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PRESS RELEASE:

80,000 Bee Colonies Poisoned in the California almonds; 400,000 other colonies affected by same pesticides Angry Beekeepers Demand EPA Should Change the Rules

In March 2014, massive bee-kills were reported to the Pollinator Stewardship Council (PSC) at the end of the almond pollination. As a result, we and the American Beekeeping Federation (ABF) met with the Environmental Protection Agency on Monday, March 24th in Los Banos, California, to discuss colony losses during the almond pollination; over seventy beekeepers attended, or participated via conference call.

As 1.7 million bee colonies were withdrawn from the almonds, beekeepers reported mass deaths among adult bees, as well as large numbers of dead, deformed and sick bee larvae. Eye-witnesses confirmed that these deaths were caused by a combination of pesticides, in a 'tank-mix', whereby farmers apply two or more pesticides in a single spray.

The beekeepers present reported at least 80,000 bee colonies had been killed or badly affected by the poisons: with most being ***'severely damaged'***. Further reports suggest that around 60% of all the 1.7 million hives placed among the almonds were affected by pesticides, to a greater or lesser extent.

Of the 80,000 'severely affected' hives, around 25,000 were completely dead, while 55,000 suffered a major loss of adult bees, with dead and dying brood evident. These losses affected beekeepers who had over-wintered their bees in California, as well as those who had brought their bees to California from other states.

As a result of this pesticide crisis, the Pollinator Stewardship Council and the American Beekeeping Federation asked for an urgent meeting with the EPA.

However, PSC and ABF have additional concerns over the wording of new pesticide labels, for foliar (leaf-spray) applications of the neonicotinoids: clothianidin, dinotefuran, imidacloprid and thiamethoxam, as well as the two new pesticides: tolfenpyrad and cyantraniliprole.

Pesticides Which Killed or Damaged 80,000 Bee Colonies, weakened another 400,000
The Los Banos meeting addressed the severe damage to bee-colonies caused by growers applying a tank-mixture of two pesticides, namely: an **'Insect Growth Regulator'** (IGR) and a **fungicide**. Insect Growth Regulators are a new class of insecticides, which prevent insect larvae from moulting; as a result the larvae never mature into adult insects. Unfortunately, bees are also insects and although they are not the intended targets of IGRs, they can be just as severely affected as the target pests.

As a result of these massive losses, hundreds of beekeepers will be unable to make 'splits' (divide their colonies) so as to increase their bee-stocks and recover to previous levels for the next season. Moreover, since many colonies are still affected by the residual poisons,

beekeepers will be unable to breed replacement Queens, or produce new-stocks of 'package bees' for sale in the normal way; this represents a severe financial loss.

Local Sprayings Caused Distant Deaths
Many beekeepers were also concerned that the deadly mixture of poisons applied in one almond grove, killed or poisoned honey bees in distant locations. This was either due to spray drift, or because bees from untreated areas, flew into the poison-zone and were killed; bees can fly up to three miles radius from their own hive.

Delayed Effects of Sub-Lethal Poisoning
The full effects of the poisonous sprays often went unnoticed until trailer-loads of bees had been returned to distant bee-yards, in the Southern states. The toxic effects were often delayed, or sub-lethal, and many beekeepers did not realise the full extent of the damage to their bees until they arrived home and were able to inspect the dying brood and queens inside the hive.

Many scientific studies have confirmed that some fungicides can be just as poisonous to bees and pollinators as actual insecticides, see linked article below:

http://westernfarmpress.com/fungicides-can-reduce-hinder-pollination-potential-honey-bees

It is also known that pesticides applied to almonds during the night-time cause less damage to bees and other pollinators. Beekeepers at the Los Banos meeting reported that their bees have suffered pesticide damage among the almonds for at least six years, since 2008. Bee - deaths were reduced when growers applied pesticides during the night, and there were far fewer bee deaths if growers did not apply pesticides when trees were in bloom, since bees are mainly attracted to the flowers.

Paramount Farms, the largest grower of almonds in the world, stated that they do not apply any pesticides during the pollination season (the flowering period), since their almond yields improved when they timed pesticide applications to protect the bees.

However, in 2014, some growers changed their pesticide application regimes, and bees suffered as a result.

Some Beekeepers Will Never Return to California
The current scale of bee-colony-deaths is so great, that some beekeepers said they will never bring their bees to another California almond pollination; they simply could not survive another loss of colonies on this scale, nor the financial loss which would result.
The beekeepers present promised that, if the EPA did not take urgent action, they would be forced to add a ***'pesticide surcharge'*** to all future pollination contracts; they would charge growers an extra fee, for any bee deaths which resulted from pesticide applications. Moreover, if enforceable changes to pesticide labels are not made before the 2015 pollination, then their hives would remain in Georgia or Florida, to gather a honey crop in a safer environment, rather than risk another season of severe colony losses and damage.

What Use is Pesticide Label 'Advice', if the bees are still poisoned?
The mass bee-deaths among the almonds in 2014 happened, despite pesticides being applied *"as advised per the label".* This raises an obvious question:

> ***"what is the point of an 'Advisory Label', if bees are still poisoned when the advice is followed?"***

The combined fungicide and Insect Growth Regulator mixture was applied *'as per the label*',

but the label advice is so 'theoretical' that it has little relevance to to the practical reality in the field.

One beekeeper described the process:

> ***"The pesticide label instructs you to take a quart-jar and mix the products you want to use into the jar. If it does not 'blow-up', go ahead and mix the full chemicals and apply to the crop."***

The EPA recently stated that, from now on, the new ***'pesticide label language'*** will only be required for **foliar applications** of: clothianidin, dinotefuran, imidacloprid, thiamethoxam, and the two new products tolfenpyrad and cyantraniliprole. In other words, if these pesticides are applied as seed-dressings or soil treatments (both equally deadly to bees) – no label advice need be followed.

At the Los Banos meeting the EPA representatives said they had not seen the letter from Mr. Jim Jones to the bee industry, and they were not aware of the issues the bee industry had concerning the new label language. (Jim Jones' letter was posted on this Newslist and is available here again). EPA staff listened to our concerns, but did not promise any action on the labelling issue; changing the wording of a label is a long, bureaucratic process, which could not be done quickly or easily.

Beekeepers at the meeting asked the EPA for two urgent pesticide reforms:

1. The EPA Advisory Label should instruct applicators, on when and how to apply pesticides, so as to avoid poisoning bees and other pollinators

2. The EPA should ban the use of pesticide mixtures in spray tanks, since combinations of two or more pesticides are far more deadly to bees than single applications.

Scale of Losses Has Grave Financial Implications

At the Los Banos meeting, beekeepers said that, for the California almond pollination, 1.7 million bee colonies were supplied by 1300 beekeepers. Of these, they estimated 15 to 25% (255,000 to 425,000 colonies) were badly affected by pesticides, resulting in: dead colonies, heavy loss of brood, partial or entire loss of adult forager bees)

A conservative financial estimate of these losses is $63,750,000 to $106,250,000;
However beekeepers are still assessing the damage; the above figure:

- Does not include the loss of colonies which would have been used in later pollination contracts, which cannot now be fulfilled.
- Does not take into account the losses of selling packages of honey bees, queens, or frames of brood to establish new hives, which must now be cancelled.
- With hundreds or thousands of severely poisoned hives some beekeepers have been forced to cancel orders for honey or bee colonies etc.

Knock on Effects for Other Crop Pollinations

The almond pollination represents the start of the annual crop-pollination cycle in the USA; almonds are the first crop which honey bees pollinate. Thus, if pesticides cause large scale colony losses during the almond pollination, this will affect all subsequent pollination contracts for: apples, cranberries, canola, tangelos, blueberries, squash, watermelon, kiwi, plums, apricots, cherries, seed crops, and much of our vegetables and fruit.

One beekeeper, who had contracted his bees to pollinate Washington apples after the

almonds finished, was short of 1200 hives, due to his colony losses among the almonds.
If many thousands of colonies continue to die among the almonds, this will affect:

- how many bee colonies are available to pollinate later crops in other states
- the financial cost of pollinating those crops
- the cost of the food we buy to feed our families

The Pollinator Stewardship Council works with beekeepers to collect reports of bee kills across the U.S. in rural, suburban, and urban areas.

Please contact the Pollinator Stewardship Council to file any bee kill report at 832-727-9492 or info@pollinatorstewardship.org