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August 13, 2018

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-2016-0416

Dear Mr. Goodis:

The National Cotton Council (NCC) appreciates the opportunity to comment on the Environmental Protection Agency's (EPA) dockets "Pesticide Product Registrations: Applications for New Uses and New Active Ingredients." The NCC is pleased to see the prospects of a new active ingredient, Afidopyropen, targeting aphids and whiteflies in cotton. Cotton producers and their Integrated Pest Management crop consultants across the cotton belt continue to battle these two pests, which have demonstrated resistance to many currently available products and modes of action. A new active ingredient that has been classified by the Insecticide Resistance Action Committee (IRAC) as the only member in the new mode of action subgroup 9D is highly encouraging news. The NCC supports the registration of this needed product for pest control in cotton.

The NCC is the central organization of the United States cotton industry. Its members include producers, ginners, cottonseed processors and merchandizers, merchants, cooperatives, warehousemen 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 9 and 12 million acres of cotton with production averaging 12 to 18 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 \$100 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.

EPA's Human Health Risk Assessment (HHRA) and Environmental Fate and Ecological Risk Assessment (EFERA) both support registration of Afidopyropen. The NCC further notes EPA's EFERA reports "no acute or chronic risks of concern for aquatic or terrestrial plants, birds, fish, or acute risk concerns for aquatic invertebrates and mammals.... There are not acute or chronic risk concerns for adult or larval bees based on mortality." The highly conservative HHRA and EFERA reports show favorable data supporting the registration of this product, especially when weighted by the benefits it would add to aphid and whitefly IPM rotation of modes of action (MOA).

Aphids and whiteflies are a concern in every cotton region and are typically present, but do not always reach treatment criteria. Many factors must be considered in aphid and whitefly management in each region. Drought stress, presence of honey dew, stage of the cotton crop, diversity and proximity of other crops (for example as row crops and vegetable crops in CA, AZ, and GA must consider resistance selection from each other) and many other factors (including reports of natural aphid fungus in some regions) complicate the decision to invest more money for aphid control and/or whitefly control. For aphids, producers can wait for the fungal epizootic too long and suffer yield loss. At times, producers make the aphid treatment and the epizootic occurs within a few days. The producer's treatment decision is complex. Tremendous research efforts have attempted to develop cost savings for cotton producers by monitoring and alerting growers of indications that the aphid fungal epizootic may occur (Steinkraus and Hollingsworth 1994, Hollingsworth et al. 1995, Steinkraus and Slaymaker 1994, Steinkraus et al. 2002). Unfortunately, aphid populations may occur at any stage of cotton production and the fungal epizootic is not always a reliable control, especially late season.

The NCC urges EPA to understand the economic impact of honey dew and “sticky cotton” resulting from aphids and whiteflies. The potential occurrence of sticky cotton is a severe concern to the entire cotton industry production and supply chain. Although the silverleaf whitefly is a pest that only sporadically reaches damaging levels of concerns, the NCC urges EPA to recognize the potential impact of sticky cotton for producers who do not have the tools to manage aphids and whiteflies. The rapid population increase (sometimes at a field level or area level, sometimes at a larger level) and the stage of plant development can result in honeydew on lint, termed “sticky cotton”. Henneberry et al. 2001 (<http://arizona.openrepository.com/arizona/handle/10150/211301>) showed the association of aphids and honeydew resulting in sticky lint. Hector and Hodkinson (1989) reported over 80% of sticky cotton at textile mills was associated with aphids and whiteflies.

The research literature has numerous papers discussing the challenges to control aphid and whitefly outbreaks, and the extreme need for multiple modes of action (MOA) in rotation to avoid uncontrollable populations (Hequet et al., 2007, Sticky Cotton: Causes, Effects, and Prevention, USDA ARS Tech. Bull. No. 1915, 210pp; Nichols et. al. Management of White Fly Resistance to Key Insecticide in Arizona, <http://www.cottoninc.com/fiber/AgriculturalDisciplines/Entomology/Whitefly/WhiteFlyResistance/>; Whiteflies: Cotton Insect Management Guide, <https://cottonbugs.tamu.edu/foilage-feeding-pests/whiteflies/>). The biology and rapid population growth of aphids and whiteflies requires the availability of critical IRM tools. Ellsworth et al. (1999, The University of Arizona, Cooperative Extension IPM Series No. 13, Stick Cotton Sources & Solutions) reported “insecticide treatment to specifically prevent stickiness has cost Southwestern cotton growers \$47 million for aphids and \$154 million for whiteflies from 1994-1998.” The development and implementation of a new integrated system of whitefly management greatly reduced the cost, but optional management tools must be available to comply with IRM recommendations.

Ellsworth et al. 1999 showed that Aphids and whiteflies do more than just reduce yield. The sugars they excrete impacts the entire cotton chain – from producer yield losses, slowing ginning process by up to 25 % (Ellsworth et al., 1999), lowering grade and value \$0.03/lb – \$0.05/lb (Ellsworth et al. 1999), requiring extra efforts to spin fibers, requiring frequent shutdown of processing equipment to clean gumming of sugars, and potential reduction in final product due to staining and lower fiber grade. The seriousness of sticky cotton can impact entire regions as textile mills attempt to avoid the purchase of sticky cotton.

Aphids also present a problem in scouting for caterpillar eggs and neonate larvae. When aphid populations reach a density that begins to show the shiny leaves (honeydew), it is difficult to determine the number of aphids present. A mere walk through the field will cover clothing with gummy residue from thousands of aphids brushed from the underside of leaves. The terminal of the cotton plant will most often be covered with aphids making it practically impossible for professional crop consultants to monitor for bollworm/budworm larvae.

The NCC supports the registration of Afidopyropen and urges EPA to recognize the value added with a new MOA to control aphids and whiteflies. Thank you for allowing the NCC to comment on the EPA's docket "Pesticide Product Registrations: Applications for New Uses and New Active Ingredients" which includes Afidopyropen.

Respectfully,

A handwritten signature in black ink that reads "Steve Hensley". The signature is written in a cursive, flowing style.

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