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Submitted via regulations.gov

Re: Comment for the Draft Biological Evaluation, Effects Determinations, and Mitigation Strategy for Federally Listed and Proposed Endangered and Threatened Species and Designated and Proposed Critical Habitats -- Docket EPA-HQ-OPP-2023-0567.

Dear Ms. Friedman:

The undersigned national and state agricultural organizations thank you for the opportunity to offer comments on the Environmental Protection Agency's (Agency) Draft Biological Evaluation for the Rodenticides (Draft BE) and the Rodenticide Strategy (Docket EPA-HQ-OPP-2023-0567). Our organizations have as their members most of the farmers and ranchers in the US today raising animals to produce eggs, milk or meat for consumers.

Our organizations strongly support and share with the Agency a desire to improve rodenticide stewardship to reduce or eliminate rodenticides' effects on non-target species, including threatened and endangered species under the Endangered Species Act. Our members have a long and successful history of working cooperatively with the Agency, and other federal and state agencies, to continually improve rodenticide's performance and eliminate, to the extent achievable, the risks associated with addressing the critical need to control rodent populations on farms and ranches. We have reached the conclusion, though, that the Draft BE not only likely fails to achieve that non-target species outcome, but it may also in fact exacerbate the very problem the Agency is seeking to address.

We are deeply concerned that assumptions made and errors in the Agency's analysis do not support the Agency's finding that the rodenticides are likely to adversely affect even a single individual plant or animal. Given that this finding drives extreme mitigation measures, such as making all of the rodenticides Restricted Use Products (RUPs), we instead urge the Agency to make a BE finding that these products "may affect" the species in question. The Agency can then take part in the studies needed to develop sound and appropriate mitigation measures that effectively and efficiently reduce the potential for harm for non-target species from unintended exposures to rodenticides.

We urge the Agency to proceed in this manner because the current slate of mitigation measures hold great potential for harm to our farmer and rancher members. Designating these products as RUPs, for example, as well as some of the proposed mitigation measures, creates a series of other serious risks on farms and ranches. Effective and affordable rodent control is essential to protect the health and welfare of the animals our members raise and care for, to the safety of the food products many farmers produce and market, as well as to preventing environmentally and financially significant losses of the grain and feed used to raise animals.

We stand ready to work with the Agency to engage with the rodenticide manufacturers and stakeholders to conduct serious studies of how specific uses of rodenticides, and the resulting possible pathways of exposure, may cause harm to endangered species. Only then can sound, effective and efficient mitigation measures be devised. Rodenticides are just too important to our country's farms and ranches, as well as the numerous critical societal objectives agriculture serves, for the Draft BE's policies and measures to move forward as proposed.

We discuss these matters in more detail below.

I. The RUP designation and proposed mitigation measures will lead to greater costs and inefficiencies for, and gaps in, the practice of good rodent control on farms and ranches.

The RUP designation will create the restriction that only certified applicators can purchase and apply rodenticides for commercial uses like that on a farm or ranch, or in some states be by a person supervised by a certified applicator. This single provision upends decades of the Agency's and state regulated practices, operations and systems developed for rodenticide use by producers and their staff on farms and ranches, or by commercial rodent control providers that service operations. The consequences of this provision for how much and how well rodent control is practiced will vary greatly, according to the wide range of types and circumstances of farms and ranches across the country. But there is no question that for a substantial number of operations the cost, time and resources will make the producers less able to practice the quality of rodent control programs they have in place today, or force them to make a lose-lose choice between biosecurity and the effectiveness of the rodent control program on their operation.

The Agency cannot assume that all farms and ranches can simply hire a well-qualified outside rodent control service provider if an operation is not able for any number of reasons to get their own family members or staff trained and certified as applicators. There are two reasons for this.

First, there is a large number of farms and ranches across the country that raise species of animals or animals at certain stages of their lifecycle that face serious risks of communicable disease infections. These operations must and do go to great lengths maintain the biosecurity of their farms and ranches and eliminate or strictly control any contact between their animals in a specific barn at a location and any persons not working solely at that location. For many of these operations, only those outside persons that **absolutely** must come to a farm can come to the farm, but only after having their vehicles cleaned at the farm's border, and then showering in, changing clothes, and then showering out when they leave. Even then, these people often are not allowed on the property if they have not observed lengthy wait periods after a visit to another farm raising the same species and will absolutely not be allowed if they have been in an area where infections have occurred. This is done to increase biosecurity and reduce the risk that persons entering the operation could be a vector for the introduction of deadly pathogens. The use of outside, contracted certified applicators who would make the rounds going from farm-to-farm to provide rodent control services would for many producers present unacceptable levels of biosecurity risk, as well as a risk that the provision of essential rodent

control services would be disrupted should there be disease outbreaks at other operations in the area. Many companies simply would not and could not accept these risks and would be forced to acquire, if they can, in-house certified rodenticide application personnel.

We note and appreciate the fact the Agency's Office of Enforcement and Compliance Assistance (OECA) is taking these biosecurity concerns seriously when there are disease outbreaks like those currently occurring for the poultry sector in the US. OECA issued guidance in 2016 ([Biosecurity Procedures for Visits to Livestock and Poultry Facilities](#), April, 2016) that created standard operating procedures to minimize "the risk of EPA personnel and those acting on their behalf (e.g., contractors, grantees, and senior environmental employment staff), here after called 'EPA personnel,' transmitting animal diseases from livestock or poultry facilities, to livestock or poultry at another location." Even when the Agency is planning to enter a facility in an area where there are no known disease outbreaks and therefore no extraordinary disease prevention measures officially required by state veterinarians, the Agency's standard operating procedures direct personnel to take measured and sensible steps prior to entry. In particular, they call for the Agency's personnel to "discuss appropriate biosecurity measures with the owner/operator and are encouraged to adopt more stringent measures, as appropriate, into the procedures for that specific facility." (Page 9).

Second, there are many locations around the country where there is an insufficient density of farms and ranches to support a local and well-qualified rodent control service provider to successfully operate. The Agency must also consider the fact that even where rodent control service providers do exist that much of their staff today do not need to be certified applicators for rodent control services. The costs of offering a well-qualified rodent control service will most certainly increase due to the certification requirement. Further, such costs will increase considerably in any of the states that require rodenticides be applied only by a certified applicator and not by someone simply being supervised by one.

There certainly are farms and ranches large enough and with the resources to hire and have on-staff certified applicators to conduct, or where states provide, supervise the operations' rodent control programs. This will increase their costs of operation, certainly, but their scale permits this. Thus, in such situations, one would not expect any diminishment in the quality of their rodent control program. These higher costs, though, would not add any rodenticide stewardship value relative to current conditions, given that the rodenticide use practices will be essentially identical to those practiced on these operations today. This decision would simply be adding higher costs to produce these foodstuffs.

But there are also literally tens of thousands of farms and ranches that today carry out their own rodent control program with their own family members and/or staff but are not in a position, for any number of reasons, to get them certified as rodenticide applicators. We expect the number of operations that fall into this general category to be quite large but how, or most concerning if, they cope with this will vary greatly depending on the type of operation, the animals they raise, and an operation's regional or local circumstances. The most dire type of situation will be for the thousands of operations that have serious biosecurity issues to address on their farm and, therefore, face an impossible choice between hiring

outside providers that compromise biosecurity protocols and risk catastrophic disease, or risking rodent infestations and all the negative risks and outcomes that flow from infestations (including catastrophic disease outbreaks). The Agency cannot allow this to be the choice such operations face.

There will be a large number of farms and ranches whose species of animals being raised are not particularly vulnerable to communicable infectious diseases and who then could retain an outside rodent control service provider if they are available. This will add considerable costs to their operations for the reasons cited above. Even in this instance, there are significant potential drawbacks. Some farmers report to us their experience with relying on outside rodent control service providers who, after the first few service visits, do not continue to spend sufficient time, effort and care in ensuring the program is or will continue to work. There are many highly reputable rodent control service providers who consistently provide high quality service. But given business and staffing pressures and normal human tendencies when conducting seemingly routine functions, we have every reason to believe that this is, in fact, many producers' experience. These farmers and ranchers tell us they can do an even better job of good rodent control than these service providers, and at far less cost while also practicing better levels of rodenticide stewardship.

The bottom line here is critical. Higher costs and greater risks of incomplete, inadequate or less than optimal rodent control service will mean in many instances that (1) less effective average levels of rodent control will be achieved on many farms and ranches, (2) booms and busts of rodent populations on farms and ranches will become more common, resulting in (3) greater average amounts of rodenticides needed to achieve control, and therefore (4) on average exposing more non-target animals to rodenticide-treated rodents or their carcasses. At least in the case of farms and ranches, the RUP designation will result in worse outcomes for non-target species.

An almost identical conclusion can be reached about the value of the additional recordkeeping requirements imposed by the RUP designation. The requirement will not yield any meaningful information about rodenticide stewardship, but it will add considerable costs, as detailed by others in their comments to you on the proposal. As in the case of requiring certified applicators in general, the costs will lead to less effective rodent control on operations, with the same perverse outcome.

We hope the Agency is acutely aware of the great tragedy of the broader implication of raising production costs in a way that likely cannot be afforded by medium to smaller farming or ranching operations. Modern commercial agriculture is routinely criticized for having too much total production taking place in too few large operations. Many of these critiques could very well be coming from some of the very same organizations that are pressuring the Agency to make rodenticides RUPs. The irony and tragedy of this is the fact that the costs of regulatory compliance in a commodity sector like animal agriculture are a significant factor in forcing small and mid-sized operations into the choice of getting bigger or getting out of agriculture. Regulatory costs add to the pressure to concentrate production in fewer, larger facilities with better economies of scale. Making rodenticides RUPs and requiring their use

only by certified applicators would definitely be another of these concentration-driving regulatory measures.

Lastly, we come back to the shocking irony in all of this. Rodenticide control practices that will be used by certified applicators will likely be nearly identical to those in use on a large proportion of today's farms and ranches. The principles of Integrated Pest Management (IPM) have long been thoroughly embodied in modern rodent control practices as advocated by many of the Land Grant University Extension systems in this country. Many producers have sophisticated rodent control programs to comply with federal Food and Drug Administration (FDA) requirements, which are themselves grounded in IPM principles tailored to meet food safety-driven and high levels of rodent control. These practices are also in use by the private rodent control services that are available to operators in some parts of the country. These are the same practices that a state licensing authority would train certified rodenticide applicators to use. We do not see the value of adding the certified applicator requirement that results in using in that state the same predominate set of practices already in use in that state today.

We are happy to work with EPA, USDA, the Land Grant Universities, state agencies, and the rodenticide stewardship community if we need to ensure the practices being advanced and used today are fully consistent with IPM principles. Such an effort must be supported by additional research and development to find best practices to protect non-target species while controlling rodent populations affordably and practically, and fully consistent with other federal regulatory requirements and critical programming. The certified applicator requirement will not help us achieve that goal.

II. The PIDs will create greater food safety risks and related regulatory compliance risks for farms and ranches.

Any operation with laying hens producing shell eggs for sale in the fresh market faces added jeopardy if they are not in a position to hire staff in-house to carry out their own rodent control program. These farmers will be forced to choose between using outside contractors that bring with them the biosecurity risk of the loss of all the birds on the farm to Highly Pathogenic Avian Influenza (HPAI) on one hand, and on the other not being able to sell those eggs in the fresh market due to insufficiently adequate rodent control program on the farm or salmonella detections on the farm, or both. Similar challenges can face dairy farmers producing fluid milk that will be shipped and sold interstate.

Rodents are a vector for the transmission of contaminants in animal agricultural operations that can make the foods produced there unsafe for human consumption, including such bacterial contaminants like *Salmonella* and virulent forms of *E.coli*. See for example the findings reported in 2020 about rats carrying zoonotic bacterial pathogens associated with food-borne illnesses. In addition to *E. coli* and *Salmonella*, the bacterial strains included *Pseudomonas oryzihabitans*, strains of *Pseudomonas aeruginosa*, as well as 4 strains of *Staphylococcus aureus*. *These strains had high degrees of antimicrobial resistance.* (See [An Investigation of Potential Health Risks from Zoonotic Bacterial Pathogens Associated with Farm Rats.](#))

As a result of this risk, rodent control is required by the FDA, as well as state food safety mandatory controls applicable to dairy and table egg production. Rodenticides are in widespread use today on animal agriculture operations as the primary tools used to control rodent populations and meet these federal and state on-farm food safety requirements. Any changes to the current pesticide regulatory program applicable to rodenticides must fully consider how such changes will affect farmers' ability to meet these food safety requirements and otherwise protect food safety.

SHELL EGGS – The FDA's egg safety rule applicable to shell eggs being produced for table consumption has been in effect for over 10 years and today applies to operations with 3000 or more laying hens at a farm. In the case of shell eggs, the FDA holds that "Egg-associated illness caused by *Salmonella* is a serious public health problem. Infected individuals may suffer mild to severe gastrointestinal illness, short term or chronic arthritis, or even death. Implementing the preventive measures would reduce the number of Salmonella Enteritidis infections from eggs by nearly 60 percent" The rule mandates that egg farmers test at regular intervals for the presence of *Salmonella* in the layer houses and related buildings and take significant biosecurity and related aggressive measures to avoid the presence of *Salmonella* in the facilities. Should *Salmonella* be detected, either in the layer facilities or on the eggs themselves, significant financial penalties are imposed in the form of denying entry of those shell eggs into the marketplace for high value table egg consumption. Instead, **all** of the eggs from the flock in those facilities **must** be pasteurized or diverted into non-food use. Furthermore, the facility **must** be sanitized so as to eliminate detections of *Salmonella* in the layer houses and related buildings. (See the FDA Fact Sheet "Egg Safety Final Rule" at <https://www.fda.gov/food/eggs-guidance-documents-regulatory-information/egg-safety-final-rule>.)

With respect to rodent control, the FDA requires shell egg producers to monitor for rodents by visual inspection and mechanical traps or glue boards or another appropriate monitoring method, and when monitoring indicates unacceptable rodent activity, producers must use appropriate methods to achieve satisfactory rodent control. In addition, producers must remove debris within their layer houses and vegetation and debris outside the layer houses that may provide harborage for pests like rodents (See (21 CFR 118.4(c)(1), (c)(2) and (c) (3))). See the highlighted language in [Appendix C with an excerpt from the Code of Federal Regulations, 21 CFR 118.4](#)).

The FDA issues guidance to industry about how to meet these requirements. If the number of rodents detected through the producer's monitoring program exceeds a certain number over a period of time, the farm is deemed as having a food safety issue and the farm must take "appropriate methods to achieve satisfactory rodent control." (See the associated excerpts from [FDA guidance in Appendix D](#) about how to monitor and index the detections of rodents to determine thresholds triggering need for greater rodent control).

MILK FOR INTERSTATE SHIPMENT – The enormous success of today's food safety provisions involving pasteurized milk and milk products stems directly from milk safety measures initiated in the US in 1924, 100 years ago, and are today reflected in the FDA's Grade A Pasteurized Milk Ordinance (PMO). The

PMO is a collaboration between the FDA, the states, and industry to ensure the highest level of milk sanitation practices and food safety for Grade A dairy products. The PMO has driven the decrease of milk-borne illnesses from 25% of all disease outbreaks in 1938 to today, when “for every 2 billion servings of pasteurized milk or milk products, less than 1 person gets sick” (See FDA’s [100 Years of Milk and Dairy Safety](#)). The PMO regulates the entire journey of grade A milk from the cow to the processing plant.

Rodents can be a vector for disease on dairy farms and as such are both a biosecurity and public health concern. The PMO suggests rodenticides as a possible tool to use for the control of rodents- “anticoagulant poisons, Warfarin, Fumarin, etc. have offered improved means of controlling rodents on the farm. Used according to directions, and with due precaution against their consumption by domestic animals, these chemicals should keep the rodent population in check while additional preventive programs are instituted.” Given the amount of accessible feed on dairies which often attracts rodents, rodenticides, when used properly and following the Agency’s guidelines, are an important tool to protecting herd biosecurity.

III. The PIDs will create greater biosecurity risks and animal health risks for farms and ranches.

Rodents are a vector for the transmission of serious animal diseases on farms and ranches that hurt farm animals’ health and welfare and can lead to their deaths. Rodents can be carriers of numerous pig pathogens including “*Salmonella* serovars, *Leptospira*, *Yersinia pseudotuberculosis*, *Toxoplasma gondii*, *Campylobacter* spp., *Brachyspira* spp, *Lawsonia intracellularis* or the encephalomyocarditis virus.” While mice travel relatively short distances in an evening (150 meters) and, therefore, are more of a threat to biosecurity within a facility, rats can be vectors for transmission off-farm and to neighboring farms and ranches. Rats can travel up to 3 km in an evening. (See [Biosecurity in pig farms: a review](#)). The primary diseases of concern for U.S. cattle carried by rodents are bacterial: *Salmonella* spp., *Cryptosporidium parvum* and *Leptospirosis* spp. Rodents can shed *Salmonella* and *Cryptosporidium parvum* in their feces, contaminating water and feed sources. Rodents can shed *Leptospirosis* spp. their urine, again contaminating feed and water.

The swine diseases that rodents can carry and transmit include the following:

Disease	Agent	Rodents implicated
Bordetellosis	bacteria	rats
Encephalomyocarditis	virus	rats, mice
Leptospirosis	bacteria	rats, mice
Pseudorabies	virus	rats*
Salmonellosis	bacteria	rats, mice
Swine Dysentery	bacteria	rats, mice
Swine Erysipelas	bacteria	rats
Toxoplasmosis	protozoan	various rodents
Trichinosis	nematode	rats

(See [Controlling Rats and Mice in Swine Facilities](#), August, 2019.)

With respect to potential human diseases, trichinosis was once a serious issue associated with farm raised pork that has been addressed by the US swine sector. Trichinosis results from ingestion of the parasite *Trichinella*, a nematode parasite in pigs that could infect humans if the pork wasn't fully cooked. Today, trichinosis is very rare and all but eliminated in farm raised pork, although human infections do occur from eating wild game like feral hogs. Yet *Trichinella* remains an ongoing risk on swine operations that producers continue to address, and the "rat is considered to be the most common vector for the *Trichinella* parasite. The population of rats living on pig farms can play an important role in maintaining or spreading the parasite to other animals." (See [Occurrence of *Trichinella* spp. in rats on pig farms](#), November 2018.) See also Table 1 in [Rodents on pig and chicken farms – a potential threat to human and animal health](#) for a summary of the results of a 2016 worldwide review of the animal and human pathogens that are commonly carried by rodents on swine and chicken farms around the world.

With respect to the potential for animal diseases that can be spread by rodents and related biosecurity breaches, farms and ranches face every day the catastrophic risk of an animal disease that could lead to the deaths of their entire herds or flocks. Once such a disease reaches a farm or ranch, the risk of spreading to others is very great and these incidents can lead to the loss of literally millions of animals and their owners' livelihoods. For example:

- African Swine Fever in 2018 wiped out up to a third of the entire swine herd of China, the equivalent of the entire US swine herd. ("African swine fever (ASF) is classified by the World Organization for Animal Health as a List A disease, with a mortality of up to 100%. The latest large outbreak of ASF was reported in China, the world's biggest producer and consumer of pork, in August 2018 and has killed millions of pigs. Due to the absence of effective vaccines and treatment and proper sanitary and hygiene practices, eradication of the disease presents a major challenge. Particularly in China, a large proportion of pigs are kept on small-sized farms

which lack the capacity to prevent infection and to control pig diseases. This makes eradication of ASF very difficult in China. Since the onset of the latest outbreak, huge efforts have been made to prevent and control the rapid spread of the disease, including a strict stamping-out policy that involves delineating quarantine zones for infected areas and the rigorous culling of infected herds. These measures inevitably cause large economic losses and affect many people and related industries.” See Nature Food, [African swine fever outbreaks in China led to gross domestic product and economic losses.](#)) While ASF has not yet been detected in North America, it was recently found in Haiti. The US and Canadian swine farmers and the animal health agencies are on high alert.

- HPAI swept across the US in 2014 and 2015, leading to the deaths of more than 50 million birds, mostly egg laying hens and turkeys. (“Between December 2014 and June 2015, more than 50 million chickens and turkeys in the United States died of HPAI or were destroyed to stop the spread of the disease. These birds accounted for about 12 percent of the U.S. table-egg laying population and 8 percent of the estimated inventory of turkeys grown for meat. In response to this historic animal-disease event, many destination markets for U.S. poultry commodities levied trade restrictions on U.S. poultry exports, distorting markets and exacerbating economic losses.” See USDA ERS Report [Impacts of the 2014-2015 Highly Pathogenic Avian Influenza Outbreak on the U.S. Poultry Sector.](#))
- The United States is entering year three of an ongoing HPAI outbreak. To date over 81.7 million birds have been lost as part of the largest foreign animal disease outbreak in U.S., with over 464 commercial flocks, primarily egg laying hens and turkeys, impacted. The virus has been widespread, detected in 47 states, and likely will continue to be a significant threat to the overall poultry industry. During the high-risk period of this disease, countries need to scale up surveillance efforts, implement strict biosecurity measures and ensure a timely reporting of outbreaks to curb its spread. See: [The World Organization for Animal Health \(OIE\) calls for increased surveillance.](#) November 2021.) Stringent biosecurity is the only preventative option for farmers, and USDA/APHIS continues to emphasize its importance. Specifically, USDA APHIS has introduced a biosecurity audit in the current outbreak. APHIS has also created the [Defend the Flock](#) program to bring together all the information poultry producers need to practice good [biosecurity](#). Both of these efforts, the APHIS biosecurity audit and the Defend the Flock program contain several criteria related to rodent control. At this critical moment of time, restricting access to or the loss of any tool like rodenticides to protect poultry against the threat of HPAI, or other disease, could be especially devastating to the industry.

Disease transmission to livestock and poultry or humans is, of course, **not** a problem solely attributable to the presence of rodents on farms and ranches. But the risk is very real that rodents are playing a serious and substantial role in the chain of transmission of animal and human diseases. Animal agriculture, therefore, takes the business of rodent control on their operations very seriously. Fortunately, rodenticides and related measures can be used to great effect in achieving the desired

population controls. These benefits of the products must be fully considered in any changes in federal rodenticide policies.

Rats and mice are also known vectors for human diseases. Rodents are a vector for the transmission of the virulent bacteria responsible for Lyme disease to ticks and then to humans. (See [National Science Foundation](#).) They are also vectors for several other serious diseases including the hantavirus (a potentially life-threatening disease most commonly carried by the white-footed mouse, cotton rat and rice rat), lymphocytic choriomeningitis virus, or LCMV (most popular host is the common house mouse, causing digestive tract issues and then severe neurological disease), salmonella, rat bite fever, tularemia (similar to Lyme disease in that it can spread via tick bites that pass the bacteria from rodents to deer and then to humans). (See <https://www.earthguardpest.com/blog/2016/05/six-dangerous-diseases-spread-by-rats-and-rodents/>)

IV. The PIDs will lead to greater animal feed losses and spoilage, increasing the lifecycle environmental footprint, including greenhouse gas emissions, of farms and ranches.

The average mouse will eat approximately 2.25 pounds of food a year, about 10-15% of its body weight a day. A rat can eat about 22.5 pounds a year, also at about 10-15% of its bodyweight each day. (See [Rats and Mice, Indiana's Epidemiology Resource Center](#).) Estimates of the amount of feed spoiled by rodents as they eat the feed range up to 10 times the amount consumed (See [The Hidden Costs of Rodents on Poultry Livestock Farms](#) and [Role of rodents in poultry environs and their management](#).) Working from those estimates, an uncontrolled population of 9000 mice on an animal operation would therefore consume approximately 10 tons of animal feed a year, and spoil about 100 tons. A population of 3000 rats will eat about 34 tons of feed a year and spoil another 340. Such feed losses are of economic importance to an animal producer.

These losses are also important because feed in general plays a large role in the life cycle environmental footprint of that animal operation. Life cycle analyses of the environmental performance of the major US animal agricultural sectors routinely find that feed use is a major if not largest contributor to the important elements of their footprints, including Greenhouse Gas Emissions (GHGs). (See for example the discussions and graphs of the role of feed use in [Do We Know the Carbon Footprint of the Pork Industry?](#), [Landmark 50-Year Study Documents U.S. Egg Industry Reduced Environmental Footprint](#), [U.S. Dairy's Environmental Footprint](#), [Sustainability Assessment of U.S. Beef Production Systems](#), and [Broiler Production System Life Cycle Assessment: 2020 Update](#).)

Effective rodent control programs, and the critical role that the rodenticides play in them, therefore are having a net positive and meaningful benefit in reducing the environmental and the GHG footprint of farms and ranches. These benefits of the products must be fully considered in any changes in federal rodenticide label policies.

V. Questions about the science behind the Agency’s assumptions about non-target species’ exposures to rodenticides.

We encourage the Agency to reconsider its assumptions regarding non-target species’ likely exposures to the rodenticides in question. While we understand how the uncertainty around the quantity of rodenticides potentially consumed by non-target species leads the Agency to include a margin of safety in its exposure assumptions, assuming that 100 percent of the food consumed by some non-target species is made up of rodenticide-treated baits is not plausible. We cannot imagine a realistic scenario where this assumed degree of non-target exposure will occur in an animal agriculture setting. This inaccuracy is compounded by the fact that the Agency bases its estimates of the effects of exposure on the results of a very small number of studies involving 2-3 mammalian and avian species that will commonly have significantly different biological properties than the non-target species. The use of the exposure assumption and these effects estimates inaccurately skews the resulting assessment of the likelihood of a harm being experienced.

The Agency does not have a sufficient body of knowledge to accurately and properly characterize how and by what rodenticide uses and use-patterns individual animals from among the non-target species are being exposed. The Agency, therefore, has devised mitigation measures that likely fail to address, effectively, soundly and efficiently, the actual pathways of exposure leading to adverse effects. As such, we think it prudent that the Agency only go so far as reaching a “may affect” finding in the Draft BE, which would give the Agency and stakeholders the time to determine the pathways and degree of exposures more accurately, and then develop appropriate mitigation measures. This work could be done under the Agency’s Rodenticide Strategy, which rightly should be a living document and part of a process of continual improvement.

Research would be instrumental to updating and harmonizing good rodenticide stewardship practices that fully reflect IPM principles, and lead to a full understanding how mitigation measures be best established that address the actual rodenticide use-patterns that lead to exposures, if any. We are fully ready to work with the Agency, USDA, the Land Grant Universities and the rodenticide stewardship community to do this research and advance consistently sound rodenticide stewardship practices.

Thank you again for the opportunity to provide these comments. We would welcome the opportunity to answer any questions you might have about these comments or if further clarification is needed.

Sincerely,

**American Farm Bureau Federation
American Horse Council
Association of California Egg Farmers
Dairy Producers of New Mexico
Florida Poultry Federation
Indiana State Poultry Association
Kentucky Poultry Federation**

North Central Poultry Association
National Council of Farmer Cooperatives
National Milk Producers Federation
National Pork Producers Council
National Turkey Federation
Ohio Poultry Association
Pacific Egg and Poultry Association
Texas Poultry Federation
United Egg Producers