California Citrus Quality Council

Submitted to PCPA.Comments@cdpr.ca.gov

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PCPA Imidacloprid Comments
Ms. Kara James
Pesticide Registration Branch
California Department of Pesticide Regulation (CPR)
100 I Street
Sacramento, CA 95814-4015

Subject: Pesticide Contamination Prevention Act (PCPA) Review Process for Imidacloprid

Dear Ms. James:

The California Citrus Quality Council (CCQC) represents the California citrus industry, including 85 citrus packinghouses and approximately 2,000 citrus growers on technical and regulatory issues domestically and overseas. We appreciate the opportunity to comment on the Department of Pesticide Regulations (DPR's) Pesticide Contamination Prevention Act (PCPA) review process for the use of imidacloprid.

Imidacloprid is an Essential Tool for Controlling ACP

The California citrus industry is facing its greatest threat since the 1870s when commercial citrus shipments began. The Asian citrus psyllid (ACP) is spreading Huanglongbing (HLB), a bacterial disease with no cure, into southern California, primarily in Orange, Los Angeles, Riverside and San Bernardino Counties. HLB attacks a citrus tree's nutrient transport system causing infected trees to drop leaves and fruit. The tree eventually dies within four to 12 years depending on the age and overall health of the tree. During this time, the disease also reduces fruit quality and ruins the taste of the fruit. Since California produces primarily fresh market fruit, symptoms that reduce fruit quality will reduce demand for California citrus and jeopardize the economic viability of citrus production even before the diseased trees die. Despite millions of dollars being spent on research, no cure has been identified. The California citrus industry's number one priority is stopping the spread of HLB.

With no cure in sight, the best defense against HLB infection is to control the ACP, the vector that spreads the disease. HLB can only spread through grafting, dissemination of infected nursery plants or if it is transmitted from tree to tree by infected ACP. The California citrus industry is working in collaboration with the California Department of Food and Agriculture (CDFA) to monitor residential properties and commercial groves for the presence of ACP and HLB. CDFA makes pesticide applications to residential properties when positive trees are

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identified. In addition, citrus growers have formed citrus pest management areas to coordinate pesticide applications in commercial groves for a more effective suppression of ACP. CDFA has also targeted high risk urban areas where an ACP parasitic wasp is being released. CDFA works in tandem with the USDA's Animal and Plant Health Inspection Service (APHIS) to administer a multilayer regulatory program that includes regulation of nursery production, movement of harvested fruit, ACP and HLB monitoring, residential treatments and diseased tree removal, production and dissemination of an ACP predatory wasp, areawide ACP treatments and a multimillion-dollar research program. These activities are coordinated with industry-funded public service communications, research and laboratory services.

Soil Uses of Neonicotinoids are Critically Important

Several different pesticides are used to control adult ACP. However, the most effective tools for ACP control are the neonicotinoids including imidacloprid, applied systemically through the irrigation system. Use of imidacloprid as a soil application allows the industry to minimize the number of foliar pesticide applications to control adult ACP, since systemic imidacloprid reaches new leaf tissues and thus is very effective against early life stages. Without imidacloprid, citrus growers would be required to make more frequent foliar pesticide applications resulting in more pesticides being used, since foliar applications are not as effective as imidacloprid soil drenches in controlling nymphs. The soil use of imidacloprid is usually effective for three months while foliar pesticides are only effective for up to one month.

If the citrus industry lost the use of imidacloprid it would require at least three times as many pesticide applications of other less effective products to control ACP. This increased use of pesticides would reduce populations of beneficial insects, which would cause outbreaks of insects that are presently controlled through natural biocontrol or the systemic effect of imidacloprid. This would devastate integrated pest management (IPM) programs and increase the use of pesticides to control outbreaks of secondary pests.

While ACP control is the citrus industry's major use of neonicotinoids, they are also essential for control of the glassy-winged sharpshooter, a major vector for the spread of Pierce's disease (*Xylella fastidiosa)* in grapes. Pierce's disease threatens California's table grape and wine industries, because there is no cure for the disease and once vines are infected, they usually die within five years.

The California citrus industry collaborates with grape growers to control the glassy-winged sharpshooter (GWSS), which overwinters in citrus groves. Citrus is a major host for GWSS which can survive during the winter by feeding in citrus groves. Control in citrus groves is essential in reducing GWSS populations and assists the grape industry in managing those populations. Neonicotinoids such as imidacloprid play an important role in this objective.

Imidacloprid soil treatments are also used in an areawide program to control aphids around the Lindcove Research Center. Aphids are a vector for the citrus tristeza virus, which reduces tree vigor and kills branches and trees. Citrus tristeza reduces productivity and yield and slows tree growth. If citrus tristeza became established at the Lindcove Research Center it would jeopardize the entire center, since research cannot be conducted on unhealthy trees. The loss of the soil use of imidacloprid will make it more difficult to control the spread of tristeza virus in the region particularly around the research center, require more pesticide applications and jeopardize the viability of the research center.

Reducing Label Rates of Imidacloprid

A potential option for addressing the detection of low levels of imidacloprid in groundwater wells is to reduce label rates. CCQC urges CDPR not to adjust label rates of imidacloprid for use on citrus. Reduced rates would not be effective in controlling target pests such as ACP, citrus leafminer, citricola scale and glassy-winged sharpshooters. Imidacloprid is the keystone to the industry's defense against ACP until a cure for HLB is found. Most soil uses of imidacloprid are used at the highest label rate of 14 ounces of formulated product per acre, which is the most effective rate for control of ACP. Lower rates are completely ineffective on large trees. As such, it would undermine the citrus industry's strategy to slow the spread of HLB by reducing rates to levels that are effective in controlling ACP in citrus production regions in California. Label rate reductions would also handicap growers in their efforts to control citrus leafminer and citricola scale.

Citrus leafminer is a harmful insect that burrows into leaves and feeds inside of the leaf. As nymphs grow during the season, they consume more of the leaf, damaging the ability of the leaves to create the energy that trees need to grow. Young trees can become stunted by high populations of leafminers. Early tree growth is important in establishing new citrus groves and a significant factor in the long term profitability of the grove. Optimal control is achieved by using systemic pesticides. Systemic soil uses of neonicotinoids including imidacloprid are essential for managing leafminers because they provide longer lasting control than foliar treatments and they are the only systemic pesticides available that are effective on leafminers.

Citricola scale is another significant pest that is normally controlled with applications of imidacloprid. Citricola scale feeds on leaves, twigs and small branches and exudes a sugary substance known as honeydew. Heavy populations of citricola scale lead to severely reduced yields and smaller fruit size.

The loss of imidacloprid would create significant problems for citrus growers especially for control of leafminer and citricola scale. Inadequate control of these insects reduces yields and fruit size, thereby reducing grower revenue. Growers are under significant economic pressure because of the high cost of labor, water and other inputs. A reduction in label rates or cancellation of imidacloprid uses on citrus would significantly increase the citrus grower's cost of production by requiring more pesticide applications to control the same pests that are currently controlled with imidacloprid. An imidacloprid soil treatment costs growers approximately $10 per acre while a single foliar treatment would cost between $60 and $90 per acre. These costs are extremely difficult to pass on since retailers have significant market power. If CDPR cancelled the use of imidacloprid in response to the groundwater detections it would cause significant economic harm to citrus growers.

There Are No Comparable Alternatives to Imidacloprid

Imidacloprid is used by citrus growers because of its excellent efficacy and reasonable cost. While there is a soil use for thiamethoxam, it is generally not used as a soil treatment for ACP because growers prefer to use thiamethoxam to control fuller rose beetle (FRB) which is a quarantine pest for the industry's largest orange export market. Citrus growers are required by APHIS to make two pesticide applications each year to control FRB and thiamethoxam is one of the best foliar treatments for FRB control. If imidacloprid was not available for ACP control, thiamethoxam would be a potential partial alternative, but the application would exhaust the

maximum annual label rate so it would be unavailable for FRB control. Additionally, imidacloprid is effective in controlling ACP for approximately three months while thiamethoxam is only effective for approximately one month. If imidacloprid was unavailable for use, growers would be forced to apply other pesticides more frequently.

Groundwater Detection Levels are Significantly Lower than Acute Reference Levels

CDPR collected 658 individual well water samples from 365 wells in 20 different counties in California. Of these samples 627 were below CDPR's reporting threshold of 0.05 parts per billion (ppb), 30 samples were above 0.05 ppb and one sample was reported at 0.05 ppb.

Of the samples that were above 0.05 ppb, the detections ranged from 0.051 to 5.97 ppb. CDPR has established that the acute Human Health Reference Levels (HHRL) for imidacloprid is 283 ppb. For the samples above the detection limit, the highest reported single detection of 5.97 ppb is nearly 50-fold lower than CDPR's identified reference level. The mean and median values of detections above 0.05 ppb were 800 and 3,100 times lower, respectively than the acute reference level. It is clear from these data that these detections do not pose a risk to public health.

Additional Data Sources Validate Low Detection Levels

The United States Geological Survey (USGS) and the California State Water Resources Control Board (CSWRCB) collected 1075 samples from 1021 wells across 45 counties between 2004 and 2020 and only two samples were above 0.05 ppb at levels of 0.056 ppb and 0.091 ppb.

The combined number of samples from CDPR monitoring, USGS and CSWRCB amount to 1,733 samples with 1,701 samples testing lower than the 0.05 ppb reporting threshold. Of all of the samples collected 1.8 percent were above the 0.05 ppb reporting level with all of the detection levels less than 800 times lower than the acute reference level for the chemical.

Conclusion

Imidacloprid is an essential tool that the California citrus industry needs to manage an invasive disease that is spreading in southern California and threatens the existence of commercial and residential citrus production in California. Reducing label rates of imidacloprid would render it ineffective in controlling a range of serious economic citrus pests and cause citrus growers significant economic hardship.

Well water monitoring programs in California have confirmed that imidacloprid detections are at very low levels and they have not been detected at increasing rates over time. Monitoring data demonstrate that imidacloprid detections are not a material problem in California and the isolated detections are so low that they are 800 times less than the acute reference level. These detections do not pose a health risk to the public, are not polluting ground water and do not threaten to pollute groundwater.

In making its decision on the future of imidacloprid use for citrus growers we urge CDPR to consider the very low potential health risk from imidacloprid detections in well water and the significant economic hardship that would result from the removal of imidacloprid or reduction in label rates.

We appreciate the opportunity to comment on this important matter.

Sincerely,

James R. Cranney, Jr.
President

cc: CCQC Board of Directors