedraogo F, Hansen C. 2023 AVMA Report on Economic State of the Veterinary Profession. AVMA.

Veterinary Shortage Situation Types and Program Coverage

Three VMLRP shortage categories are classified by type of practice and percent of full-time equivalent (FTE) employment dedicated to serving the specific needs of each shortage situation area (Table 4). Percent FTE is based on a 40-hour work week. Of the 237 designated FY2023 shortage areas, NIFA made awards in 60 areas, or 25.3%. In addition, 20 renewal applicants received awards in previously designated shortage areas.

Table 4. Distribution of shortage type by awardee type.

| FY23 Shortage Coverage | Pre-FY23 Shortages | | |
|------------------------|--------------------|-----------------------|------------------------------|
| Shortage Type | Designations | Filled by New Awardee | Filled by Renewal Awardee |
| Type I | 28 | 6 | 1 |
| Type II | 173 | 47 | 16 |
| Type III | 36 | 7 | 3 |

Type I shortage situations are considered rural, urban, or other type, and require a commitment of at least 80% FTE (minimum of 32 hours a week) to private practice food supply veterinary medicine. Of the 28 Type I shortage situations,

- nominations were received and designated from 12 individual states, and
- 6 (21.4%) were filled in 5 states.

In addition, one Type I renewal award was made from a pre-FY23 designation.

Type II shortage situations are in rural areas and require a commitment of at least 30% FTE (minimum of 12 hours a week) dedicated to the private practice of food supply veterinary medicine. Of the 173 Type II shortage situations,

- nominations were received from 44 individual states, and 6 joint-states², and
- 47 (27.2%) were filled in 26 states.

In addition, 16 Type II renewal awards were made from a pre-FY23 designation.

² There are instances where bordering counties along two states are interested in combining a shortage situation area based on their needs. The joint nomination counts as one allocation used for each state. It requires both states to develop and review the nomination areas. Both SAHO's must affirm that the information presented regarding location, species, objectives, and activities align with the purpose of the program.

Type III shortage situations require a commitment of at least 49% FTE (minimum of 19.6 hours a week) to veterinary medical public practice. NIFA reserves 10% of VMLRP awards for Type III shortage situations. For Type III shortage situations,

- 36 were designated in 27 individual states, and
- 7 (19.4%) shortages were filled in 6 states.

In addition, 3 Type III renewal awards were made from a pre-FY23 designation.

VETERINARY SHORTAGE SITUATION TYPE, SPECIES COVERAGE AND PUBLIC PRACTICE NEEDS

Each veterinary shortage nomination provides details of the geographic area where veterinary services are needed, agricultural species that must and may be served, and specific activities related to the must- and may-serve species. Applicants to VMLRP propose to serve one veterinary shortage situation area and are rated and ranked based on their ability to serve the specific needs of that area. SAHO's may select as many must serve and may serve species as needed in the shortage area for Types I and II.

For Type I shortages, beef cattle were the species and production type with the highest need requiring coverage. This was followed by dairy cattle, small ruminants, and swine (Table 5). For Type II shortages, beef cattle were the dominant species and production type, followed by small ruminants, dairy cattle and swine (Table 6).

For Type III shortages the needs ranged broadly, with SAHOs specifying requirements for public health, epidemiology and food safety, and a range of other disciplines (Table 7). SAHO's may select as many disciplines as needed to fulfill the requirements of the agency or institution for a Type III shortage.

Table 5. Distribution of Type I veterinary shortage situation area must serve species by number of areas designated and filled.

| Veterinary Shortage Situation Area | Beef Cattle | Dairy Cattle | Swine | Poultry | Small Ruminant | Other |
|---------------------------------------|----------------|-----------------|-------|---------|-------------------|-------|
| Designated | 22 | 10 | 4 | 2 | 9 | 0 |
| Filled | 3 | 2 | 0 | 1 | 1 | 0 |
| Award Rate | 14% | 20% | 0% | 50% | 11% | 0% |

Table 6. Distribution of Type II veterinary shortage situation area must serve species by number of areas designated and filled.

| Veterinary Shortage Situation Area | Beef Cattle | Dairy Cattle | Swine | Poultry | Small Ruminant | Other ¹ |
|---------------------------------------|----------------|-----------------|-------|---------|-------------------|--------------------|
| Designated | 157 | 41 | 25 | 7 | 79 | 15 |
| Filled | 43 | 16 | 7 | 0 | 20 | 1 |
| Award Rate | 27% | 39% | 28% | 0% | 25% | 7% |

¹ Equine (15 designated, 1 filled)

Table 7. Distribution of Type III veterinary shortage situation area specialty and discipline by areas designated and filled.

| Veterinary Shortage Situation Area | Food Safety | Public Health | Epidemiology | Other |
|---------------------------------------|-------------|---------------|--------------|-----------------|
| Designated | 18 | 22 | 20 | 25 ¹ |
| Filled | 4 | 3 | 3 | 5 ² |
| Award Rate | 22% | 14% | 15% | 20% |

¹ Includes animal health and emergency preparedness (1), animal welfare (1), clinical practice (1), diagnostics (4), fish enhancement veterinary management (1), general veterinary practice (1), infectious diseases, laboratory (1), microbiology (1), pathology (3), pathologist/bacteriologist/virologist (2), pathology/diagnostician (1), regulatory activities (5), wildlife pathology/epidemiology (1), and zoonotic diseases.

Veterinary Shortage Situations by State

Each State is allocated by the Program a maximum number of designated shortage situation areas. (Table 8). VMLRP defines a State as any one of the fifty States, the District of Columbia, and the Insular Areas of the United States. Also included are total "Federal Lands", defined for convenience as a single entity. Kansas had the highest number of awardees for an individual state with 12 new and renewal awardees.

²Includes fish enhancement veterinary management (1), general veterinary practice (1), microbiology (1), pathology (1), and wildlife pathology/epidemiology (1).



Table 8. Number of shortage allocations, shortage designations, applications (combined new and renewal), and new and renewal awards, by state.

| State ¹ | Allocations | Designations | Applications | New Awards | Renewal Awards |
|--------------------|-------------|--------------|--------------|---------------|-------------------|
| Alabama | 5 | 5 | 3 | 1 | 1 |
| Alaska | 5 | 2 | 1 | 0 | 0 |
| Arizona* | 6 | 6 | 1 | 1 | 0 |
| Arkansas* | 6 | 4 | 3 | 1 | 1 |
| California | 8 | 8 | 2 | 1 | 0 |
| Colorado* | 8 | 8 | 3 | 0 | 0 |
| Connecticut | 2 | 2 | 0 | 0 | 0 |
| Delaware | 3 | 3 | 0 | 0 | 0 |
| Florida | 4 | 4 | 2 | 0 | 2 |
| Georgia | 7 | 7 | 2 | 2 | 0 |
| Hawaii | 2 | 2 | 0 | 0 | 0 |
| Idaho | 7 | 7 | 11 | 6 | 2 |
| Illinois | 6 | 6 | 3 | 1 | 1 |
| Indiana | 5 | 5 | 2 | 1 | 0 |
| Iowa | 7 | 7 | 8 | 4 | 0 |
| Kansas | 7 | 7 | 13 | 9 | 3 |
| Kentucky | 5 | 5 | 8 | 1 | 2 |
| Louisiana | 4 | 4 | 1 | 1 | 0 |
| Maine | 2 | 2 | 0 | 0 | 0 |
| Michigan | 6 | 6 | 6 | 2 | 0 |
| Minnesota | 7 | 7 | 4 | 3 | 0 |
| Mississippi | 5 | 5 | 0 | 0 | 0 |
| Missouri | 7 | 7 | 2 | 1 | 0 |
| Montana | 6 | 6 | 4 | 2 | 2 |
| Nebraska | 7 | 7 | 3 | 2 | 1 |
| Nevada | 5 | 4 | 0 | 0 | 0 |
| New Hampshire | 2 | 2 | 0 | 0 | 0 |
| New Jersey | 2 | 2 | 0 | 0 | 0 |
| New Mexico | 6 | 6 | 1 | 0 | 1 |
| New York | 5 | 5 | 3 | 1 | 1 |
| North Carolina | 6 | 6 | 3 | 3 | 0 |
| North Dakota | 5 | 2 | 0 | 0 | 0 |
| Ohio | 5 | 5 | 3 | 1 | 0 |
| Oklahoma | 7 | 7 | 8 | 6 | 0 |

^{*} Indicates nominating states of a joint state nomination.

¹ States or Insular Areas that did not submit nominations: Maryland, Massachusetts, Rhode Island, District of Columbia, Guam, Micronesia, Northern Mariana, Puerto Rico, Republic of Marshall Islands, Republic of Palau, and U.S. Virgin Islands.

| Oregon | 6 | 6 | 4 | 1 | 1 |
|----------------|-----|-----|-----|----|----|
| Pennsylvania | 5 | 5 | 6 | 4 | 1 |
| South Carolina | 3 | 3 | 4 | 0 | 0 |
| South Dakota | 6 | 6 | 3 | 2 | 0 |
| Tennessee | 4 | 3 | 2 | 1 | 0 |
| Texas | 8 | 8 | 1 | 1 | 0 |
| Utah* | 6 | 5 | 0 | 0 | 0 |
| Vermont | 2 | 2 | 2 | 2 | 0 |
| Virginia | 5 | 5 | 6 | 3 | 0 |
| Washington | 6 | 4 | 2 | 1 | 0 |
| West Virginia | 2 | 2 | 1 | 1 | 0 |
| Wisconsin* | 7 | 7 | 3 | 2 | 1 |
| Wyoming | 6 | 6 | 2 | 0 | 0 |
| Federal Lands | 4 | 4 | 0 | 0 | 0 |
| Totals | 250 | 237 | 136 | 68 | 20 |

Table 9. Joint State Nominations with the nominating state, cooperating state, number of applications and awards.

| Nominating State | Cooperating State | Applications | Awards |
|------------------|-------------------|--------------|--------|
| Arkansas | Alabama | 0 | 0 |
| Arkansas | Mississippi | 0 | 0 |
| Arizona | New Mexico | 0 | 0 |
| Colorado | New Mexico | 0 | 0 |
| Utah | Arizona | 0 | 0 |
| Wisconsin | Michigan | 0 | 0 |

COMPLETION & TERMINATIONS FROM PROGRAM IN 2023

Service agreements that concluded on December 31, 2023, were based on 1, 2, or 3-year agreements that began in January of 2023, 2022 or 2021. For the 2020 application cohort, who entered into 3-year service agreements that began on January 1, 2021, 59 out of 65 (90.7%) completed their service agreements. For the 2021 and 2022 application cohort, there were no two-year agreements made that began on January 1, 2022, or one-year agreements made that began on January 1, 2023.

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ACRONYMS AND DEFINITIONS

AVMA COE: American Veterinary Medical Association Council on Education, a specialized accrediting agency recognized and authorized by the U.S. Department of Education.

DVM/VMD: Doctor of Veterinary Medicine degree, or equivalent

FOOD ANIMAL: Bovine, porcine, ovine/camelid, cervid, poultry, caprine, and any other species as determined by the Secretary of Agriculture.

FOOD SUPPLY VETERINARY MEDICINE: All aspects of veterinary medicine's involvement in food supply systems, from traditional agricultural production to consumption.

FULL-TIME EQUIVALENT (FTE): The number of working hours that represents one full-time employee during a fixed time period. For VMLRP this equates to a 40-hour work week.

INSULAR AREAS: The Commonwealth of Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, the Republic of the Marshall Islands, the Republic of Palau, and the Virgin Islands of the United States.

NVMSA: National Veterinary Medicine Service Act

PRACTICE OF FOOD SUPPLY VETERINARY MEDICINE: Includes corporate/private practices devoted to food animal medicine, mixed animal medicine located in a rural area, food safety, epidemiology, public health, animal health, and other public and private practices that contribute to the production of a safe and wholesome food supply.

STATE: means any one of the fifty states, the District of Columbia, and the Insular Areas of the United States. Also included are total "Federal Lands", defined for convenience as a single entity.

STATE ANIMAL HEALTH OFFICIAL (SAHO): The state veterinarian, or equivalent, who will be responsible for nominating and certifying veterinarian shortage situations within the state.

VETERINARY MEDICINE LOAN REPAYMENT PROGRAM (VMLRP): Veterinary Medicine Loan Repayment Program authorized by the NVMSA.

VETERINARY SHORTAGE SITUATION: means any of the following situations in which the Secretary of Agriculture, in accordance with the process in subpart A of the <u>final rule</u>, determines has a shortage of veterinarians:

- 1. Geographical areas that the Secretary determines have a shortage of food supply veterinarians;
- 2. Areas of veterinary practice that the Secretary determines have a shortage of food supply veterinarians, such as food animal medicine, public health, animal health, epidemiology, and food safety.