National Cotton Council of America

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December 16, 2019

Office of Pesticide Programs
Regulatory Public Docket (7502P)
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW Washington, DC 20460

RE: Docket ID Number EPA-HQ-OPP-2011-0855-0133

Dear Ms. Mannix:

The National Cotton Council (NCC) appreciates the opportunity to comment on EPA's Draft Human Health and Ecological Risk Assessments for Paraquat Dichloride. The NCC appreciates EPA's scientific review of all pesticide products to identify potential human health and ecological safety concerns justifying regulatory restrictions as mitigation of concerns. Paraquat is an important herbicide for many weed management systems, including cotton. Paraquat has been manufactured and sold since 1962. It is a unique mode of action (HRAC Group 22, Photosystem 1 Electron Diverter, https://ag.purdue.edu/btny/weedscience/Documents/Herbicide_MOA_CornSoy_12_2012%5B1%5D.pdf) that may be used as a preplant treatment for a broad spectrum of weeds or a desiccant or defoliant. Paraquat is fast acting on plant foliage and is biologically inactivated and immobilized on contact with the soil. These properties make paraquat extremely important for rotation of Modes of Action (MOA) as recommended by herbicide resistance management experts. Additionally, paraquat has continued to provide effective weed control for no-till (conservation) farming practices. No-till farming is broadly recognized across federal agencies as a benefit to society and the environment by decreasing soil erosion, decreasing soil compaction, improving soil texture and organic matter, and reducing impact on air quality. For continuation of reduced tillage practices, producers must have multiple herbicide MOA to combat weed resistance development. Paraquat is critical for sufficient MOA rotations and is a highly effective herbicide across a broad range of weeds while becoming insignificant once it contacts soil. The NCC supports continued registration of paraquat dichloride.

The NCC is the central organization of the United States cotton industry. Its members include producers, ginners, cottonseed processors and merchandizers, merchants, cooperatives, warehousers and textile manufacturers. A majority of the industry is concentrated in 17 cotton-producing states stretching from California to Virginia. U.S. cotton producers cultivate between 10 and 14 million acres of cotton with production averaging 12 to 20 million 480-lb bales annually. The downstream manufacturers of cotton apparel and home furnishings are located in virtually every state. Farms and businesses directly involved in the production, distribution and processing of cotton employ more than 125,000 workers and produce direct business revenue of more than $21 billion. Annual cotton production is valued at more than $5.5 billion at the farm gate, the point at which the producer markets the crop. Accounting for the ripple effect of cotton through the broader economy, direct and indirect employment surpasses 280,000 workers with economic activity of almost $75 billion. In addition to the cotton fiber, cottonseed products are used for livestock feed and cottonseed oil is used as an ingredient in food products as well as being a premium cooking oil.

The NCC supports and appreciates EPA's diligent scientific process assessing the use of all pesticide products, and identifying protective measures required as needed for safe product use. EPA notes label amendments required based on the January 12, 2017 Paraquat Dichloride Human Health Mitigation Decision that have been phased in (completed in 2019). The NCC understands the mitigations restricting use of all paraquat products to certified applicators only, requiring targeted paraquat training, and requiring closed systems packaging for all non-bulk containers. These requirements were added to existing PPE and other requirements already on the label.

EPA states (page 6):
"Due to the additional requirements for closed-system packaging for all non-bulk (less than 120 gallons) end use product containers, this occupational handler exposure and risk assessment considers the currently required levels of PPE described above, as well as the closed-system packaging for mixers and loaders."

NCC is unclear if EPA is stating that both the existing PPE and the amended label additions, such as the closed-system packaging, were included together in the risk assessment or viewed separately. The NCC believes the assessment should be reflective of all requirements based on the current label and urges EPA to verify this is the case.

The NCC asks for greater clarity related to the inhalation exposure component of the risk assessment. Technology has dramatically improved worker environments with closed cab equipment and filtered air conditioning. The NCC requests clarity if the assessment accounts for these technologies.

Mechanical Cotton Harvest Transfer Coefficients: (page 60)

The National Cotton Council appreciates HED's recognition of the NCC's 2016 Survey of Harvest Transport Practices and will continue to work with EPA to develop appropriate exposure pathways related to harvest and post-harvest practices associated with current production. The NCC includes the following remarks for clarification of the discussion:

1. Cotton trailers were used to transport cotton to gins, and trampers were individuals who entered the cotton trailer to walk back and forth to pack the cotton more densely in the trailer. The desire was to maximize the amount per trailer to be hauled to the gin. In later years, some producers would use mechanical equipment for packing trailers.
2. Conventional module builders were developed in the 1970's and greatly advanced efficiency of moving cotton volume to the gin. The conventional module building equipment is a large rectangular metal wagon with sides and an open bottom. The cotton in the cotton picker basket would hydraulically dump into the inside of the conventional module builder. A hydraulic press mounted on top of the module builder would incrementally move from front to back pressing the cotton densely along the way. The back of the module builder would open, the wagon would pull forward, and a tarp would be placed over the top of the module. Again, these advancements were developed for efficiency in moving cotton from fields to gins, but still required multiple pieces of equipment (harvester, module builder, tractor, and at least 2 employees).
3.The current development for efficiency and reduced requirements for equipment and labor are as follows:
    a) The harvester with round bale module – The round bale module is densely packed on the harvester during the harvest process. The harvester is equipped to notify the operator when the appropriate size has been met. The cotton is then mechanically wrapped inside the harvester and mechanically placed on the ground. The round bale module is later mechanically loaded on a truck or trailer and transported to the gin.

b) The harvester with mini-module – The mini-module is densely packed on the harvester during the harvest process. The harvester is equipped to notify the operator when the size has been met. The cotton is then mechanically placed on the ground for employees to cover with a tarp before being transported to the gin.

The NCC appreciates the opportunity to engage with EPA for an appropriate explanation and update of the exposure pathways with these developments in the cotton industry. The NCC desires recognition of industry advancements that have resulted in significant reduction of potential exposure pathways. While the NCC continues to disagree with the inclusion of "trampers" exposure, we appreciate that EPA recognizes less than 1% of the U.S. cotton production utilizes trailers, and most of those trailers do not have trampers to pack the cotton.

The NCC has provided a Technical Report to EPA regarding these harvest practices, which is attached to these comments as well.

Dislodgeable Foliar Residue: (page 62)

The NCC is not in agreement with entry and exposure assumptions regarding Dislodgeable Foliar Residue (DFR) and Dislodgeable Boll Residue (DBR). Crop production equipment today has greatly advanced beyond practices utilized at the period of time these exposure pathways were developed (eg. DBR in the early 1990's). The NCC desires further engagement with EPA to appropriately revise these exposure pathways to reflect today's technology. Cotton harvesters today provide operators with great comfort including closed cabs with filtered air-conditioning. The equipment is designed to perform the operations without the operator exiting the equipment. Justification for DFR and DBR are not reflective of todays production practices. The EPA Ecological Risk Assessment discusses the strong binding of paraquat to soil particles, and the required strong acid processing to be able to separate part of the bound material. Given this binding strength that renders paraquat biologically inactive, the NCC does not believe DFR and DBR studies are relevant. Additionally, the NCC does not believe DFR and DBR assumptions of contact are appropriate. When paraquat is used as a defoliant, the crop is ready for harvest. Pest scouting by individuals has ended. The only remaining operation is to allow the plant to complete their reaction to the defoliant, allow plant material to dry, and begin harvest. Harvest is mechanical with operators in closed cab, air-conditioned equipment. The NCC fails to understand the assumptions that the operators contact some number of cotton bolls per hour and therefore may receive DBR.

The NCC urges EPA to refine the risk assessments in a manner reflective of today's production practices.

Thank you for the opportunity to provide these comments regarding EPA's Draft Human Health and Ecological Risk Assessments for Paraquat Dichloride.

Sincerely,

Steve Hensley
Senior Scientist, Regulatory and Environmental Issues
National Cotton Council