

## Mink Fur Farming

### *For Good Reasons, Mink Farming Appears to Be in Terminal Decline*

- After a 100-year run, mink fur farming in the United States is nearing its end, as pelt production, pelt prices, the number of farms, and market demand continue a downward spiral.
- Mink fur farming is an economically fragile, broken, and unsustainable industry poised for near-term total collapse.
- Farmed mink may be one of America's greatest zoonotic disease threats. As SARS-CoV-2 risk in farmed mink recedes, a greater mink threat to people arises from HPAI (bird flu) H5N1.
- It is time for Congress to authorize a voluntary mink buy-out and mink farming ban to protect public health, stop cruelty, and provide a safety net to the small set of farmers still involved in the enterprise.

American mink farms are largely unprofitable, poorly regulated, exceptionally secretive, in long-term decline, and kept afloat by government **subsidies** in some states. In addition to the demonstrable cruelty associated with extreme cage confinement of semi-aquatic wildlife, mink ranching represents a high-impact, if unpredictable, zoonotic hazard, as shown by the worldwide zoonotic **COVID-19 pandemic in farmed mink** from 2020-2022 and the **outbreak in 2022-2023** that caused infections and deaths of thousands of farmed mink from the zoonotic bird flu H5N1 virus.

It is unethical, unjustifiable, and reckless to keep a failing and inhumane mink industry afloat that threatens human, domestic animal, and wildlife health for the sake of a luxury fashion commodity exported to China and Europe that American consumers, retailers, and fashion designers reject and want no part of.

### ***I. Mink farms: animal cruelty epicenters***

Non-domesticated American mink (*Neogale vison* and *Neovison vison*) are intensively farmed by the millions in Europe, North America, and China for their dense and warm fur pelts. Farmed mink are raised in intensive, high-density, high-volume,



low-welfare, poor-hygiene barns. Industry housing norms place mink in tiny wire cages (about 1 square foot of floor space per mink, two adult mink per cage) with thousands (typically 10,000 to 50,000 mink per farm) of conspecifics. As highly aggressive hunter-predators, captive mink often **fight with, injure, kill, and even cannibalize** weaker cage-mates. They are fed a poor-quality and unnatural diet of slaughterhouse offal.

Unlike any cattle, pig, sheep, or poultry operation, mink farms raise wild, solitary, aggressive, and

semi-aquatic carnivores, not for food but for their dense winter fur coat. Mink are neither herd nor flock animals, nor even truly domesticated; the USDA classifies farmed mink as wild animals. The whole industrial mink farming setup — semiaquatic carnivores never getting to swim or hunt or roam and kept in a tiny austere cage — causes blatant cruelty, numerous abnormal behaviors (stereotypies), high stress and distress, frequent injuries and disease, and endless frustration.

## **II. Mink farms: zoonotic virus utopias**

With high population densities in a very small areas, low genetic heterogeneity, inbreeding to produce an array of coat colors (which also lowers disease resilience), filthy living conditions, innate mink/carnivore **susceptibility** to infections, **modest (at best) biosecurity practices**, unending distress, and stress-induced immunosuppression, mink farms are highly conducive to contagions of all sorts. Their livestock, fish, and poultry slaughterhouse offal feed may be contaminated with various animal pathogens. Farmed mink are notoriously vulnerable to infectious, multi-host, and zoonotic (i.e. spread from animals to humans) diseases. They are also highly receptive to “species jumping,” i.e., when a pathogen infects a new host species.

Mink farms are near-perfect habitats for infectious agents to spawn, fester, mutate, and spread. Poor mink welfare and high animal/zoonotic disease risk cannot be disentangled. The same intensive confinement conditions that simplify the mass-rearing of mink create ideal environments for animal or human pathogens to prosper, spread, and evolve.

For example, mink farm outbreaks are facilitated by housing in adjoining bare wire cages that allow for both free airflow and direct animal contact within their densely packed barns. There are unintended if predictable disease consequences to raising normally solitary and unsocial wild mink under intensive confinement to which they are evolutionarily maladapted. Of particular current concern is the marked farmed mink vulnerability to two epidemic and zoonotic viruses: SARS-CoV-2 and Influenza A, the cause of most human, swine, and avian flu infections.

**COVID-19:** Farmed mink became infamous as zoonotic virus reservoirs during the SARS-CoV-2

pandemic. By late 2020, SARS-CoV-2 had spilled over from humans to farmed mink across Europe and North America where the virus then mutated and sometimes spilled back to infect thousands of people on at least five separate occasions, including in the U.S. Twenty million mink globally were culled to prevent a novel mink mutant strain from going rogue.

From 2020-2022, SARS-CoV-2 outbreaks occurred on at least **450 mink farms in 13 countries** in Europe, Canada, and the United States. The virus infected seven million mink and killed about 700,000 animals, including thousands of animals on 18 American mink farms. Captive mink are SARS-CoV-2 “super-recipients” and “super-spreaders.” They readily contract the virus from infected farm workers, rapidly spread it to virtually all mink on the farm (killing about 10% of exposed mink), and then (unlike any other animal) spill the virus back to people, sometimes as a dangerous mutant that may resist human vaccines and treatments.

Farmed mink in Denmark, France, Latvia, Poland, and **Michigan** spawned dangerous SARS-CoV-2 mutants that collectively infected thousands of people. Denmark (the world’s largest pre-Covid mink producer) and the Netherlands slaughtered all 20 million of their mink (one-third of the global 2020 farmed population) and banned mink farming in the fall of 2020 to successfully prevent the spread of the mink “Cluster 5” variant to people at a time when a human Covid vaccine was not yet available.

COVID-19 outbreaks at mink farms in Wisconsin, Utah, Oregon, and Michigan in 2020-22 were certainly an undercount. Unlike Europe or Canada, we have **no active or mandatory COVID-19 surveillance or testing** of mink farms or farmers by federal (CDC, USDA) or state agencies. A new mink COVID-19 variant could silently emerge and disseminate from any of these farms, imperil more people, and force us to yet again make lifestyle and work adjustments and incur high health and financial costs.

Another problem: mink are lithe and athletic and readily escape by the thousands. **Farmed mink can infect wild mink with COVID-19**, potentially creating an ineradicable SARS-CoV-2 reservoir in North America, just as zoonotic rabies, plague, and brucellosis have taken permanent hold in our

native wildlife populations. As carriers of SARS-CoV-2 and other animal or zoonotic pathogens, escaped or released farmed mink are also serious disease vectors, ecological disruptors, and injurious species to our native wildlife. SARS-CoV-2 spillover from farmed mink to native wildlife may decrease biodiversity and damage natural ecosystems. Mustelids such as native wild mink and the endangered black-footed ferret are particularly vulnerable to disease introductions from feral mink.

An experimental SARS-CoV-2 veterinary vaccine has been available to U.S. mink farms since 2022. However, some mink farmers are resistant to delivering the mink vaccine for cost, practicality, labor, and philosophical reasons. There is no data available on the vaccine's effectiveness or industry usage. Just as in humans, new mink vaccine formulations will be needed routinely to adjust to new virus variants that make the original vaccine ineffective.

Furthermore, a [Danish study](#) demonstrated that farmed mink can be heavily infected by SARS-CoV-2, seroconvert (i.e., become “immune” with antibodies), and then be heavily re-infected less than three months later with essentially the same virus strain. This finding does not bode well for mink COVID-19 protection via natural infection or immunization. Our [105-page Animal Wellness Action report](#) summarizes the risks of SARS-CoV-2 in farmed mink.

**Highly pathogenic avian influenza (HPAI) A H5N1:** The possibility always exists for pandemics caused by viruses that are more severe than COVID-19. Avian influenza A viruses are the consensus most likely known viruses with pandemic potential, i.e., could become adapted to and adept at human-to-human transmission with high morbidity and mortality. These “bird flu” viruses are highly contagious, with variable, strain-dependent morbidity and mortality. Host immunity may be short-lived and is not cross-protective between strain variants.

- In October 2022, an [outbreak of HPAI H5N1](#) occurred in intensively farmed mink in northwest Spain, described in a [January 2023 scientific report](#). Alarming, the virus spread mink-to-mink, crossing the bird-mammal species barrier

with ease. All 52,000 mink on this farm not already killed by the virus were quickly and preemptively culled to prevent something much worse: a mink-adapted H5N1 bird flu strain that could infect and kill people with similar ease.

*There were two crucial aspects of this outbreak:*

- (1) This was the first known HPAI H5N1 outbreak with sustained mammal-to-mammal virus transmission.
- (2) The mink viruses possessed an uncommon mutation (T271A) in the PB2 gene. This mutation allows the virus to replicate at the lower body temperature of mammals vs birds, evidence that the virus is evolving to adapt to mammals.

From July to September 2023, [HPAI H5N1 outbreaks](#) occurred on at least 27 mink, raccoon dog, and fox farms in Finland. At least five mink farms were infected, with sustained mink-to-mink spread and virus adaptation to mammals likely. Authorities ordered the killing of the approximately 135,000 animals where the bird flu was detected, including 50,000 mink, 79,000 foxes, and 6,000 raccoon dogs.

The avian H5N1 strain first emerged in southern China in a domestic goose in 1997. Its descendants have circled the globe counterclockwise over the past quarter century, marching across Asia, Europe, and Africa until finally reaching North America and Latin America in 2022. The bird flu H5N1 virus is now circulating uncontrolled around much of the globe despite draconian veterinary disease control efforts, devastating wild birds and domestic poultry and also killing wide swaths of the animal kingdom including foxes, bobcats, pigs, grizzly bears, seals, dolphins, and sea lions.

The bird flu H5N1 virus cluster has cut a vast and wide path in time and space of suffering and death, unlike any previous animal influenza virus, killing perhaps 600 million poultry globally, untold millions of waterfowl and wild birds, and many thousands of land and marine carnivorous and scavenger mammals who dined on birds killed by the virus. Worldwide, there have been [986 confirmed human cases](#) of H5N1 between 2003 and July 2025, including [~70 human cases](#) in the U.S.; 473 (48%) of these cases have been fatal. Most human mortalities occurred





among persons with close contact with infected poultry, such as cockfighters in Southeast Asia. The human case fatality rate of about 50% is much higher than any known influenza virus including the infamous 1918 H1N1 pandemic strain.

In the United States, as of November 18, 2025, about 184 million backyard and commercial poultry in all 50 states and Puerto Rico have been culled since the outbreak began in February of 2022, mostly egg layer chickens and meat turkeys. This includes 1,869 flocks: 869 commercial enterprises and 1,000 “backyard” flocks. (Our national flock consists of about 330 million egg-laying chickens and about 217 million turkeys). Skyrocketing egg and turkey meat prices in 2022 and again in 2024 were not a surprise. The agricultural economic cost to the U.S. alone will be many billions of dollars for this animal health, animal welfare, and looming public health disaster. Furthermore, the H5N1 virus “species jumped” from birds to cattle in 2024 in the U.S. To date, at least 1,084 dairy cattle herds in 19 states have been infected, resulting in dozens of animal-to-human contact infections.

Both pigs and mink uniquely possess receptors for both avian (alpha 2-3-galactose sialic acid) and human (alpha 2-6-galactose sialic acid) influenza A viruses. Thus both swine and mink can be naturally infected with both human and avian influenza strains and function as virus “mixing vessels.” If an avian and human flu virus co-infects the same mink or pig host cell, they can swap parts during replication, producing a chimeric human-avian flu virus (a reassortant) that can more easily infect mammals or humans. All five pandemic flu viruses since 1918 have been reassortants.

Mink of all ages are highly susceptible to influenza A strains of avian, human, and mammalian (e.g., swine, equine, canine) origin. Mink host a wider biodiversity of avian-, swine-, and human-derived influenza A virus HN subtypes than any other mammal. This makes mink superior to even swine as ideal mixing vessels to create novel flu virus variants by antigenic drift (random viral RNA mutation) or antigenic shift (viral reassortment).

The HPAI H5N1 virus did not appear to have sustained mammal-to-mammal transmission until

the farmed mink outbreak in Spain in October 2022 and possibly in the mass deaths of sea lions in Peru (fall 2022 to Feb. 2023) and seals in southern Russia (Feb. 2023).

Overall, intensified livestock farming in general and factory fur farming, in particular, have created an important interface between humans and mink and made bird flu H5N1 zoonotic events and the risk of emergence as a human-transmissible virus more likely. Most mammalian species infected with the bird flu H5N1 virus so far are wild predators and scavengers (e.g., foxes, wolves, bears, raccoons, skunks) feeding on infected birds—usually solitary nocturnal or crepuscular animals that rarely interact closely with people. They are very unlikely to spread the virus far or infect people.

At mink farms, however, thousands of normally solitary carnivores are forced to live closely together, creating ideal conditions for the avian virus to adapt to mammals. People have intimate daily contact with farmed mink. Furthermore, most farmed mink are fed uncooked poultry or swine slaughterhouse residues, including avian and pig lungs potentially infected with avian or swine influenza viruses. Several farmed mink outbreaks have been attributed to influenza virus-contaminated feed. A better bio-system to encourage or maximize viral antigenic shift or reassortant generation could not be devised.

The crowded, confined, and intensive fur farming practices also expose mink to human flu viruses (from sick workers) and equally well expose humans to flu viruses from mink. Because mink are often housed in open-sided or open-front sheds, they may have contact with aquatic fowl or migratory birds infected with H5N1 (or other avian influenza viruses). In other words, much of the mink pandemic zoonotic risk from avian influenza H5N1 is a human construct.

As Yasmin Tayag recently wrote in *The Atlantic*, “Mink may never pass bird flu to us. But that doesn’t mean they won’t be a risk the next time a novel influenza virus or coronavirus comes around. Doing nothing about mink essentially means choosing luck as a public health strategy. Sooner or later, it will run out.” Others have also called for a ban on mink farming due to the high zoonotic disease risk.

### **III. Mink ranching: a fur-farming financial fiasco**

The most recent USDA mink report documents the continuing sharp economic decline of the U.S. mink industry as major designers, retailers, and consumers globally abandon fur. In 2011, U.S. mink pelt values averaged \$94.30 and the industry generated over \$290 million in farm-gate income. By 2019, before COVID-19 struck, prices had plummeted to \$21.90 per pelt, with gross revenues below \$60 million. Even as production was relatively stable, total revenues for the industry decreased five-fold.

American mink farms produced just 771,200 pelts in 2024, the lowest output on record. The average price per pelt in 2024 was \$36.40 (barely above the farm break-even price of ~\$35), while the value of American mink pelts (no. of pelts x average pelt value) was just \$28.1 million, the lowest ever value. The market price per pelt has been below the breakeven price of \$35 in six of the past seven years. There were only an estimated 69 active mink fur farms across the entire U.S. in 2024, down from 7,200 mink farms in 1959.

### **IV. Mink farms: serving a foreign luxury market**

Major fashion houses, clothing retailers, and American and European consumers have largely sworn off fur fashions. Americans have lost their appetite for mink, and major designers and retailers—from Neiman Marcus to Macy’s to Armani—no longer sell fur. Today, American-produced mink pelts go to China and Russia, where a small sliver of elite consumers wrap themselves in fur, outsourcing the viral risks to our homeland.

**Conclusion. It is past time to end mink fur farming in America.** There are core problems with the enterprise of mink farming: (1) the inordinate zoonotic risks that mink farming poses to America; (2) the unavoidable cruelty built into captive farming and killing; (3) and the near-total rejection of fur for garments by American society. A legislative solution makes sense because these risks far exceed the negligible benefits accrued to perhaps 50 active mink farms in 2025. The MINKS Are Superspreaders Act is a voluntary but permanent buy-out of the mink

farmers by the USDA. Some mink producers may welcome a buyout to relieve financial duress and pursue new opportunities. With an H5N1 outbreak still coursing throughout the nation, it is urgent to take action before mink contribute to further spread and mutation of the virus.

More so than any other farmed animal, mink **pose a substantial risk** for the emergence of future human disease outbreaks and the evolution of future pandemics. It is no exaggeration to say that allow this industry to operate at our peril.

Any uncontrolled situation in which an RNA virus (e.g. bird flu H5N1 or SARS-CoV-2) is allowed to spread freely among densely housed highly susceptible animals like mink **may lead to virus evolution, mutation, and new host adaptation** including viruses with enhanced pandemic potential.

Any laboratory “experiment” mimicking American mink fur farming practice would be classified as “gain of function” research and would be prohibited by most scientific regulatory authorities. Approval of such an experiment would require an a priori extensive and favorable benefit-to-risk assessment and performance of the experiment under high-containment conditions.

Yet this dangerous “experiment” likely occurs routinely on high-density, high-volume, low-welfare, low-hygiene, and low-biosecurity industrial mink farms infected with bird flu or SARS-CoV-2. This raises the possibility that dangerous “**gain of function**” adaptations occur on mink ranches in a completely unregulated and uncontrolled manner. This was and is the rationale to cull all bird flu H5N1-infected mink and fur farms in Spain and Finland in 2022 and 2023, respectively, and to **cull all 17 million Danish mink** exposed to COVID-19 in 2021.

Unfortunately, unlike most other countries, American public health agencies (e.g. CDC, USDA) ignore these mink farm risks. Incredibly and uniquely, **the United States has no surveillance**, testing, or bio-security protocols and no mandatory disease reporting for mink farms.

To address this shortcoming, at a minimum, **enhanced biosecurity practices** and mandatory active surveillance for SARS-CoV-2 and influenza A at

mink fur farms should be instituted and enforced. This should include regular virologic and sero-surveillance of influenza A virus on mink farms, including HA subtyping and genetic sequencing, with prompt sharing of findings with the scientific community.

However, the only long-term, reasonable, and cost-effective zoonotic risk management is a one-time Federal buy-out of the few remaining active U.S. mink farms for their full value and a permanent sunsetting (phase out) of this industry.

**Twenty European nations** have announced or implemented policies to ban mink farming. Acknowledging animal cruelty, bio-ethical concerns, and zoonotic threats, fur-producing nations such as the Netherlands, Poland, Ireland, Estonia, and France, as well as the Canadian province of British Columbia announced the permanent closures of mink and other fur farms. Denmark, Sweden, and Italy temporarily banned mink farming due to SARS-CoV-2 concerns, bans which may become permanent. Nations with long-standing fur farming prohibitions e.g. the United Kingdom are moving towards **restrictions on fur sales**. Austria, Belgium, Croatia, Slovenia, Bosnia and Herzegovina, Serbia, Macedonia, and Norway previously banned all fur farming.

Congress or relevant federal agencies (USDA, HHS, and USFWS) all have statutory authority to act to protect the public (or native wildlife) and should take steps to end mink farming. These enterprises are fundamentally inhumane for the animals, and a voluntary buy-out is the right precautionary approach at a time when the world vividly understands the disruptive potential of zoonotic threats.

We propose that Congress offer, via a funding re-allocation or re-direction in the 2025 Farm Bill, a one-time permanent buy-out to all approximately 50 active U.S. mink farms. Fair market compensation would be offered to mink farmers by USDA (or another designated agency) based on:

- (a) The average number and quality of mink pelts produced over the past three years (from farm gate receipts); and
- (b) Professional valuation of mink facilities e.g. condition of barns and equipment.



The figures that follow are designed to explain major concepts in this fact sheet.

## Time to buy-out & ban U.S. mink fur farms

### Four major insoluble problems within the U.S. fur farmed mink industry

#### 1. Unmitigated cruelty



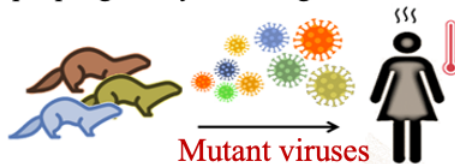
- Mink are the only factory-farmed wild aquatic carnivore
- Normally solitary & reclusive mink are crowded into filthy, tiny wire cages on large industrial “mink ranches”
- Stress-induced cannibalism, self-mutilation, bite wounds, infanticide, stereotypies & disease are common
- A farmed mink’s life: “poor, nasty, brutish & short”: 4 min video from Polish mink farm showing poor welfare on YouTube by copying this link: (<https://www.youtube.com/watch?v=meFB3EJWj-o>)

#### 2. Two high-consequence zoonotic disease pandemic threats

“Mink, more so than any other farmed species, pose a risk for the emergence of future disease outbreaks and the evolution of future pandemics.” *Peacock & Barclay, PNAS 2023*

##### SARS-CoV-2

- 450 mink farms infected globally 2020-22
- 20 million farmed mink died or culled
- Five mink mutants infected thousands of people globally including U.S. 2020-22



##### Highly pathogenic bird flu H5N1

- 184 M poultry, millions of wild birds & thousands of wild mammals died in U.S. Feb 2022-Nov 2025; Hundreds of humans & millions of U.S. dairy cattle infected since 2024
- First mammal-to-mammal spread in farmed mink in Spain Oct 2022 and Finland July 2023
- Mink very susceptible to human, mammal and avian influenza strains so can be intermediary “mixing vessels,” creating mutants that spillover to people

#### 3. Mink farmers in a financial death spiral



- U.S. produced just 771,200 pelts worth \$28.1 million in 2024
- Fewest pelts & lowest pelt value since USDA has kept records
- Down from 3.74 M pelts worth \$216 M in 2014
- Avg pelt price below farm break-even price in six of past seven years
- ~50 active U.S. mink fur farms, down from 7200 farms in 1960

#### 4. No U.S. domestic mink demand & rapidly declining world fur market

- American consumers do not want to buy mink garments; few U.S. retailers sell fur outfits
- U.S. mink pelts sold to Russia & China to make luxury garments for their wealthy elites



#### Best fair & just solution for our citizens, mink ranchers & farmed mink:

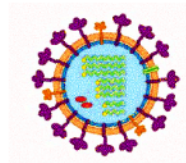
- One-time voluntary but permanent Federal government buy-out of mink farms

“Doing nothing about mink essentially means choosing luck as a public health strategy. Sooner or later, it will run out.” *Yasmin Tayag, The Atlantic, 2023*

## Two drivers of infectious & zoonotic disease risk in farmed mink

### 1. Inherent mink biology

- Innate Carnivore hyper-susceptibility to infections; deficient immune system permits mink to be readily infected & then carry (but not kill) bacterial & viral pathogens
- Solitary & anti-social outside of spring breeding season so naturally social distance (“high behavioral immunity”)
- Immune system evolved to deal with rare pathogen encounters & infrequent contact with other mink
- Respiratory system anatomy & physiology permissive to & propagate airborne viral & bacterial infections



### 2. Unsafe & unnatural mink farming practices

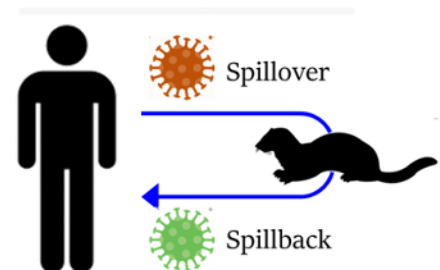
- Fed slaughter waste may contain viral, bacterial & prion pathogens eg bird flu, sheep scrapie
- High-density, high-volume housing enables rapid pathogen spread; kept entire life in small cage
- Low welfare, low hygiene; little vet oversight
- Inbred for fur properties, big bodies & large litters but not for tameness lowers disease resistance
- Poor biosecurity & lax bio-surveillance exposes captive mink to human, wildlife & domestic animal pathogens that wild mink never or rarely encounter
- Farms ignored by U.S public health agencies; lax regulation; industry secrecy; frequent escapees



- Inadequate natural immunity
- Behavioral & physiologic stress & distress from mink maladaptation to intensive farming environment
- Mink genetic homogeneity (inbreeding)
- Frequent, diverse & high dose pathogen challenge
- Corticosteroid induced immuno-suppression

Extremely high susceptibility to pathogen infections, mutations, transmission, clinical disease & spill-over to new hosts (“*species jumping*”)

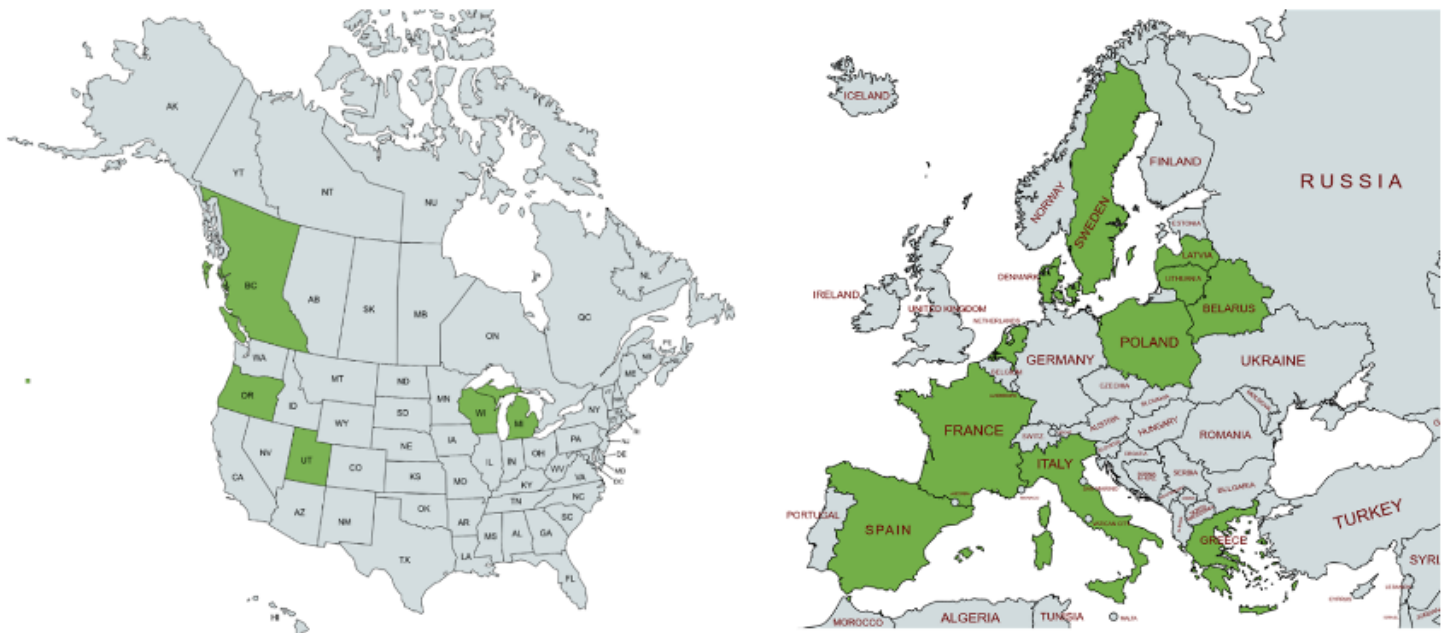
- especially via airborne respiratory route



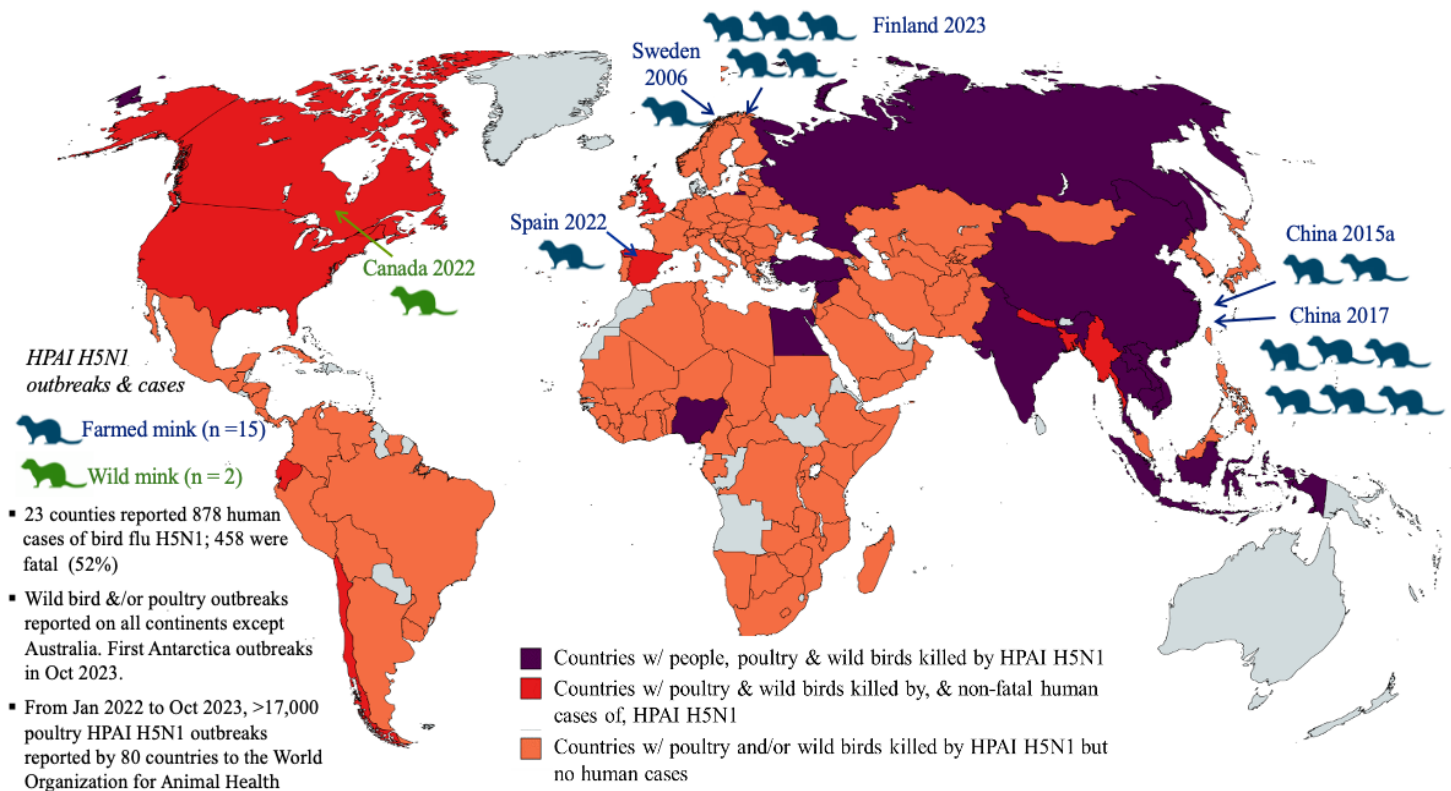


## Fourteen countries, four U.S. states, and one Canadian province with farmed mink SARS-CoV-2 outbreaks, 2020-2023

*Note: Bulgaria accidentally excluded as infected country in the Figure*

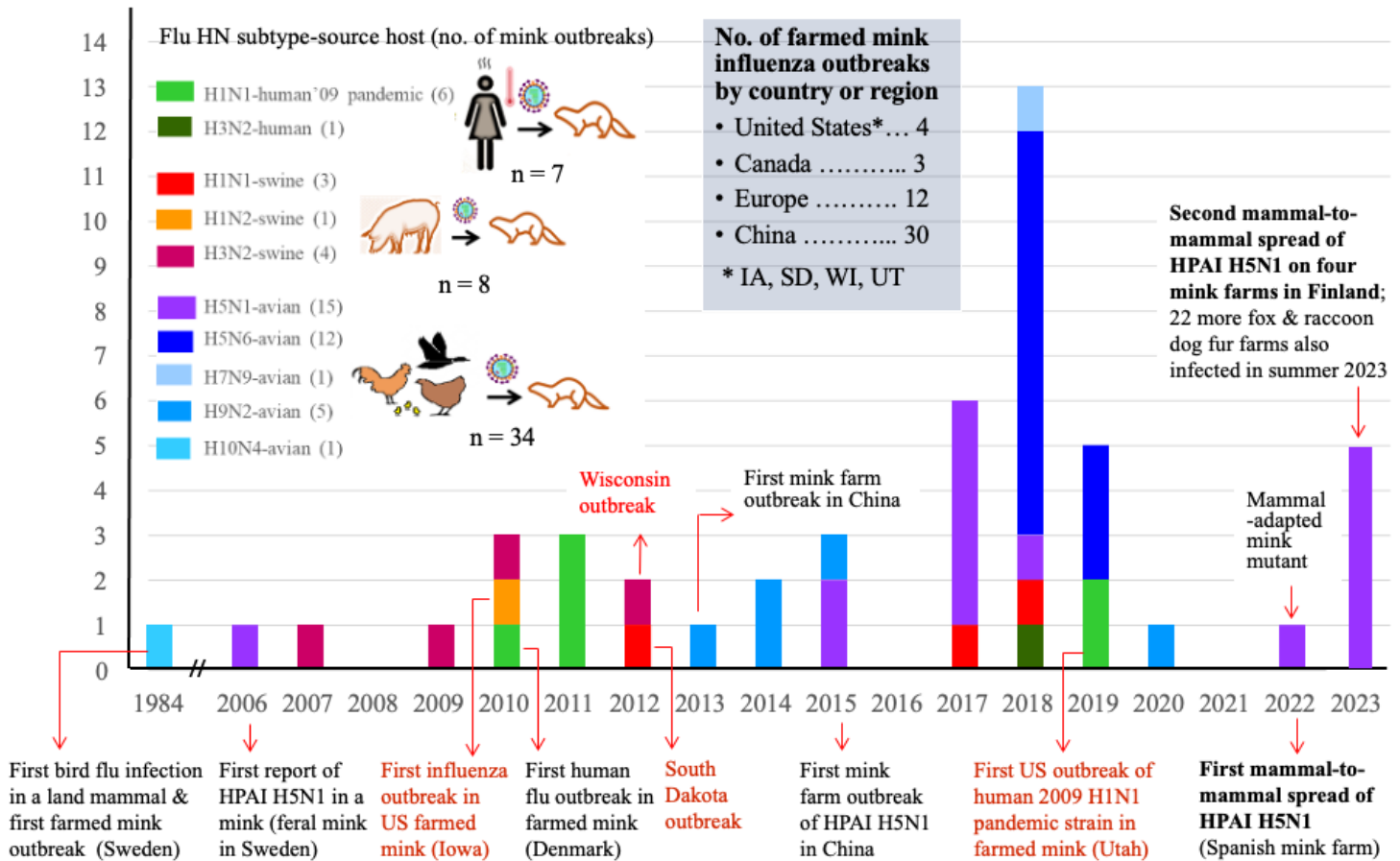


## Panzyotic Highly Pathogenic Avian Influenza (HPAI) H5N1 in birds, people & mink through Nov 2023



## Reported global Influenza A outbreaks in farmed mink (n = 49)

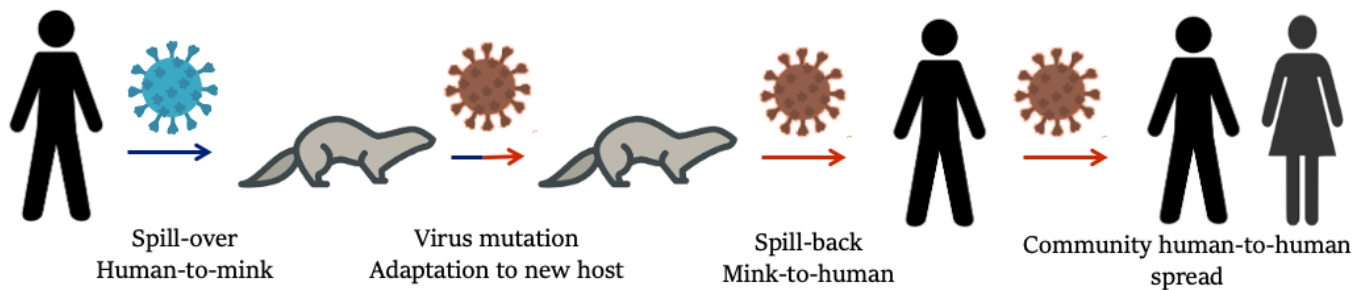
No. of farmed mink outbreaks per year & by subtype



These 48 symptomatic bird flu outbreaks likely just the tip of the bird flu disease iceberg because:

- No systematic surveillance of circulating flu (or any other virus eg COVID) on mink farms in US
- Mink flu infections may be clinically silent
- Where testing of asymptomatic mink is carried out, farmed mink are commonly infected w/ multiple human, swine & avian flu strains

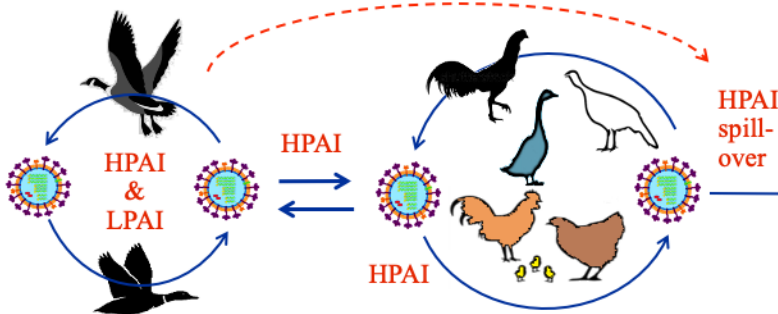
## Zoonotic COVID-19 spill-over, spill-back, mink mutation & community spread



- Outbreaks on at least 450 mink farms in 13 countries in Europe, Canada, and the U.S. (18 farms in MI, OR, UT, WI)
- Mink mortality was 10.5% vs. U.S. human pre-vaccine COVID-19 mortality rate of 1.7%
- Five documented SARS-CoV-2 mutant variants spawned on mink farms spilled back from mink to people, including in one U.S. human outbreak in Michigan that the CDC hid from the public for more than a year
- Mink COVID-19 mutants infected thousands of people worldwide in 2020-2022

## Emergent zoonotic avian influenza HPAI\* H5N1 spill-over to mammals & farmed mink

### 1. Virus propagation in permissive avian hosts

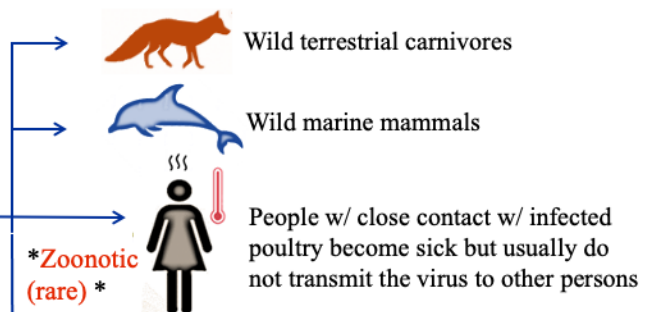


\* HPAI = Highly Pathogenic Avian Influenza H5N1; LPAI = Low PAI

\*\* Globally, from January 2003 to March 2023, there were 873 cases of human infection with avian influenza H5N1 in 21 countries (including the U.S.), of which 458 were fatal ie case fatality rate of 53%.

Influenza viruses have a relatively high mutation rate that is characteristic of RNA viruses. The segmentation of its genome facilitates genetic recombination by segment reassortment in hosts infected with two different strains of influenza viruses at the same time. A previously uncontagious strain may then be able to pass between humans, one of several possible paths to a pandemic

### 2. Dead-end mammalian hosts = spread from birds to mammals but no further spread among mammals



### 3. First mammal-to-mammal propagating virus spread on mink farm (Spain Oct 2022)



Mink mutations could make HPAI H5N1 more readily

- Transmitted from mink-to-person
- Transmitted from person-to-person (between people).



## U.S. mink industry is dying rapidly ...

2024 = **Fewest number of mink pelts produced** since USDA has kept track

= **Lowest value ever of mink pelts** since USDA has kept track

Due to security concerns, the U.S. farmed mink industry and the USDA currently husband information about mink farm numbers, ranch locations and other details. However, the number of active American mink farming operations is currently estimated to be less than 70, down from 275 farms in 2013.

### Twelve years of mink industry decline: 2013 vs. 2024

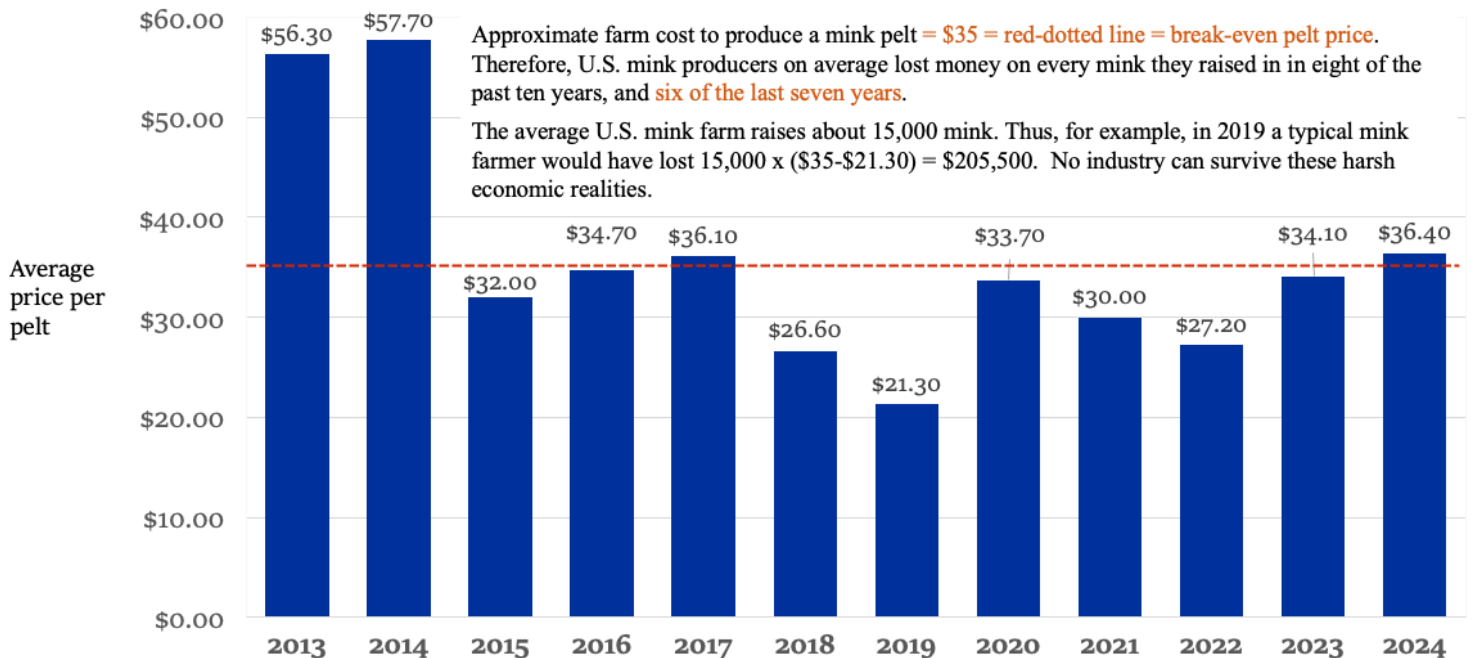
Year	Average pelt price				Pelt production		Pelt value = Avg pelt price X no. pelts produced			
	Pelt price	Inflation adjusted to July 2024	Percent change NOT inflation adjusted	Percent change inflation adjusted	Number of pelts	Percent change	Pelt value	Inflation adjusted	Percent change NOT inflation adjusted	Percent change inflation adjusted
July 2013	\$56.30	\$70.94	NA	NA	3,544,610	NA	\$199,561,543	\$269,408,083	NA	NA
July 2024	\$36.40	\$36.40	NA	NA	771,200	NA	\$28,071,680	\$28,071,680	NA	NA
Difference	\$19.90 less	\$34.54 less	35% less	52% less	2,773,410 less	78% less	\$171,489,863 less	\$241,336,403 less	86% less	90% less

Inflation adjusted to 2024 using U.S. Bureau of Labor Statistics inflation calculator

A July 2013 dollar was equivalent to \$1.35 in July 2024

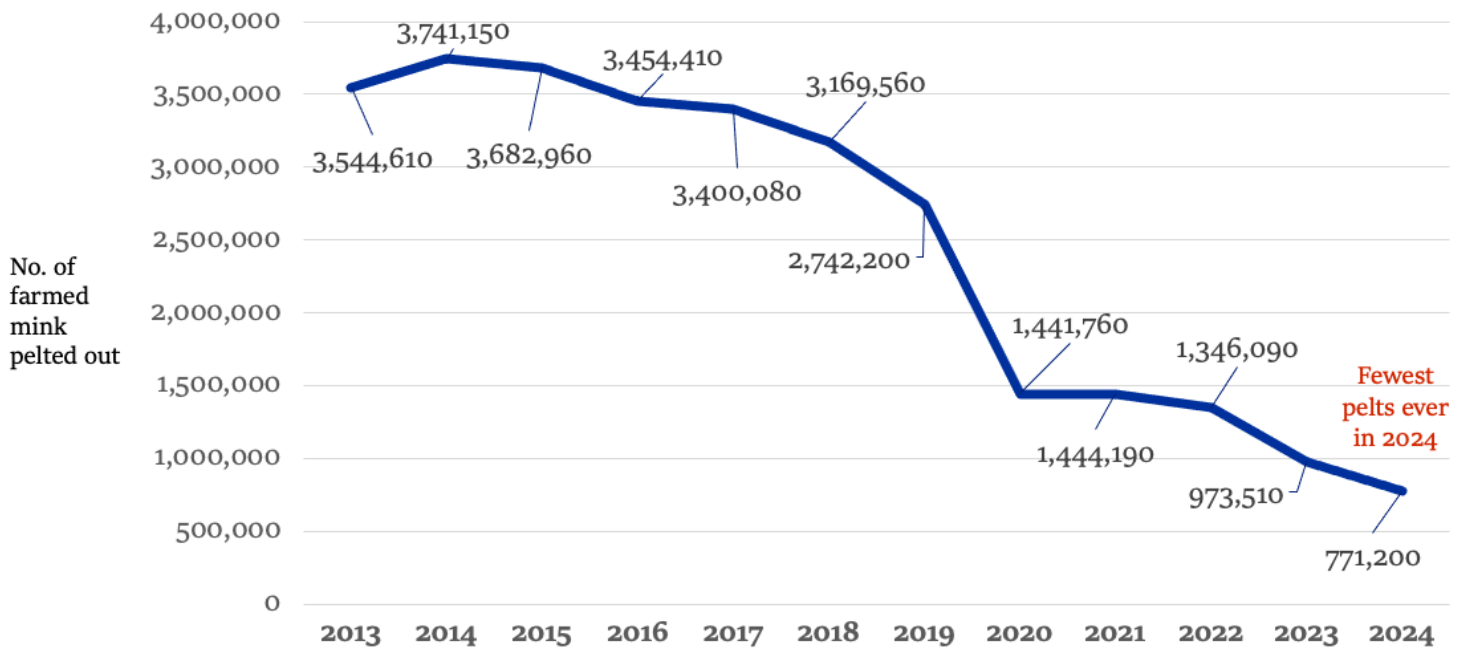
Source: USDA Library/cornell.edu

## Average U.S. farmed mink pelt prices 2013-2024



Source: USDA Library/cornell.edu

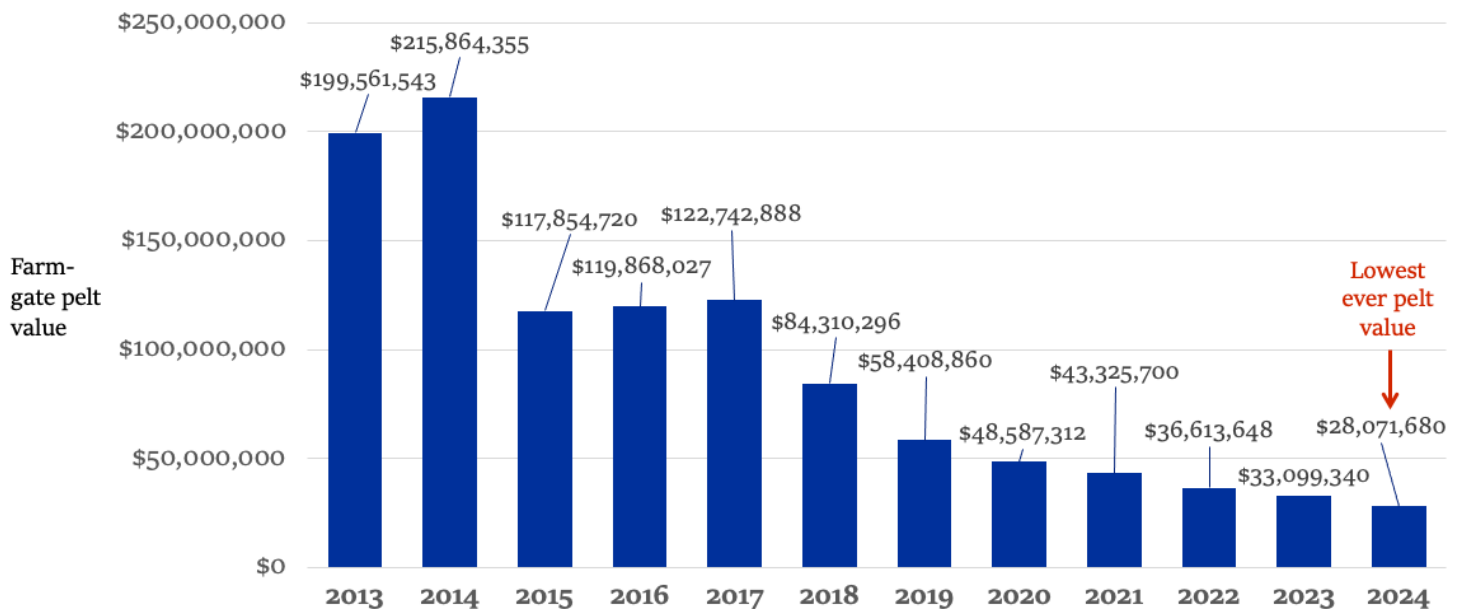
## Number of U.S. farmed mink pelts produced 2013-2024



Source: USDA Library/cornell.edu

## U.S. farmed mink pelt values 2013-2024

Pelt value = Average price per pelt x No. of pelts harvested



Source: USDA Library/cornell.edu