



The Worst of Both Worlds: The Hidden Lives of Farmed Animals at the Intersection of Agriculture and Experimentation

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Key Takeaways:

- I. **Oversight gaps:** While multiple avenues of external oversight exist for animal experimentation—albeit offering only minimal protection to some of the animals used in labs—these mechanisms consistently fail to provide *any* degree of protection to farmed animals in agricultural experiments. The Animal Welfare Act excludes them entirely, NIH oversight applies primarily to biomedical experiments, AAALAC accreditation typically benchmarks only to standard agricultural practices, and state confinement bans commonly exempt “research.”
- II. **Massive scale:** At just ten AAALAC-accredited public universities in the United States, nearly 100,000 farmed animals were used in agricultural experimentation, teaching, and commercial production across the span of a year.
- III. **Industry & commercial influence:** The universities’ experimental and commercial endeavors are inextricably connected, with the bodies of the same animals killed in the name of taxpayer and industry-funded science often being sold as food to potentially unsuspecting consumers, including students.
- IV. **Downplayed suffering:** The suffering farmed animals endure during agricultural experimentation is routinely understated, with protocols involving induced heat stress and mass culling via ventilation shutdown miscategorized as minimally painful or distressing—likely *because* they align with “standard agricultural practices.”



Executive Summary

When the general population pictures animal experimentation, they likely imagine dogs or primates in laboratory cages—not cows, pigs, and chickens on a university farm. Yet farmed animals are subjected to extensive agricultural experimentation across domains including nutrition, genetics, physiology, reproduction, behavior, and “welfare,” often funded by and conducted in service of the animal agriculture industry. Because the Animal Welfare Act (AWA) excludes farmed animals used in agricultural research, this experimentation proceeds with little federal oversight and almost no public visibility: the number of animals used, as well as their treatment and fate, are excluded from federal reporting.

However, a narrow window into this hidden sector exists. Public universities that voluntarily accredit their agricultural programs with the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC) generate records obtainable through public records requests. These records were requested in a collaborative effort between Rise for Animals and Animal Partisan; our analysis of the records produced by ten public universities with AAALAC-accredited agricultural units is communicated in this report.

The scale of farmed animal use for agricultural purposes is substantial. Across just these ten institutions, an estimated 97,448 farmed animals were used across a single year in agriculture-related production, experimentation, and teaching. At these universities, an average of 96% of *all* farmed animal species used fall outside the AWA's protections. Farmed birds account for over half (52%) of these animals, with cows and pigs each comprising less than one-fifth, while sheep and goats combined make up just over 10%.

The institutions to which these animals are confined are not laboratories in the conventional sense; they are working farms. A single animal is frequently treated as a research subject, a teaching resource, and a marketable commodity at once—raised, bred, slaughtered at the university's own U.S. Department of Agriculture (USDA)-

inspected facilities, and sold to the public for consumption under branded retail labels. The experimentation is sustained by the industries that benefit from it and, increasingly, by taxpayers: the USDA's National Institute of Food and Agriculture (NIFA) and Agricultural Research Service (ARS) directed roughly \$72.4 million in federal funding to nine of these institutions over five years, in addition to commodity-board and corporate grants. In some states, this funding is compelled by statute.

The conditions these animals endure combine the confinement of industrial agriculture with the added burdens of experimentation. Standard housing includes calf hutches, gestation and farrowing crates, battery cages, and tie stalls; experimental protocols impose further restraint, holding animals in metabolism crates and stanchions, where they are often unable to turn around, for days or weeks at a time. The state laws that restrict some of these confinement systems uniformly exempt research.

The records also reveal how thoroughly these animals' suffering is understated. Of 608 documented Institutional Animal Care and Use Committee (IACUC)-approved teaching, husbandry, and experiment protocols, over two-thirds of those carrying a designation are classified Category C—the USDA's research tier reserved for *at most* “momentary” pain or distress—even as that tier describes studies involving heat stress, colostrum deprivation, ventilation shutdown, and slaughter. That is, experiments essentially deemed harmless may actually include “standard” agricultural practices or AVMA-approved methods of mass killing with the potential to cause immense and prolonged pain or distress.

Nearly half of all protocols carry a “special consideration” such as survival surgery, prolonged restraint, the use of hazardous agents, or food deprivation. Additionally, self-reported “adverse events” document preventable deaths in restraint equipment, mass losses to environmental and feed failures, and incidents traced to investigator misconduct.

Ultimately, the “final disposition” for many of these farmed animals is slaughter, and their meat, milk, and eggs may be sold to consumers likely unaware that these animals were used in experiments.

Introduction

When used for this agriculture-related experimentation, farmed animals are exempt from coverage under the Animal Welfare Act (AWA). Not only does this deprive these animals of even the minimal protections and federal oversight the AWA offers, but it also allows vital information pertaining to this experimentation to be excluded from federal reporting and kept hidden from the public.

While other relevant federal oversight agencies exist, their reach likewise does not typically extend to farmed animals subjected to agricultural experiments. For example, the National Institutes of Health (NIH) Office of Laboratory Animal Welfare (OLAW) enforces the Public Health Service Policy on Humane Care and Use of Laboratory Animals (PHS Policy) in experimentation that receives funding from the NIH. While the PHS Policy does not categorically exclude farmed animals in agriculture experimentation, the NIH primarily funds *biomedical* experimentation.¹ Thus, OLAW oversight is not often applicable to farmed animals used in traditional agriculture experiments.²

Non-governmental organizations have been created to offer what they claim to be additional external oversight and animal welfare accreditation of experimentation facilities. The Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC) does just that, for an annual fee of anywhere between \$4,000 and \$13,000—in addition to an initial application fee of \$5,000 to \$20,000—depending on the size of the facility.³

AAALAC requires certain welfare standards to be met for *all* animals used at an accredited unit—including farmed animals subjected to agricultural experimentation. However, buy-in from agricultural research units appears to be limited. An AAALAC brochure from 2015 notes that only half of AAALAC-accredited U.S. land-grant institutions chose to have their agricultural programs included in their accreditation.⁴ Based on other AAALAC promotional materials, this may be due to the assumption that AAALAC accreditation of agricultural experimentation programs requires animal care

standards or ethical frameworks that these programs are unwilling, or unable, to accommodate for their use of farmed animals.^{5, 6}

In reality, AAALAC repeatedly states that their accreditation requirements align with the standards used on a “high-quality, well managed farm,” as dictated in the Guide for the Care and Use of Agricultural Animals in Research and Teaching (Ag Guide)—the creators of which concede that “too prescriptive” of an approach to farmed animal care can indeed “stifle” agricultural research and teaching.⁷ Significantly, these authors include industry stakeholders from Tyson Foods, Cobb-Vantress, Aviagen, and Maple Leaf Farms, as well as researchers from the very universities highlighted in this report.⁸

To achieve or maintain this accreditation, institutions undergo a site visit by AAALAC officials every three years. The site visits align with their submission of the triennial Program Description, a comprehensive document detailing the institution’s animal care program. Additionally, accredited institutions are required to submit a brief annual report to AAALAC that details general changes to the animal care program’s structure, “adverse events” affecting animals used in experiments, as well as the number of *all* animals used by the accredited unit(s) that year.⁹

This puts public universities with AAALAC-accredited agricultural programs in a unique position: the information compiled for AAALAC accreditation can often be obtained through straightforward public records requests, offering a glimpse into this sector of experimentation that is typically kept hidden from view.

To shed light on this often-forgotten group of exploited animals, we obtained and analyzed AAALAC records from ten public universities with accredited agricultural units. Publicly available federal funding data for each university was likewise analyzed to uncover the degree to which taxpayer funds contribute to this experimentation. Part I of this report establishes the scale of this experimentation, the commercial structure of the programs that carry it out, and the industry and public funding that sustains them. Part II describes the animals’ lives at the intersection of experimentation and agriculture: how they are housed, experimentally confined, reused, harmed, and ultimately killed.

Methods

AAALAC annual records and program descriptions were requested from all AAALAC-accredited public institutions in the U.S. in a collaborative effort between Rise for Animals and Animal Partisan.

The universities whose records were analyzed in this study met the following criteria: (1) Public universities (2) from states whose public records laws do not restrict the release of research related materials or requests from non-residents (3) with AAALAC accredited agricultural programs (4) who provided responsive records in accordance with our request. A selection of institutions with AAALAC-accredited agricultural programs were analyzed for this study as follows, with the year of their most recent AAALAC program description or annual report at the time the records requests were made:

UNIVERSITIES REVIEWED, BY AAALAC REPORT YEAR



*Universities whose annual reports were received and analyzed for this report

[†]As the University of Wisconsin–Madison has separate AAALAC accreditations for numerous units, records only from their College of Agricultural & Life Sciences (CALS) were analyzed for this report

This should not be interpreted as a complete list of universities with AAALAC-accredited agricultural programs, as at least eight universities with confirmed AAALAC-accredited agricultural programs are not included in this report. First, while we received records from the University of Nebraska-Lincoln, they were so heavily redacted that the information pertinent to this report was impossible to collect or analyze.

Additionally, the University of Arizona failed to fulfill our request in a timely manner, while Ohio State University asserted that our requested records were not maintained by the university; Texas Tech and the University of Connecticut – Storrs denied our requests outright; and the University of Maryland - College Park and Clemson University sought fees to fulfill our request that were not within our budget for this project. Finally, Pennsylvania State University is exempt from public records requests per 65 P.S. § 67.102 and 65 P.S. § 67.301(a); therefore, no attempt was made to request these records.

Based on AAALAC program descriptions, annual reports, IACUC records, and publicly available federal funding data from each university, this report summarizes the following:

Part I: Scale, structure, and funding

- a. The number of farmed animals used each year in agricultural experimentation, teaching, and production at these institutions
- b. The overlapping experimental and commercial structure of these programs
- c. The funding that sustains this experimentation and the facilities that enable it

Part II: The lives and deaths of farmed animals at AAALAC-accredited universities

- a. The housing systems used to confine these animals
- b. The additional confinement imposed by experimental protocols
- c. Farmed animal reuse across experiments and teaching
- d. Pain and distress classifications, as well as “special considerations,” applied to agricultural experimentation on farmed animals
- e. The common “adverse events” affecting these animals
- f. The animals’ “final disposition”

Limitations

This research contains limitations that must be acknowledged. First, the figures describing the scale of farmed animal use are our best estimates rather than direct counts. To isolate the animals that fall outside of the AWA's coverage, we computed the difference between the animal census numbers these institutions reported to APHIS and those they reported to AAALAC across the same year. The sample of universities is also neither complete nor randomly drawn, and their records document farmed animal use primarily between 2022 and 2026, making the aggregate figures an estimate of animal use across different years.

The analysis also rests entirely on self-reported records with uneven disclosure between universities. Three institutions provided less-detailed annual reports rather than triennial program descriptions, while at least one omitted pain designations for the vast majority of its protocols. The federal funding totals are also likely incomplete, encompassing only those made readily available on NIFA's portal, and should therefore be read as a *minimum* in terms of federal funds devoted to this experimentation.

While these are all clear limitations within the context of the present report, it is important to note that they point to additional data that would be expected to *strengthen*, rather than diminish, the scale and strength of our findings.

PART ONE

Scale, Structure, and Funding

Scale

To understand just a portion of the scale of agricultural experimentation using farmed animals, we compiled each university's "approximate annual usage" census included in AAALAC program descriptions and annual reports. Because the numbers reported on the census do not differentiate between animals used in agricultural versus AWA-covered experimentation, our findings are estimates. These figures were extrapolated by computing the difference between the figures reported to APHIS (which only requires reporting of farmed animals used in non-agricultural experimentation) and AAALAC (which requires the number of animals used in all forms of experimentation) across the same year. A visual depiction of the calculation used can be found below.

$$\textit{Estimate of farmed animals used in agricultural protocols} = \textit{Farmed animal census figures submitted to AAALAC} - \textit{Farmed animal census figures submitted to APHIS}$$

For just these ten schools, this total comes to the approximate annual usage of 97,448 farmed animals in agriculture-related production, experimentation, and teaching protocols. UIUC reports the highest usage of farmed animals in agricultural experimentation with nearly 27,000 animals, while WSU reports the lowest usage with 942 animals. Also reported in the below chart is our extrapolation of the percent of farmed animals used in agricultural versus AWA-covered protocols at each university, which comes to an average of 96%. This figure was calculated by dividing our previously extrapolated agricultural use animal census numbers by the *raw* farmed animal census numbers reported to AAALAC by each university, as depicted in the following equation.

$$\textit{Percent of farmed animals used in AWA-exempt protocols} = \frac{\textit{Estimate of farmed animals used in agricultural protocols}}{\textit{Farmed animal census figures submitted to AAALAC}} \times 100$$

Estimated Annual Farmed Animal Use in Agricultural Protocols

University	Number of farmed animals used by agricultural units	Percent of farmed animals used not covered by the AWA
Purdue University (2022)	9,958	97%
West Virginia University (2022)	15,866	100%
Michigan State University (2023)	4,931	89%
University of California, Davis (2023)	15,210	96%
Washington State University (2023)	942	88%
Oregon State University (2024)	1,810	98%
University of Wisconsin-Madison (2024)	10,945	96%
University of Illinois, Urbana-Champaign (2025)	26,971	99%
University of Nevada, Reno (2025)	5,853	99%
University of Idaho (2026)	4,962	100%
Total (Average %)	97,448	96%

Table 1: The number of farmed animals used in agriculture-related protocols across a single year, as reported to AAALAC, with those of the same species reported to APHIS during the same reporting year subtracted from that total. Additionally, the estimated percent of farmed animals used at each university that fall outside of the purview of the AWA.

In terms of species, farmed birds were the most used animals in agriculture-related experimentation at these universities, making up just over half (52.4%) of all farmed animals. Pigs and cows were the second and third most used species at 19.5% and 17.6%, respectively. Sheep (9.4%), and goats (1.2%) make up the remaining 10.6%. Again, these estimates were derived by taking the difference between species-use numbers submitted to AAALAC and APHIS by each university.

While this breakdown by species does not map *perfectly* onto that of animals used in strict production settings in the US, it follows a similar pattern: farmed birds make up the majority of these animals, followed by pigs and cows, with sheep and goats comprising the smallest portion. This is just one of the many areas in which the structure of university agricultural programs and conventional agricultural production overlap, as the next section will explore in more detail.

Estimated Annual Farmed Animal Use by Species

University	Cattle	Farmed Birds	Goats	Pigs	Sheep	University Total
Purdue (2022)	555	8,674	0	417	312	9,958
WVU (2022)	950	14,216	0	0	700	15,866
MSU (2023)	967	2,198	0	1,470	296	4,931
UC Davis (2023)	912	11,882	977	638	801	15,210
WSU (2023)	889	0	0	8	45	942
OSU (2024)	1,098	70	172	44	426	1,810
UW-Madison (2024)	3,717	2,097	0	4,588	543	10,945
UIUC (2025)	3,294	11,931	6	11,740	0	26,971
UNR (2025)	580	0	0	0	5,273	5,853
U of I (2026)	4,145	0	10	62	745	4,962
Species Total (% of Total)	17,107 (17.56%)	51,068 (52.41%)	1,165 (1.20%)	18,967 (19.46%)	9,141 (9.38%)	97,448

Table 2: The number of farmed animals used in agriculture-related protocols across a single year, broken down by species.

Commercial operations

University agricultural animal facilities often are, in practice, working farms: commercial operations that raise, breed, slaughter, and sell animals and animal products even as those same animals are enrolled in experiment and teaching protocols. The commercial function is not incidental to the “research” mission; the two are interwoven, and in many cases a single animal is considered an experimentation subject, a teaching “resource,” and a marketable commodity at the same time.

The defining characteristic across institutions is the simultaneous assignment of animals to production, experimentation, and teaching protocols. UIUC classifies most of its animals under “production protocols” that cover the husbandry needed to raise farmed animals for slaughter and/or commercial sale of their milk and eggs, while noting that the same animals may be concurrently assigned to experiment or teaching protocols.¹⁰ UW-Madison similarly describes a closed, biosecurity-managed swine herd

used for experiments, teaching, and production together, and a sheep herd maintained for production, sale, and instruction.¹¹

Commercial imperatives clearly shape the way these animals are managed. UW-Madison enrolls its sheep in the National Sheep Improvement Program specifically to generate estimated breeding values that inform selection decisions and set sale prices.¹² U of I tracks animals so that milk is withheld from the bulk tank whenever an experiment procedure would compromise its ability to be sold¹³—a direct example of these experiments being managed around preserving the marketability of the product. Purdue University contracts the raising of roughly 160 heifers to a private commercial farm, which returns them as bred two-year-olds.¹⁴

The slaughter of these animals is often carried out at the university's own USDA-inspected facilities, and the commercialization of this process is particularly visible in the branded retail operations these campuses run. Meat, dairy, and eggs from university experiment and teaching animals are sold to the public under institutional labels: Vandal Brand Meats at U of I,¹⁵ Beaver Classic at OSU,¹⁶ the Boilermaker Butcher Block at Purdue,¹⁷ Varsity Meats¹⁸ and the Babcock Dairy at UW-Madison,¹⁹ Ferdinand's Ice Cream at WSU,²⁰ and Wolf Pack Meats at UNR.²¹ The volumes involved are often those of a commercial operation: U of I's dairy alone produces 5,000 pounds (or 600 gallons) of milk per day, much of which is sold to Darigold²² and Bush Creek Creamery,²³ while UC Davis sells milk from its dairy herd to Hilmar Cheese Company.²⁴



“Beaver Classic cheese.”
Photo taken by Ben Davis, Oregon State University.
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Funding

Just as the experimental and commercial functions of these facilities are intertwined, so too are the financial interests that sustain them. Agricultural experimentation at these universities is supported not only by the institutions themselves, but by commodity groups, industry-aligned companies, state-mandated funding mechanisms, and substantial federal investment.

In some states, a portion of this funding is compelled by law. An Oregon statute directs a portion of the state's cattle assessment (ten cents per “head” of cow assessed for beef and dairy production research) to OSU for projects related to rangeland, with the funded projects selected in consultation with beef and dairy associations.²⁵ In 2015, this annual funding was roughly \$160,000, or more than \$1.5 million over the preceding decade.²⁶ Indiana has a similar statute: *all* of the money collected by the state's egg board is paid directly to Purdue University's treasurer to fund the board's “purposes” and the university's agricultural programs.²⁷

Experiments performed at MSU are often funded by the Michigan Alliance for Animal Agriculture (M-AAA), which itself is funded by the state.²⁸ The M-AAA has provided roughly \$54 million in funding over the past decade, and its partners include Michigan Allied Poultry Industries, Michigan Cattlemen's Association, Michigan Farm Bureau, Michigan Meat Association, Michigan Milk Producers Association, Michigan Pork Producers, and the Michigan Sheep Breeders Association.²⁹

Commodity boards also fund dedicated research centers. The UC Davis CLEAR Center, which conducts “sustainable agriculture” experimentation, has received over \$3.7 million from the Institute for Feed Education and Research, \$600,000 from the National Pork Board, and \$200,000 from the California Cattle Council.³⁰

A Purdue antibiotic-resistance project received \$250,000, matched by industry contributors, including Tyson Foods and McDonald's.³¹ U of I has drawn support from the Idaho Cattle Association, the Idaho Beef Council, and a \$250,000 gift from the Idaho Farm Bureau, alongside a \$1 million commitment from Chobani to support the construction of the “largest research dairy in the nation.”³² UW-Madison and UIUC have

each received \$1–2 million through the Foundation for Food and Agriculture Research's Greener Cattle Initiative, whose backers include the Council on Dairy Cattle Breeding, JBS, and Nestlé.³³

Industry money, however, is not the sole funder of this experimentation; a significant portion of this funding comes directly from taxpayers through federal government grant programs. A commonly observed federal funding source is the USDA's National Institute of Food and Agriculture (NIFA), which is described as the department's "extramural" funding agency and claims to support 70% of the agricultural research and development performed at land-grant universities.³⁴ Much of the experimentation pertinent to this report appears to fall under the scope of NIFA's Agriculture and Food Research Initiative (AFRI). The congressionally appropriated 2027 budget for AFRI alone is \$419 million.³⁵

Using NIFA's public grant portal,³⁶ we sought to determine the scale of the federal funds used to support this form of experimentation at the ten surveyed universities. Projects were filtered to include both "animal health" and "research" components, and the resulting methodologies were reviewed manually to ensure their relevance to this research question.

According to our analysis, NIFA awarded at *least* 98 grants, totaling just under \$65 million, to fund agricultural experimentation using farmed animals at nine of the ten institutions surveyed between 2021 and 2025. UW-Madison received the most federal funding, making up nearly one-third of this total across 23 NIFA grants. While UNR did not receive any NIFA funding during our strict search period, a more recent search reveals that the university was the recipient of two \$1.15 million grants for sheep-related projects in 2026. Given search constraints within NIFA's grant portal, along with our restrictive filter criteria, this figure is likely a conservative estimate of the taxpayer-funded grants awarded by NIFA to further farmed animal experimentation.

Number and Sum of NIFA Grants Received: 2021 - 2025

University	Number of NIFA Grants Received	Sum of NIFA Grant Amounts
University of Wisconsin-Madison	23	\$20,751,782
Purdue University	19	\$10,062,929
Michigan State University	19	\$9,353,250
University of California, Davis	12	\$10,168,940
University of Illinois, Urbana-Champaign	9	\$4,633,491
University of Idaho	6	\$2,271,580
Oregon State University	4	\$4,099,950
Washington State University	4	\$2,472,112
West Virginia University	2	\$739,000
University of Nevada, Reno	0	\$0.00
Total	98	\$64,553,034

Table 3: The number of NIFA grants awarded to each university for agricultural uses of farmed animals between 1/1/2021 and 12/31/2025, alongside the sum of these grant amounts.

The USDA's Agricultural Research Service (ARS) is a second major federal funder of this experimentation. ARS is described as the department's "chief in-house research agency,"³⁷ and it operates multiple farmed animal research labs at some of the very universities discussed in this report.³⁸ ARS' 2027 taxpayer-funded budget for their Livestock Production and Protection program totals \$271 million.³⁹

While ARS awards are less common than those from NIFA given the structure of the program, the same methods described above were used to search NIFA's grant portal to determine the extent to which this experimentation is funded by ARS. Our analysis found that ARS made at least thirty-four awards to these institutions—totaling over \$7.8 million—across the same time period.

Number and Sum of ARS Grants Received: 2021 - 2025

University	Number of ARS Grants Received	Sum of ARS Grant Amounts
Purdue University	14	\$1,370,000
Washington State University	6	\$2,436,100
University of Wisconsin-Madison	5	\$816,500
University of Idaho	4	\$533,700
University of Illinois, Urbana-Champaign	2	\$311,100
University of California, Davis	1	\$22,000
Michigan State University	1	\$50,500
Oregon State University	1	\$2,300,000
West Virginia University	0	\$0.00
University of Nevada, Reno	0	\$0.00
Total	34	\$7,839,900

Table 4: The number of ARS grants awarded to each university for agricultural uses of farmed animals between 1/1/2021 and 12/31/2025, alongside the sum of these grant amounts.

Together, these two USDA agencies directed roughly \$72.4 million in federal money to farmed-animal experimentation or related projects at these public universities over five years—an order of magnitude beyond any single industry contribution documented above, and a reminder that the taxpayer, not just commodity boards, industry groups, or private companies, also funds this experimentation.

It is also important to note that the federal and industry streams are not independent of one another. The Foundation for Food and Agriculture Research, which channels JBS and Nestlé money to UW-Madison and UIUC through its Greener Cattle Initiative, was itself established by Congress in the 2014 Farm Bill and supported with federal appropriations on the condition that they be matched by non-federal funds.⁴⁰ Public dollars do not merely coexist with industry dollars in this sector; in some instances, they are structurally designed to attract them.

Across these diverse mechanisms, the experimental agenda at university animal facilities is shaped in significant part by funders whose commercial interests are directly tied to the hypotheses posed and the results produced. In Oregon and Indiana, this dynamic is reinforced by state law. In the case of NIFA and ARS, it is underwritten by the federal government—and American taxpayers.

...

These findings describe a substantial publicly and privately financed system in which agricultural experimentation, teaching, and commercial production are deeply interconnected. But understanding how this system operates requires looking beyond its institutional structure and funding to the lives of the animals whose bodies sustain it. The following section of this report summarizes what those animals experience: from the conditions in which they are housed, to the additional restraints and procedures imposed by experimentation, to their eventual deaths.

PART TWO

The Lives and Deaths of Farmed Animals at AAALAC-Accredited Universities

Housing

Before being “enrolled” in an experimental protocol, these animals often live within the same housing systems that define industrial animal agriculture. Individual calf hutches, gestation crates, and battery cages, all forms of confinement housing that have drawn decades of public criticism and legislative prohibition in some states, are standard equipment at AAALAC-accredited university facilities. What permits this is the governing standard itself: the Ag Guide typically sets minimum space requirements and stocking densities generally aligned with industry practice. At a regulatory level, state animal confinement legislation often exempts “research activities” from compliance with these laws.^{41, 42}



Calves housed individually during an experiment at the UW-Madison Dairy Cattle Research Center. Adapted from Reuscher et al., <https://doi.org/10.3168/jds.2023-24006>.⁴³ © 2023 The Author(s). Licensed under CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>).

Cows

The Ag Guide lightly recommends housing calves in small group pens,⁴⁴ yet most of the institutions analyzed describe housing at least some of their calves alone, confined to hutches or pens. UW-Madison houses some dairy calves individually in hutches, citing their necessity in mitigating disease transmission.⁴⁵ Purdue states that they house some of their calves individually to prevent “cross-sucking,” noting that the calves retain visual contact with adjacent animals,⁴⁶ while MSU keeps female calves in individual plastic hutches with a wire mesh pen in front until roughly eight weeks of age, at which point some may be grouped together for socialization.⁴⁷ WSU explicitly states that calves are housed individually precisely *because* this is strongly favored by the dairy industry, and a primary goal of the Knott Dairy Center is to “train students according to the current practices” of that industry.⁴⁸

U of I uses “commercially produced” plastic hutches in its calf barn for single calves up to sixty days old,⁴⁹ and OSU houses young calves individually in indoor pens measuring seven by four feet.⁵⁰ Finally, UIUC describes calves housed singly *or* in groups, with individual hutches that include a semicircle of metal fence.⁵¹ The rationales offered, namely disease control and the prevention of cross-sucking, are identical to those given by the commercial dairy industry.

This confinement does not always end when calves leave their hutches. Adult dairy cows may be housed in tie stalls, a system that tethers a cow by the neck in a single stall for the majority of the day. MSU describes heifers first introduced to tie stalls with a rope halter to help them adjust to neck chains.⁵³ Its exercise provisions indicate the extent of



*Calves during a cold stress experiment at the UW-Madison Emmons Blaine Dairy Cattle Research Center. Adapted from Reuscher et al., <https://doi.org/10.3168/jds.2023-23941>.⁵²
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the restriction: non-pregnant, non-lactating cows in tie stalls are released once daily for one hour, and lactating cows are released three times daily for thirty to forty-five minutes.⁵⁴ Every minute outside those windows of time appears to be spent tethered.

At UIUC, the Lincoln Avenue Dairy is described as a “confinement facility,” with the exception that “developing heifers have access to dirt exercise lots.”⁵⁵ The on-campus dairy at UW-Madison also confines cows to tie stalls. While this dairy has an “outdoor exercise lot,” the program description does not indicate how frequently or for how long these cows have access to the paved area behind the facility.⁵⁶



Cows chained to their tie stalls at UW-Madison's Dairy Cattle Center. Adapted from Mantovani et al., <https://doi.org/10.3168/jdsc.2023-0442>.⁵⁷ © 2023. Licensed under CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>).

Pigs

For pigs, the Ag Guide deems a “properly designed individual stall or group system” acceptable to house gestating sows.⁵⁸ Every analyzed university that routinely houses pigs describes the use of gestation and/or farrowing crates. UIUC houses gestating sows

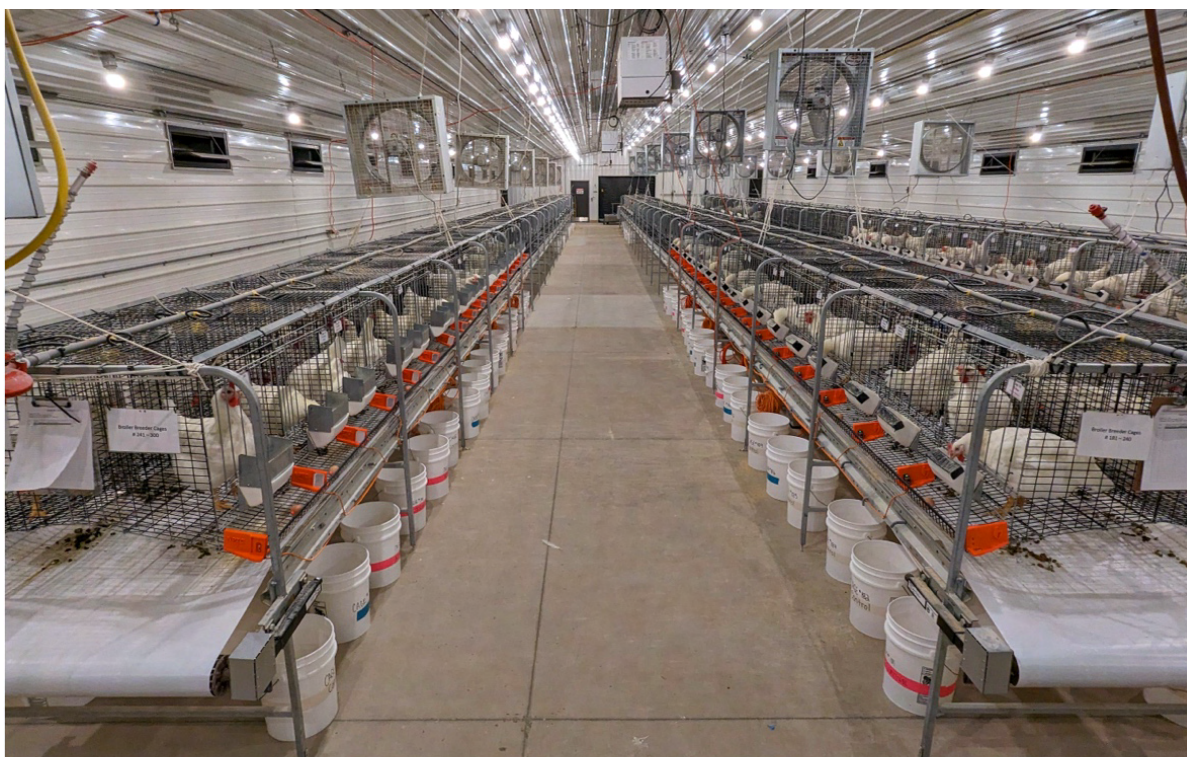
and mature gilts individually in gestation stalls on concrete before moving them into farrowing crates, and may house boars individually as well.⁵⁹ Despite Michigan's gestation crate ban, MSU houses all gestating sows in stalls at one of its units, where boars are also kept in steel stalls atop cement slats.⁶⁰ Purdue uses both gestation pens and crates, as well as farrowing crates to house pigs.⁶¹ UW-Madison uses crates and stalls to house individual pigs across various life stages,⁶² and OSU's sanitation records confirm the presence of farrowing crates at one facility.⁶³



Sows housed in gestation crates at UIUC. Image obtained via public records request.

Farmed birds

Farmed birds are often housed in cages. The Ag Guide does not prohibit housing laying hens or broiler chickens in cages; it simply provides minimum space allowances and stocking densities typically consistent with industry standards.^{64, 65} UIUC houses laying hens in group wire cages and growing chicks in multilayer battery cages until four weeks of age.⁶⁶ Purdue's Poultry Unit is described in its own documentation as a “conventional, total confinement teaching and research facility.”⁶⁷ Again, despite Michigan's law prohibiting the caging of laying hens, MSU states that it houses chickens in individual or colony cages depending on the protocol.⁶⁸



Chickens confined to individual cages during an experiment funded by ARS. Adapted from Sroda et al., <https://doi.org/10.1016/j.psj.2025.105932>.⁶⁹ © 2025 The Authors. Licensed under CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>).

The alignment with commercial practice is not incidental: in at least one instance it is the stated justification. UIUC obtained IACUC approval for a space exception permitting commercial swine in certain grow-finish protocols to be housed below Ag Guide density during the final two to four weeks before market, on the explicit grounds that “the goal of the research must address commercial production conditions.”⁷⁰ Where the experiment’s question is how animals perform under the worst industrial conditions, the minimum requirements set by the Ag Guide become negotiable.

Experimental confinement

The confinement these animals endure does not end with the standard housing systems of commercial agriculture. Animals enrolled in experimental or teaching protocols may be subjected to still more intensive restriction, in which they are held for days at a time in enclosures that may prevent them from turning around.

A common form of this restraint is referred to as the “metabolism” crate or stall, used across species to isolate animals for nutritional and metabolic studies. Often so restrictive of movement that the animals confined within them can only stand up and lie down, the metabolism crate’s purpose is to provide researchers with strict control over an individual animal’s environment. This gives them full domain over the animal’s experimental food intake, while allowing for the individualized collection and analysis of their urine and feces.⁷¹



An example of metabolism crates situated within respiration chambers at Cornell University's Atkinson Center for Sustainability. Adapted from Dadallage et al., <https://doi.org/10.3168/jdsc.2025-0862>.⁷² © 2025. Licensed under CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>).

At Purdue's swine unit, sixteen stainless-steel metabolism crates hold pigs for nutritional trials; the larger crates provide 11.5 square feet and the shorter ones just 8 square feet. In both cases, the animals are unable to turn around and are typically held for a total of ten days following a multi-day acclimation period.⁷³ Notably, the facility argues that because these crates satisfy the Ag Guide's space requirements for individually housed “finishing” pigs, they “would not have to be considered confinement,” even as it acknowledges the animals cannot turn around inside them.

Purdue's beef unit similarly confines cattle in metabolism crates for periods of up to three weeks.⁷⁴ UIUC holds adult cows in metabolic “chambers” for as long as twenty-one days,⁷⁵ while metabolism crates or cages may house pigs for anywhere between two weeks and three months at the university’s Swine Research Center.⁷⁶

In some protocols, the restraint is specially engineered around the demands of an individual experimental procedure. At UIUC, calves are held immobile in crates with their heads placed in a stanchion so that urine flow will not contaminate fecal collection; after a two-to-three-day acclimation, the calves are orally inoculated with a diarrheal pathogen and held in restraint for up to fourteen days.⁷⁷ Also at UIUC, cattle in greenhouse-gas trials have their heads enclosed in a sealed plexiglass collection hood for up to 26 hours.⁷⁹



A cow confined to a greenhouse gas collection hood at UC Davis. From Place et al., <https://doi.org/10.3390/ani1040433>.⁷⁸ © 2011 by the authors. Licensed under CC BY 3.0 (<https://creativecommons.org/licenses/by/3.0/>).

Other protocols rely on further sustained individual caging and isolation. UW-Madison houses boars in gestation crates and single-houses hens in battery cages for approved experiments.⁸⁰ OSU's “400 House” is a caged layer facility purpose-built to hold laying hens in individual cages so that each bird's egg production and feed consumption can be recorded separately.⁸¹

These protocols show confinement functioning not as an incidental byproduct of these studies, but as a designed condition of them: animals are immobilized, isolated, and in some cases, held below baseline standards precisely because the experimental or commercial objective requires it. For some animals, exposure to these conditions is not necessarily limited to a single study. Because many farmed animals remain part of university herds for months or years, the same individual may be enrolled repeatedly in experimental and teaching protocols over the course of their life.

Re-use of animals in experiments

Compounding the confinement and industry-driven experimentation described above, farmed animals are routinely singled out for reuse in experimental and teaching protocols. The institutions themselves identify agricultural and veterinary-teaching animals as the primary population subjected to this practice, and their own descriptions reveal how thoroughly a single animal's life can be given over to successive experiment and teaching demands.

The reuse appears most concentrated in teaching and in nutritional experimentation. MSU reports that reuse occurs primarily in its veterinary and agricultural teaching programs, where adult cattle are cycled through protocols for training students in handling, injections, blood sampling, and rectal palpation.⁸² UIUC describes a similar pattern: animals maintained long-term on a housing or production protocol are temporarily reassigned to teaching protocols as needed, while nutrition studies see individual animals moved through multiple feeding trials over time—albeit “rested” between each trial.⁸³ OSU, U of I, UW-Madison, and WVU likewise confirm that farmed animals may pass through multiple studies throughout their lives in the herd.^{84, 85, 86, 87}

For a subset of these animals, reuse is enabled by permanent surgical modification. UIUC notes that cattle and pigs used in nutrition experiments may have a digestive tract “cannula” (a surgically implanted opening into the rumen or intestine) installed to allow repeated collection of digestive contents; their IACUC permits such animals to be entered into multiple successive experiments for as long as the implant and surgical site remain viable.⁸⁸ MSU similarly identifies cows fitted with a permanent rumen cannula as its most common re-enrollments in experimental protocols.⁸⁹ UIUC further describes cattle subjected to multiple biopsies on a single protocol and then returned to the herd, where they may be drawn on again for additional nutritional experimentation.⁹⁰



A cannulated cow at Purdue's Animal Sciences Research and Education Center. Adapted from Deng et al., <https://doi.org/10.3390/agriengineering8080331>.⁹¹ © 2026 by the authors. Licensed under CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>).

The institutions frame these practices as carefully monitored and limited to minimally invasive use. Several describe tracking systems intended to prevent overuse: farm managers and veterinarians review an animal's prior-procedure history before they are enrolled in a new protocol, document invasive procedures in individual records, and enforce “washout” periods between treatments—lengths of time where an animal is not the recipient of any experimental treatment, so as not to interfere with the results of the next experiment in which they are enrolled.^{92, 93, 94} OSU explicitly states that long-lived herd animals may be enrolled in multiple “non-invasive” teaching or study protocols under unit-level tracking.⁹⁵

These reassurances rest heavily on the claim that reuse is confined to minimally invasive work. In regulatory terms, this aligns with the USDA's Category C designation, which covers experimental protocols involving *at most* momentary or slight pain or distress. But that classification is broader than it sounds, and a closer look at what it can encompass undercuts this reassurance. As will be discussed further in the next section, a designation meant to signify negligible discomfort is routinely extended to procedures with substantial capacity for harm.

Experimental pain and distress categorization

Across the seven institutions whose AAALAC program descriptions were surveyed, these records document an estimated 608 protocols involving the use of farmed animals. The USDA sorts animal use into ascending tiers of pain and distress, and the distribution across those tiers is heavily weighted towards what are supposed to be the “less painful” tiers. Of the 498 protocols carrying a category designation, 352 (70.7%) are classified as Category C. Another 117 (23.5%) are Category D, and just 11 (2.2%) are labeled Category E.

USDA Pain & Distress Designations Across Farmed Animal Protocols

University	Farmed Animal Protocols	Category B	Category C	Category C/D	Category D	Category E
Purdue (2022)	94	0	67	-	25	2
WVU (2022)	28	2	19	-	6	1
MSU (2023)	99	0	91	-	8	0
OSU (2024)	98	0	69	12	17	0
UW-Madison (2024)	22	-	9	-	13	-
UIUC (2025)	117	0	63	-	46	8
U of I (2026)	40	2	34	2	2	0
Total (% of all protocols)	498	4 (0.8%)	352 (70.7%)	14 (2.8%)	117 (23.5%)	11 (2.2%)

Table 5: The number and percent of protocols involving farmed animals categorized by each USDA pain and distress designation. Both OSU and U of I had protocols that were denoted as encompassing both Category C and D. **Note:** UW-Madison did not provide pain and distress designations for 110 of its 132 farmed-animal protocols. Percentages are calculated against the 498 protocols that carry designations, as opposed to the 608 total protocols involving farmed animals.

Category B: Defined by the USDA as “animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.”⁹⁶

Category C is defined as covering animals used in teaching, experimentation, or testing that involves at *most* momentary pain or distress, and it accounts for over two-thirds of all designated protocols. Yet the studies classified this way include some that plainly impose distress, and this classification may include AVMA-approved euthanasia techniques;⁹⁷ for farmed animals, this can include methods of depopulation such as ventilation shutdown. UIUC explicitly states that experiments in which animals are *only* subjected to “standard agricultural practices” may be uniformly categorized as minimally painful or distressing.⁹⁹

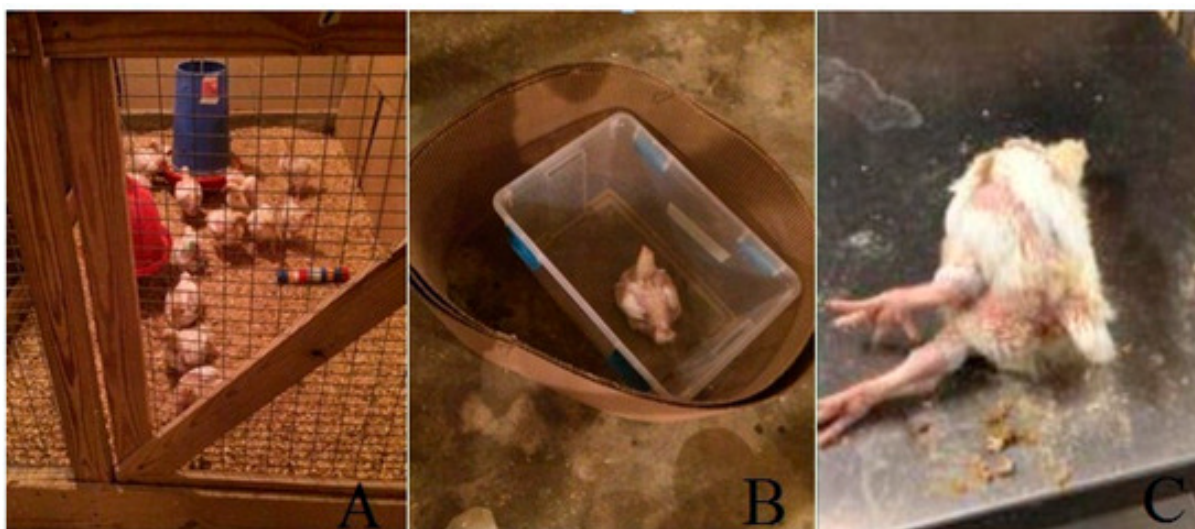


A sow having her temperature taken during a heat stress experiment at Purdue. Adapted from Field et al., <https://doi.org/10.3390/agriengineering6040226>.⁹⁸ © 2024 by the authors. Licensed under CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>).

In three protocols designated as Category C, Purdue subjected pigs to three days of acute heat stress to determine if the addition of oregano essential oil to the pigs’ water mitigated the harms of this prolonged stress,^{100, 101} and forced breeder Pekin ducks to endure ten days of heat stress, with a companion study injecting the resulting ducklings with stress hormones and “randomly culling” some to keep group sizes equal.^{102, 103}

In another, MSU ran a ventilation shutdown study on chickens, which has been shown to produce slow and agonizing deaths in animals as they succumb to heatstroke.¹⁰⁴ Funded by the Michigan Alliance for Animal Agriculture, this study sought to determine whether steam could serve as an accelerant for this method of mass killing.^{105, 106} Additionally, U of I denied colostrum to dairy calves and housed them in hutches before euthanizing them via captive-bolt stunning and exsanguination to study early-life stressors.^{107, 108} That heat stress, mass depopulation, colostrum deprivation, and slaughter all sit within a tier defined by the *absence* of extended pain or distress is alarming.

Category D covers procedures that *do* cause pain or distress but for which anesthetic, analgesic, or tranquilizing drugs are administered.¹⁰⁹ Purdue again subjected pregnant pigs to gestational heat stress, in this case to study thermoregulation in pigs selectively bred for heat tolerance.^{110, 111} In another Purdue protocol, hundreds of newly hatched chicks were subjected to heat stress conditions for nine hours per day before being thrust into situations aimed to evoke the chicks' fear response.^{112, 113} U of I imposed "mild" heat stress on lactating dairy cows to examine its effects on liver and mammary mitochondria;^{114, 115} and UW-Madison kept pregnant and lactating cows confined to individual tie stalls for as long as eleven months in a nutrition study.^{116, 117}



Chicks undergoing fear-response tests after being exposed to chronic heat stress conditions at Purdue University's Poultry Research Center. Adapted from Mohammed et al., <https://doi.org/10.3390/ani11020427>.¹¹⁸ © 2021 by the authors. Licensed under CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>).

Category E is the most severe, describing procedures involving pain or distress for which pain-relieving drugs are deliberately withheld, on the rationale that they would interfere with the experiment's results. Only eleven such protocols appear across all seven institutions, concentrated at Purdue, WVU, and UIUC. At Purdue, ducks were implanted with steroids for two weeks to artificially elevate stress hormones,^{119, 120} and chicks were deliberately infected with a strain of salmonella while treatment was withheld.^{121, 122}

At WVU, pregnant sheep had bacterial infections experimentally induced in order to determine their effect on rates of pregnancy loss.^{123, 124} UIUC accounts for the rest of the

Category E protocols, including piglets born from sows genetically predisposed to infections from a certain strain of *E. coli*, who were then “orally inoculated” with that bacteria and denied treatment for three days before they were euthanized.^{125, 126}

Protocol “Special Considerations”

Pain and distress categories, however, capture only one dimension of what these animals experience. A separate set of “special consideration” designations reveals burdens that those categories may obscure, including survival surgeries, food or fluid regulation, prolonged restraint, hazardous-agent exposure, and housing outside IACUC-managed animal facilities. Just under half of the protocols surveyed (273 of 608, or 44.9%) carry at least one special consideration, while 64 (10.5%) carry two or more.

Special Considerations Across Farmed Animal Protocols

University	Farmed Animal Protocols	Special Considerations (SC)						Protocols with ≥ 1 SC	Protocols with 2+ SCs
		SS	MSS	FFR	PR	HAU	NCA		
Purdue (2022)	94	16	1	9	0	15	9	29	11
WVU (2022)	28	7	1	0	0	0	0	7	1
MSU (2023)	99	15	7	1	0	15	9	31	12
OSU (2024)	98	5	0	0	0	0	77	77	5
UW-Madison (2024)	132	27	4	6	5	17	8	47	12
UIUC (2025)	117	28	2	6	1	35	28	70	23
U of I (2026)	40	4	0	0	7	0	1	12	0
Total (% of all protocols)	608	102 (16.8%)	15 (2.5%)	22 (3.6%)	13 (2.1%)	82 (13.5%)	132 (21.7%)	273 (44.9%)	64 (10.5%)

Table 6: The number and percent of farmed animal protocols carrying each special consideration, as well as the aggregate of all protocols with at least one special consideration, and two or more special considerations. **Note:** Because a single protocol may carry multiple special considerations, the figures may sum to more than an individual university’s number of protocols.

SS- Survival surgery (102 protocols, 16.8%) refers to operations from which the animal is expected to recover from anesthesia. For farmed animals subjected to agricultural experimentation, this often means invasive, permanent modification of the

digestive tract. UW-Madison performs rumen cannulation on cattle: a circular incision is cut, the rumen wall is sutured to the skin, and a rumenotomy follows four to seven days later.¹²⁷

MSS- Multiple survival surgeries (15 protocols, 2.5%) is defined as a single animal undergoing more than one recovery surgery in the animal's lifetime. UW-Madison's sheep protocol authorizes "embryo flushing" twice on the same ewe, at a minimum of thirty days apart, and permits egg retrieval followed by embryo flushing on the same animal.¹²⁸ UIUC conducts both rumen and duodenal cannulation on the same animals, staggering the two operations so that fresh rumen sutures are not stressed, meaning the cow undergoes two surgeries and two anesthesia events within a short time span. The same cows may also have their ovaries removed in order to prevent "unpredictable behavior" when used for teaching.¹²⁹

FFR- Food or fluid regulation (22 protocols, 3.6%) typically refers to the restriction of feed or water, although it encompasses any alteration to an animal's typical food and water provisions. UIUC's protocols illustrate the range seen within this special consideration. Farmed birds may be subjected to twenty-six-hour fasts prior to being fed experimental diets, while cattle may be fasted from food *and* water for up to twenty-four hours to measure the differences between dietary treatments. In another protocol, pigs are required to undergo total fasting for up to forty-eight hours to measure fasting heat production.¹³⁰

PR- Prolonged restraint (13 protocols, 2.1%) captures the metabolism crates, tie stalls, and stanchions documented previously. UIUC logs a single protocol under this heading despite describing the use of metabolic chambers that hold cattle for up to twenty-one days and crates that hold calves for up to two weeks. Purdue reports none at all, though its own facility documentation describes metabolism crates used for up to three weeks in cattle and ten days in pigs, along with graft-fostering stanchions that immobilize ewes for three to four days.



Calves, chained to metal stalls at Purdue's ASREC Dairy Farm, having their urine collected via catheterization as part of an experimental protocol. Adapted from Ceja et al., <https://pmc.ncbi.nlm.nih.gov/articles/PMC9387597/>.¹³¹ Part of the U.S. Public Domain.

HAU- Hazardous agent use (82 protocols, 13.5%) covers the deliberate application of biological agents such as bacteria, viruses, and parasites; chemical agents including anti-neoplastic drugs and formalin; and physical agents such as radiation, lasers, and noise.¹³² Roughly one protocol in seven exposes farmed animals to a hazardous agent. At U of I, a NIFA-funded study denoted as such saw male dairy calves confined to chambers and deliberately exposed to simulated wildfire smoke for six hours prior to being euthanized.¹³³ A similar study was conducted at OSU, although the eight-month-old cows here were exposed to simulated wildfire smoke conditions for seven days.¹³⁴

NCA- Non-centralized housing areas (132 protocols, 21.7%) describes protocols where animals are kept in facilities not directly managed by the institution's professional animal resources program, such as investigator laboratories, department-run areas, teaching facilities, and farmed animals at commercial facilities unaffiliated with the university.¹³⁵

These classification systems describe a population of animals whose suffering is systematically understated. Some protocols involving heat stress, colostrum deprivation, mass depopulation, and slaughter are categorized in a tier reserved for procedures involving no or minimal pain. The special considerations reveal that beneath those

labels lie permanent surgical alteration, multi-day fasting, prolonged immobilization, and pathogen exposure.

Adverse events

Even the designed suffering catalogued above does not capture the full extent of the harms faced by these animals, given that it excludes the “adverse events” the institutions report to their oversight bodies: the injuries, deaths, and welfare failures that occur outside any protocol's intended parameters. These reports describe animals dying in ways that are often preventable, gruesome, and in some cases, traceable to human negligence or misconduct.

A recurring adverse event category is death caused by the physical infrastructure of confinement itself, such as the stalls, gates, chutes, and other equipment meant to restrain these animals. UW-Madison reported a cow who asphyxiated after attempting to climb a gate and becoming entangled, and another who was euthanized after injuring herself when she was released from the milking parlor while still wearing “anti-kick” equipment.¹³⁶ UIUC recorded a cow being euthanized after becoming trapped under a stall crossbar, a calf injured after entering a hydraulic chute backwards, and a steer who died in a metabolism barn stanchion after apparently twisting his head while struggling to stand.¹³⁷

A second category includes mass deaths from environmental and management failures. In 2023, UIUC lost roughly 150 chickens to heat stress during unusually warm weather, saw young chicks die from insufficient supplemental heat and water shortly after delivery, and ended an experiment prematurely after a mis-mixed feed batch killed laying hens during a prolonged, low-level “die-off” period.¹³⁸ In July 2024, a downed gate let a group of cows reach a nearby railway; eleven were struck by a train, with seven killed on the scene and four euthanized.¹³⁹

A third category involves deaths that arise directly from the experimental design or from investigator misconduct. Purdue reported that six sows died on a single protocol from

peritonitis traced to traumatic insertion of a vaginal temperature logger.¹⁴⁰ U of I enrolled twenty calves in a transportation-related stress study; many fell ill and six died or were euthanized after it emerged that the principal investigator had knowingly accepted calves suffering failure of passive transfer from inadequate colostrum.¹⁴¹ UW-Madison reported a cow who died after being mistakenly removed from anti-parasitic treatment during a study, causing her to lose significant weight and failing to recover.¹⁴²

Beyond individual incidents, other reports rise to the level of systemic or institutional failure. OSU's Dairy Research Farm generated anonymous welfare complaints, elevated morbidity and mortality, missing medical records, a human zoonotic-disease case, and a lapsed protocol; the husbandry protocol was ultimately suspended in 2018 and all experiment and teaching use halted until a renovation plan was implemented, with heightened monitoring continuing after the suspension was lifted.¹⁴³

While not appearing on annual reports or program descriptions submitted to AAALAC, OSU's IACUC records reveal numerous later incidents at the OSU dairy, which include cows dying of pneumonia, uterine prolapse, and hypocalcemia;¹⁴⁴ a ewe suffering from a parasitic infection at a separate OSU unit died suddenly while being sheared, and a lamb died after being found “thrashing and in distress” from a suspected tracheal obstruction in 2021.¹⁴⁵

At UIUC, an animal-welfare complaint from a former student employee in 2023 led to an investigation that the IACUC substantiated: it concluded that an employee's handling practices at the Lincoln Avenue Dairy and Veterinary Teaching Hospital violated both the federal Animal Welfare Act and Illinois' animal cruelty laws. The institution revoked the employee's animal-use privileges, mandated retraining, and hired additional staff.¹⁴⁶

Finally, a number of events reflect the hazards of these animals' environments, a reminder that these are working farms exposed to severe weather, environmental toxins, and predators. In 2020, Purdue lost two ewes to coyotes while on pasture.¹⁴⁷ UC Davis reported a bull who was killed by a falling tree during a storm,¹⁴⁸ two cows fatally injured when a stacked hay bale collapsed,¹⁴⁹ and a dairy cow who died of oleander poisoning after the campus “Picnic Day” event, on the theory that a member of the public placed oleander leaves into her pen.¹⁵⁰ Notably, when the collapsing hay bale

incident was reported to the relevant agencies, it was deemed to be within the realm of standard agricultural practice and therefore required no further action, illustrating how much “routine” animal death the regulatory framework treats as unremarkable.

These self-reported events show that the harms to animals at these facilities extend well past what any protocol anticipates: preventable deaths in restraint equipment, mass losses to environmental and feed failures, deaths caused by investigators disregarding their own approved procedures, and substantiated cruelty by staff members. All of these harms, designed and accidental alike, befall animals whose survival was, in many cases, never the intended outcome.

The animals’ “final disposition”

For many of these animals, life ends the way it does for their counterparts on “typical” commercial farms: at slaughter. What distinguishes the university setting is largely based in nomenclature. The on-campus slaughterhouses are identified as “meat labs” or “meat science” facilities, and the killing is folded into the language of teaching and “research;” but the function, and the retail sale of the animals’ resulting meat, milk, and eggs, is thoroughly commercial.

The institutions’ own disposition policies place slaughter among the routine outcomes for farmed animals used in experiments or teaching, occasionally at the expense of the animal’s ability to be adopted or used in further experiments. UC Davis states that “livestock with a deemed value” are not eligible for adoption upon the conclusion of an experiment.¹⁵¹ Purdue slaughters farmed animals at its Land O’Lakes Purina Pavilion and Meats Lab,¹⁵² and its disposition policy contemplates preserving an animal’s “salvage value,” as some experiments may render the animal unable to be sent to slaughter and may therefore be a waste of a food source.¹⁵³

UIUC lists slaughter for human or animal consumption alongside euthanasia and “return to the herd” as standard dispositions.¹⁵⁴ U of I, OSU, and WSU assert similar disposition options: euthanasia, return to herd, sale at market or auction, or humane

slaughter.^{155, 156, 157} UW-Madison specifies that cattle, sheep, and swine that cannot be returned to the herd may be sold to other producers or for “humane harvest,”¹⁵⁸ while MSU sends “demonstration steers” directly to slaughter after classroom use.¹⁵⁹ The euphemistic vocabulary runs throughout: animals are “humanely harvested” or returned to the “food chain,” and the slaughterhouses that do this work are disguised as “meat science” and teaching facilities.^{160, 161}

IACUC approved methods of “euthanasia” or “humane slaughter” likewise mirror those used to kill animals in commercial slaughterhouses or “cull” them on factory farms. At MSU, maceration—or grinding—is an approved method of euthanizing chicks beginning to break through their eggs (“pipped eggs”), as is “cervical dislocation” (neck breaking) and decapitation for older farmed birds.¹⁶² “Manually applied blunt force trauma” may be used to “euthanize” un-weaned piglets.¹⁶³

Asphyxiation caused by carbon dioxide inhalation is an approved euthanasia method for both farmed birds and young piglets at Purdue.¹⁶⁴ At UIUC, piglets less than three weeks old may be “euthanized” by a blow to the head, while “two-step electrocution” and carbon dioxide asphyxiation are IACUC-approved killing methods for older pigs.¹⁶⁵

WVU’s IACUC lists inhaled gases (including carbon dioxide), cervical dislocation, and decapitation as approved methods to euthanize farmed birds.¹⁶⁶ Under the euthanasia section of the AAALAC program description, UW-Madison notes that agricultural species are “humane[ly] harvest[ed]” on campus at a federally inspected slaughterhouse.¹⁶⁷ Approved methods include carbon dioxide inhalation for farmed birds and pigs, as well as cervical dislocation specifically for chickens.¹⁶⁸

Conclusion

The records analyzed in this report pull back the curtain on a sector of animal exploitation that is massive in scale, commercially aligned, publicly financed, and lacking meaningful external oversight. Across just ten public universities, an estimated 97,448 farmed animals were used in agriculture-related production, experimentation,

and teaching in a single year, with an average of 96% of the farmed animals used in *all* forms of experimentation falling outside the scope of the Animal Welfare Act.

The most consistent finding across these institutions is the near-total absence of external oversight governing this sector. Four layers of potential protection each fail these animals at the same point: the AWA excludes farmed animals used in agricultural research outright; the PHS Policy enforced by OLAW could in principle apply, but typically reaches biomedical work rather than the production-oriented experimentation documented here; AAALAC accreditation, the credential these universities invoke as evidence of humane treatment, benchmarks its requirements to the standards of a “high-quality, well-managed farm,” often conforming to prevailing industry practice; and the state confinement laws enacted to abolish the cruelest housing systems carve out “scientific or agricultural research,” allowing publicly funded institutions to continue using the very systems those laws were meant to end. Each external oversight mechanism has a gap precisely where these animals sit.

The data these institutions report on their own animals' suffering are systematically diminished. Of 498 protocols carrying a pain-and-distress designation, 70.7% are placed in Category C—the tier reserved for procedures involving at most momentary pain—even as that tier describes studies involving sustained heat stress, colostrum deprivation, ventilation shutdown, and slaughter. When a classification is self-assigned and appears to routinely underestimate an animal's level of suffering, the reassurance it is meant to provide cannot be taken at face value.

Additionally, this experimentation is not a marginal or self-supporting enterprise; it is substantially funded by both taxpayers and the animal agriculture industry itself. Two USDA agencies alone, NIFA and ARS, directed a minimum of roughly \$72.4 million to these universities over five years. In Oregon and Indiana, statutes compel a share of commodity assessments directly into university agricultural programs, while agribusiness giants routinely fund experiments whose outcomes are directly tied to their business interests. The industry, commodity-board, and corporate contributions behind this work can be assembled only in part, as no comprehensive public tally of agricultural research funding exists. Even the spending that is documented, however, is rarely tied to

any public accounting of how many farmed animals are used, under what conditions, or to what end. The taxpayers who fund this work, as well as the consumers who purchase its products, likely have little knowledge of this large sector of experimentation.

Finally, we must acknowledge what this report can and cannot conclude. Every finding here exists because these universities chose to have their agricultural programs accredited by AAALAC, and because their states' public records laws allow for the release of the resulting documents. The institutions documented here may therefore represent the more transparent end of the sector, not the worst of it. Therefore, this report should be read as a partial glimpse of a sector of experimentation that, for most of the farmed animals used, generates little public record and operates under minimal external oversight.

Recommendations for animal advocates

Despite bridging two major domains within which the animal advocacy movement operates, farmed animal use in agricultural experimentation has thus far received little attention from either camp—although recent discussions with advocates indicate that this tide may be shifting. What may be viewed as less evocative to those primarily advocating for animals in labs might also be dismissed by farmed animal advocates as a lesser problem dwarfed by the immensity of industrial animal agriculture.

However, while it may be true that the number of animals sitting at this intersection is a small portion of those used in agriculture overall, these animals are still subjected to the same harms imposed by industrial animal agriculture and are additionally burdened with the purpose of providing data to uphold, promote, and expand this industry.

Additionally, as this report has revealed, this experimentation can be as brutal and invasive as the primate and dog experiments brought to the public's attention by whistleblowers, undercover investigations, and open rescues.

Given that this is an under-explored area of animal exploitation with immense potential for seamless incorporation into the present animal advocacy movement, the following are our recommendations for further work by animal advocates:

- I. **Student attitudes:** Gaining a better understanding of student attitudes towards and general knowledge of the use of farmed animals in experiments on their college campuses would be incredibly valuable. Students are in a uniquely powerful position to enact change on their college campuses, and any actions taken by animal advocates in this space will only be made stronger with student support and involvement. Movement organizations working on college campuses may want to consider incorporating the theme of farmed animal experimentation into their outreach activities.

- II. **Consumer perspectives:** It would also be beneficial to further explore the perceptions of those buying products yielded from farmed animals subjected to experimentation, including whether they are aware of this at all. Their level of knowledge here is unclear, and it would be of value to advocates to understand how consumer buying habits might change upon being informed about this area of experimentation. Another consumer-perspective theme worth pursuing is the taxpayer angle: how might people feel about their tax dollars funding animal experiments whose primary goal is boosting the profit margins of animal agribusiness?

- III. **Incorporation into current advocacy:** Animal advocates may additionally find value in incorporating this sector of exploitation into their current work. For those fighting for animals in labs, this would substantially add to the scale and breadth of animal experimentation as a topic, additionally providing a well of painful research procedures, potential researcher misconduct, and taxpayer-funded experiments to expose. For those working on farmed animal or food system issues, the insights gleaned from this report and beyond can be used to further highlight the harms imposed on farmed animals by agricultural

exploitation, while underscoring the vast influence that industrial animal agriculture's financial grasp has on so many aspects of our society.

- IV. **Exploring law and policy work:** This area of intersectional animal exploitation could also benefit from efforts devoted to policy and law reform. These efforts could take a variety of forms, from smaller-scale policy asks at the university level, to larger-scale reform at the federal level. An example of a smaller-scale, institutional policy ask could be petitioning universities to give farmed animals the option of being adopted or moved to sanctuaries instead of facing slaughter or sale to another producer upon the completion of their experimental protocols. On the other end of the spectrum, a larger-scale policy action at the federal level could be to submit rulemaking petitions to the FDA and/or USDA. As institutions must seek FDA and/or USDA approval to market food products originating from animals exposed to certain experimental biological products, drugs, or chemicals, the petition(s) could argue for mandatory disclosure labeling on products derived from the animals used in such experiments. These are offered as just a few of the undoubtedly many possible actions in the law and policy sphere worth further exploration by advocates.

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