

## Operational Plan for the 2025 APHIS/CDFA Navel Orangeworm (NOW) Program

APHIS's Plant Protection and Quarantine's (PPQ) Navel Orangeworm (NOW) cross-functional working group (CFWG) developed this 2025 NOW Program plan in coordination with the California Department of Food & Agriculture (CDFA) and members of the Navel Orangeworm Action Committee (NOWAC) through meetings with stakeholders/industry. This document outlines the NOW program goals and program plan for the fiscal year 2025. It outlines the activities needed to conduct the program. The plan proposes field releases of sterile NOW moths from March through October 2025.

### FY 2025 Operational Goals and Rationale

1. Plot sizes will be reduced from 640 acres to 160 acres, totaling 32 zones.
  - a. The reduction will enable the NOW program to maintain its SIT output while increasing grower participation and sample size, which improves the statistical validity of the program.
  - b. The previous 640-acre zones from 2024 that wish to participate will be retained for 2025 and be reduced to 160 acres.
  - c. The 2025 program will cumulatively total 5,120 acres from selected pistachio and almond orchards with half of the acreage receiving sterile NOW moths providing information on SIT NOW recapture, The remaining acreage designated as non-release controls provides information on wild NOW populations.
2. Maintain production of one magazine (~750,000 moths) sterile Moth Collection Strain (MCS) moths per day throughout the 2025 growing season.
3. PPQ will produce and release the MCS over all selected release sites within the participating almond and pistachio orchards in 2025.
  - a. CDFA will verify the mating disruption status of the Zones.
  - b. PPQ will reassign release and non-release zones among the participating almond and pistachio orchards (*Addendum 1 & 2*)
  - c. PPQ will schedule all sterile NOW releases when the nuts are vulnerable to NOW infestation and damage:
    - i. Release one magazine of sterile NOW over almond zones from March through mid-August coinciding with almond mummy nuts and then the most vulnerable period for Nonpareil Almonds to NOW.
    - ii. Release one magazine of sterile NOW over pistachio zones from mid-August through October when Kerman pistachios are most vulnerable to NOW.
4. PPQ AEO will manage aerial releases of sterile NOW moths during the 2025 program.
  - a. AEO renewed the term of last year's pilot who will be stationed in Shafter, California.
  - b. The pilot will release moths for 6 days of the week for the duration of the season.
  - c. When possible, CDFA will release sterile NOW moths with AEO ground-based equipment 1 day of the week to maintain daily releases as conducted in previous years. CDFA will also release sterile NOW moths with AEO ground-based equipment if aerial releases temporarily cease due to plane maintenance, pilot illness, or other extenuating circumstances whenever possible.

5. CDFA will monitor NOW activity in release and non-release orchards, process traps, and share weekly data in accordance with the NOW Trapping Methods SOP (*Addendum 3*).
6. CDFA will gather and process damage data through the 2025 field season in participating almond and pistachio orchards, and harvest data to record effects of sterile NOW releases on nut damage in accordance with the Tree Nut Harvest/Damage Assessment Methods SOPs (*Addendum 4*). PPQ will review and analyze data.
7. CDFA will distribute a grower agreement with participants to establish greater consistency within the program regarding data-sharing and insecticide applications (*Addendum 5*).
  - a. CDFA will work with participating growers to standardize sanitation, pesticide applications, and cultural practices to standardize production practices and reduce variables.
  - b. CDFA will collect information from participating growers that include pest management practices and post-harvest damage sheets from their respective processors. Grower anonymity will be preserved to protect any proprietary information.
  - c. CDFA will collect and analyze data regarding grower acceptance and adoption of practices.

### **FY 2025 Operational Plan**

The 2025 program will encompass 5,120 acres from pistachio and almond orchards. Up to half of the acreage will receive sterile NOW moths, and the remaining acreage will serve as a non-release “control”. All participating growers must implement to the best of their ability IPM methods that include sanitation, judicious pesticide applications, timely/early harvest techniques, with half of the acreage also utilizing mating disruption. Some orchards have participated in the program since its inception in 2020. Please see *Addendum 1. Description of Current Participating Orchards 2025* and *Addendum 2 2025 Map of Current Participating Orchards* for more information.

Industry reported to PPQ strong grower support for SIT. Regarding positive grower support, PPQ and its cooperators will request that growers with orchards in the program area (with and without sterile NOW moth release) comply to the best of their ability with the IPM minimum standards identified by the NOWAC. The reason for including acreage with no SIT release is to prepare tree nut producers for minimum standards compliance so that these areas are ready for sterile NOW moth release in the following year.

CDFA will receive the moths at the Bakersfield, California Airport shortly after arrival and drive the moths to the CDFA Shafter field office. CDFA will collect samples to conduct QC on these moths and store them overnight in a cooler. In the event that cold storage at the CDFA field office is not available, release will be done the same day the moth shipment arrives in California. PPQ AEO will release the moths by plane on the selected acres. Release of sterile moths will occur from early March through mid-October.

All program participants must agree to allow CDFA access to their orchards to implement NOW monitoring and data collection. The monitoring is to determine the NOW wild population in an area and SIT NOW recapture. Monitoring activities will occur year-round. CDFA will continue to share weekly raw data and data summaries with PPQ and on their website for interested parties (*Addendum 3. NOW Trapping Methods*).

CDFA will collect almond damage data in accordance with a sampling and processing SOP developed by almond growers and producers. CDFA will also collect pistachio damage data in accordance with a sampling and processing SOP developed by PPQ and the Agricultural Research Service (ARS). All growers will also provide grade sheets from the processors which disclose the breakout damage data from NOW in the respective tree nut (***Addendum 4. Tree Nut Harvest/Damage Assessment Methods***). Data from the processors will be shared with NOW program managers and cooperators in a manner that protects proprietary grower information. Almond/pistachio damage data sample processing by CDFA may be updated to accurately separate carpophilus beetle damage from NOW damage.

### **Funding Sources**

Funds for the SIT and monitoring part of the program are from Federal Appropriations – Specialty Crop Line Item. PPQ has not received its FY 2025 allocations. (***Addendum 6. NOW Budget Planning for 2025***)

### **Roles & Responsibilities**

#### **APHIS-PPQ – National Policy Manager (NPM)**

The National Policy Manager (NPM) is a member of the NOW cross functional working group (CFWG) and serves as the internal and external point of contact for the program. The NPM communicates with industry, the PPQ Management Team, and is responsible for coordinating overall program planning and the budget.

#### **APHIS PPQ – Field Operations (FO)**

The National Operations Manager (NOM), who is a member of the NOW CFWG, provides national program oversight and operational support for the program. The NOM and the Arizona State Plant Health Director (SPHD) communicate with the CDFA Operational Coordinator, lead logistic program planning (moth transport, release planning, etc.) in coordination with the Phoenix Rearing Facility (PRF), manage cooperative agreements, track core functional area level spending, and work with and share activities with Science and Technology (S&T).

The Phoenix Rearing Facility (PRF) produces sterile NOW moths, manages logistical program planning in coordination with the NOM and AZ SPHD (production timing and management, moth shipment, diet and equipment needs, etc.), communicate with CDFA on daily field operations logistics and needs, and tracks spending. The PRF works with and coordinates some activities with S&T, balancing the Areawide Program's needs with requests from researchers.

#### **APHIS PPQ AEO**

PPQ AEO will manage the aerial release of sterile NOW moths over the designated orchards.

#### **APHIS PPQ – S&T**

The S&T Assistant Director of the Insect Management and Molecular Diagnostics Laboratory (IMMDL), Phoenix, Arizona, provides oversight and guidance for the program and is a member of the NOW CFWG. The S&T IMMDL-Phoenix Station conducts methods development and process improvement for the program, making recommendation for program changes/direction

given the best available science. S&T also works on analyzing NOW trapping data and tree nut damage post-season assessments to determine program progress/effectiveness and may request assistance from the Agricultural Research Service (ARS) in this endeavor.

#### **California Department of Food and Agriculture:**

CDFA is responsible for managing the field components of the NOW management program at the SIT field sites. CDFA receives shipments of sterile NOW moths from the PRF, transports them to Shafter, provides storage prior to release, collects representative QC samples, and assists in the loading of release machines into aircraft and/or ground release for releases the following day. CDFA conducts the ground release of SIT NOW into participating orchards. CDFA processes and collects participating almond/pistachio field damage directly by nut collection and examination. CDFA maintains an insect trapping/monitoring system within the SIT program sites and shares that data with PPQ and publicly on the CDFA NOW website on a weekly basis. CDFA is responsible for providing information and sharing data with PPQ, such as but not limited to pistachio/almond damage data and pesticide applications/IPM practices of program participants. CDFA also provides an annual report of field data and activities to PPQ. [NOWprogram@cdfa.ca.gov](mailto:NOWprogram@cdfa.ca.gov)

CDFA also provides program coordination between participating growers and field operations, and growers may contact CDFA's Environmental Program Manager at [NOWprogram@cdfa.ca.gov](mailto:NOWprogram@cdfa.ca.gov). Activities include identifying participating orchards and growers and working with growers to establish standardized IPM practices and reporting requirements. The coordinator will also work with growers to gather and analyze data on grower perceptions and adoption of IPM practices. Information collected by CDFA may include but is not limited to processor tree nut grade sheets and pesticide applications/IPM practices of program participants, is provided to CDFA for incorporation to the project annual report to USDA.

#### **Pistachio, Almond, and Walnut Participating Growers:**

The industry participants that enroll as SIT release sites will agree to identify a field contact that can respond to and maintain regular contact with the CDFA Environmental Program Manager ([NOWprogram@cdfa.ca.gov](mailto:NOWprogram@cdfa.ca.gov)). In addition, they agree to allowing placement of traps in the participating fields, regular access by CDFA trapping staff, notification of pesticide and mating disruption practices, release of damage information from the hauler/handler, and for collection of nuts for damage assessment. Industry participants may submit feedback through the Navel Orangeworm Action Committee (NOWAC) or the Technical Advisory Committee (TAC) regarding damage-assessment protocols, IPM methods (including sanitation), and other technical methods employed by tree-nut growers and processors.

#### **Navel Orangeworm Action Committee (NOWAC):**

The NOWAC is an ad hoc advisory group under CDFA and provides recommendations to the California Secretary of Agriculture with regards to the NOW program. Members of this group represent almond, pistachio, walnut producers, and processors, in addition to non-voting representatives such as CDFA and APHIS. Advisors to the committee include USDA, CDFA, and Industry Associations.

#### **Navel Orangeworm Technical Advisory Committee (TAC):**

This group is a subgroup created by the NOWAC, chaired by the manager of The California Pistachio Research Board, and comprised of APHIS, ARS, and University of California scientists with technical expertise and experience in insect mass rearing and sterilization, NOW biology, integrated pest management, field release methods, and area-wide pest management programs. The TAC addresses scientific and technical issues within the NOW areawide program and offers technical guidance to the NOWAC.

*Addendum 1. Description of Current Participating Tree Nut Orchards 2025*

<b>Zone</b>	<b>Commodity</b>	<b>Acreage</b>	<b>SIT</b>	<b>Mating Disruption</b>	<b>Year Established</b>
1		160			
2		160			
3		160			
4		160			
5		160			
6		160			
7		160			
8		160			
9		160			
10		160			
11		160			
12		160			
13		160			
14		160			
15		160			
16		160			
17		160			
18		160			
19		160			
20		160			
21		160			
22		160			
23		160			
24		160			
25		160			
26		160			
27		160			
28		160			
29		160			
30		160			
31		160			
32		160			

***Addendum 2. Map of 2025 Participating Orchards in Fresno County, California.***

Maps TBD once program managers confirm participating growers for the 2025 season.

DRAFT

### *Addendum 3. NOW Trapping Methods*

#### **NAVEL ORANGEWORM PROGRAM** **2025 Trap Monitoring Action Plan**

Trapping is the primary tool in monitoring sterile release. It is critical for the continued success of the program that traps are maintained in optimum condition, well placed, and checked at regular service intervals. The California Department of Food and Agriculture's (CDFA) trapping protocols will be as follows:

All zones will be trap monitored and identifiable during the 2025 season. Half of the orchards are pistachio and half are almond. Additionally, half of each of the pistachio and almond orchards will have the navel orangeworm (NOW) sterile insect technique (SIT) releases, and the other half will be the non-release or "control".

For this area, the Program will have two trappers. Half the trap zones will be assigned to each trapper. Each zone will contain traps at a density of 1 per ~18 acres in an evenly spaced grid layout throughout the orchard (interior and periphery).

#### **TRAP RATIO**

The Navel Orangeworm Technical Advisory Committee (TAC) supported the trap ratio/density should be a maximum of 1 trap per 20 acres. With the grid layout for the trap sites described above, the trap ratio for year one will be 1 trap per approximately 18 acres.

#### **THE NOW TRAPS**

The traps used for CDFA's trap monitoring program will be wing intercept traps. One wing intercept trap will be placed at each trap site, baited with a NOW phenylpropionate pheromone and PPO combined lure.

#### **TRAP PLACEMENT/SERVICING**

##### **Initial Trap Placement:**

The traps will be placed in all designated almond zones by the end of April 2025, for pistachio zones by the end of June 2025, and remain in the fields year-round. The traps are hung directly in the tree, using a hanging wire, at each of the trap sites per zone, following the grid layout mentioned above. Traps are only replaced or removed as necessary.

##### **Routine Trap Servicing:**

All traps will be serviced once every week. The trap bottoms will be removed and submitted to the lab for processing. New trap bottoms will be replaced weekly, and phenylpropionate pheromone/PPO lures will be replaced every four weeks.

##### **Trap Monitoring During Harvest:**

CDFA will continue trap monitoring during harvest periods.

#### **TRAP POSITIONING AND RECORDING**



Wing intercept traps are placed on limbs of approximately 5 to 6 feet high from the ground using metal wires as hangers. CDFA trappers use GPS handheld devices to mark exact locations of all trap sites, and maps are generated with GIS software using this information.

### **TRAP LABELING**

All pertinent information will be clearly labeled on traps at time of deployment, meaning that deployed traps have been labeled, numbered, properly baited, and a GPS waypoint obtained.

Traps must be clearly labeled with the following information:

1. Zone Number
2. Trap Number
3. Township- Range- Section
4. Crop Type (Almond or Pistachio)
5. Bait Type (phenylpropionate pheromone lure)
6. Date trap was serviced and trapper's initials

### **OTHER DATA COLLECTION**

Other data collection during the SIT release will enable adaptive management to identify the effectiveness of release and other variables that may need to be included or modified. Initial data collect in addition to trap label will include:

1. Weather
2. Degree day

### **MAPS**

Maps of the assigned zones will indicate location and number of each trap placed. Crops will be distinguished from each other (almond orchards from pistachio orchards). Both an office copy map of assigned zones as well as a field copy will be kept current and reviewed by the program lead for accuracy.

### **QUALITY ASSURANCE (QA)**

Quality Assurance (QA) inspections are a vital part of any successful organization.

- QA inspections provide an acceptable method of demonstrating to the scientific, governmental, and grower communities that the NOW program is following approved policies and procedures.
- QA inspections also provide feedback to trappers, lead personnel, management, and growers regarding the quality and consistency of the NOW program.
- QA inspections help to ensure the biological integrity of the trapping program, screening process and promote uniformity among trapping districts.
- QA inspections also help to uncover any specific improvements that are necessary.

It is the goal of the NOW program to conduct regular QA inspections on each zone. Each zone will be inspected at least twice during the season.

### **STERILE INSECT PLANTING (SIP)**

All trappers are provided hands-on training and demonstrate an aptitude to identify target pests prior to conducting fieldwork. In addition to this initial certification, on a regular basis throughout the trapping season, supervisors/lead staff will conduct Sterile Insect Planting (SIP). SIP means

that dyed sterile navel orangeworm moths are intentionally placed in traps. This is conducted by a supervisor, or other qualified lead person. SIP is used as a training tool and testing method to determine a trapper's ability to identify NOW moths in the field.

- The moths will be placed in a trap in clear view.
- A supervisor/lead staff will verify missed SIP specimens immediately following expected servicing dates.
- The SIP process will randomly take place throughout the duration of the season, which can include initial deployment and before removal of traps at the end of the season.

## **REPORTING**

CDFA will provide weekly reports will to all stakeholders on a continuous basis throughout the season. The reports will include information on the number of traps deployed in the field and serviced each week. Additionally, the reports will include such trap data as:

### The number of wild NOW moths

- The number of female wild NOW moths
- The number of male wild NOW moths

### The number of sterile NOW moths

- The number of female sterile NOW moths
- The number of male sterile NOW moths

#### ***Addendum 4. Tree Nut Harvest/Damage Assessment Methods***

##### ***Almond Sampling and Damage Assessment Protocol***

Participating growers will provide harvest data sheets compiled by almond processors to CDFA.

Almond damage data will be extracted from the processor grade sheets with at a minimum the sums of the frass, pin hole, and worm category percentages being recorded per grade sheet. Grower identity will be protected and anonymized with all processor grade sheets being provided to PPQ.

CDFA will also conduct a NOW damage assessment for every trap location at a nonpareil almond within specified almond zones utilizing the following methodology:

- 250 nut samples will be collected from the surrounding area at each of the trap sites with nonpareil variety or adjacent to nonpareil variety in the almond blocks.
  - The 160-acre almond blocks will contain about 9 trap sites each with nonpareil variety or adjacent to nonpareil variety. Therefore, a total of about 144 samples or 36,000 nuts will be collected during the 2025 harvest season.
- The Program will seek grower permission to collect nut samples prior to collection.
- The Program will establish a tracking sheet of nut samples.
- Sample bags will be labeled as such:
  - Date Collected; Zone #; Trap Site #; # of nuts; Collector's Name
- These samples will be stored at the Shafter CDFA facility in refrigerated temperatures until ready to be processed.
- CDF A will process nut samples by separating hull and shell from kernel and weighing total kernels versus NOW damaged kernels.

**Standard Operating Procedure for Assessment of Navel Orangeworm Damage in Pistachios**

**Background:** At the request of the California Pistachio Research Board, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service and Agricultural Research Service developed this standard operating procedure (SOP) for assessing Navel orangeworm (NOW) damage in pistachios.

**Objective:** CDFA will conduct a NOW damage assessment corresponding to the first harvest of the pistachios, referred to as "first shake," at every trap location of a female pistachio tree (pistachios are dioecious - so the male trees make flowers while the female trees make nuts) within designated zones of the program using the following procedure:

**Materials**

- 36 + large plastic 1- to 3-gallon resealable bags per zone (i.e., Ziploc bag)
- Optional: large feed scoop (we suggest the scoop linked [here](#))
- Several fine-point sharpies
- Tight-fitting rubber gloves (hands will get covered in sap)
- Pliers for cracking nuts. We suggest a Robo Grip style plier like: [IDEAL INDUSTRIES 35-450 Robo Grip Pliers 7 in.: Amazon.com: Tools & Home Improvement](#)
- Containers for sorting nuts. We suggest at least three 14" x 20" sheet pans.

**Procedure**

1. Coordinate with the pest control adviser (PCA) and/or grower to determine the date of the first shake of the pistachio trees.
2. Conduct this assessment as close as possible to the first shake of the pistachios **but before** the shake occurs. THIS WILL TAKE SUBSTANTIAL COORDINATION WITH THE PCA/GROWER PARTICIPANT.
  - a. Note: Do not attempt to collect nuts from trees during the harvest by the industrial shakers, as this is unsafe.
3. Label the plastic resealable bag with the following information: zone, trap ID, and date.
4. Collect approximately 300 nuts at each trap tree.
  - a. Shake a cluster of nuts on a branch of the pistachio tree into plastic bag(s) or a large scoop and use only the nuts which fall off the branch during this process.
    - i. Pistachios should easily come off the tree with a firm shake by hand and should not require excessive force. Nuts that do this are ready to harvest, and their hulls will be soft and spongy – the hulls will have some give when gently squeezed between two fingers.
  - b. Pick clusters of nuts on branches arbitrarily that you can reach to shake by hand and keep collecting nuts until you have gathered about 300 nuts.
    - i. If using a large scoop, transfer the nuts into the labeled plastic bag.
5. Bring nuts back to lab/office and place in cold storage until ready for NOW damage assessment.

6. Count the number of nuts from each bag to be processed and record this info on a data sheet (paper or digital).
7. Process one bag of nuts at a time. The hulls should be easy to remove by squeezing them between your thumb and index fingers, but if not, remove the hulls **using pliers**.
  - a. Don't use your fingernails; hull that gets lodged under the fingernail can cause irritation.
  - b. Soaking the nuts in lukewarm water and then hulling them seems to help but is not required.
8. Sort nuts into the following categories while/after hulling; it may be easier to do the split in shell during, and the closed in shell after:
  - a. **Split in Shell (SS)**: Shell is split with nut meat visible (classic pistachio). As nuts are hulled, it is easiest to inspect the split in shell nuts for signs of NOW damage and set those aside.
  - b. **Closed in Shell (CS)**: Shell did not split, and nut meat is not visible (After cracking these nuts open, categorize them into the following subgroups).
9. Crack all the **Closed in Shell (CS)** nuts open with pilers and determine/separate the nuts into the following categories:
  - a. **Full but Closed**: Shell is closed, but once cracked open, has a full kernel inside.
  - b. **Blanks**: Shell is closed, and once cracked open has no developed nut inside, only an undeveloped embryo.
    - i. Note: It is rare to find NOW in the CS nuts, but it does happen. CS nuts are more resistant to NOW but can still get infested if NOW burrows through the pedicular scar to get to the nut meat.
    - ii. If pressed for time, it is not necessary to crack open the CS nuts.
  - c. Note: please be mindful of numbing, tingling, or pain in the fingers and wrist which could be signs of carpal tunnel syndrome; take breaks and wear protective wrist supports as needed to prevent injury to yourself.
10. While/after hulling, assess nuts for **NOW Damage** (found NOW and/or its frass/webbing):
  - a. Focus on NOW-damaged nuts. There should be signs of the actual insect (dead or alive pupa or larva), frass, and/or webbing.
  - b. Other nut damage resulting from mice, birds, and other insects (i.e., *Carpophilus* beetle) will have signs of chewing/bite marks, dry frass, no webbing, and larvae/pupae that are beetles; these need to be excluded from this damage assessment.
11. Record data for each group onto the same data sheet as referenced in step 6 (paper or digital).
12. To determine the percent damage by NOW for the trap location per zone, take the number of NOW damaged SS nuts and divide that by the total SS nuts (damaged plus undamaged SS nuts). Compute separately the percent NOW damage for the CS nuts (if there is any), by taking the number of NOW damaged CS full nuts and divide that by the total CS full nuts (damaged plus undamaged CS full nuts). Remove the **blanks from all calculations** and only record the total number of blank nuts.

Note: it is possible to also use aggregate weights on a per-bag basis instead of counting nuts for the **SS nuts**; this same approach would be very skewed for the blank nut fraction of the closed in shell nuts though if they are not cracked open, since blank nuts are missing developed kernels and thus are much lighter than full nuts.

### END of SOP

Participating growers will also provide harvest data sheets compiled by pistachio processors to CDFA.

Pistachio damage data will be extracted from the table values immediately below, with at a minimum the sum of the insect damage percent category across the various shell types for the USDA/CDFA grade sample along with the date delivered to the processor being recorded per grade sheet. Grower identity will be protected and anonymized with all processor grade sheets being provided to PPQ.

Load Analysis	Original	Normal	Lbs	Pct	USDA Sample	
<b>GROSS WEIGHT</b>			59,700			
Less: Tare, including 0.50%			(10,140)			
<b>GROSS GREEN WEIGHT</b>			49,560			
Less: Pre-cleaner Debris			(1,330)			
<b>NET GREEN WEIGHT</b>			48,224	100.00%	20,100	
Weight after hulling			31,430	65.17%	13,100	
Weight after drying to 4.13% moisture			19,318	39.85%	8,010	
Weight after adjusting to 5.00% moisture			19,384	40.22%		grams
<b>TOTAL DRY LOAD</b>			19,384	40.22%	500.2	100.00%
Less: F.M. and nuts less than 20/64 inch			(0)	-0.00%	(0.0)	-0.00%
<b>Net Dry Weight</b>			19,384	40.22%	500.2	
<b>SPLIT INSHELL</b>	<b>REJECT % OF ST 0.00%</b>		14,340	29.70%	170.1	
<b>UNSTAINED</b>			14,011	28.85%	389.8	
Less: Insect Damage			(0)	-0.00%	(0.0)	0.00%
Less: Defects			(0)	-0.00%	(0.0)	0.00%
Edible Unstained 96.05%			(13,911)	28.85%	358.8	71.28%
<b>LIGHT STAINED</b>			429	0.91%	11.3	
Less: Insect Damage			(0)	-0.00%	(0.0)	0.00%
Less: Defects			(0)	-0.00%	(0.0)	0.00%
Edible Light Stained 3.05%			429	0.91%	11.3	2.26%
<b>TOTAL EDIBLE SPLIT INSHELL</b>			14,340	29.70%	370.1	73.55%
<b>SHELLING STOCK (SPLIT)</b>			721	1.50%	18.6	3.72%
<b>DARK STAINED</b>			558	1.16%	14.4	
Less: Insect Damage			(0)	-0.00%	(0.0)	0.00%
Less: Defects			(0)	-0.00%	(0.0)	0.00%
Edible Shelling Wt.			558	1.16%	14.4	2.80%
<b>ADHERING (HULL)</b>			64	0.11%	1.4	
Less: Insect Damage			(0)	-0.00%	(0.0)	0.00%
Less: Defects			(0)	-0.00%	(0.0)	0.00%
Edible Adhering Wt.			64	0.11%	1.4	0.18%
<b>SHELL DAMAGE (incl. non-coke=100)</b>			0	0.00%	0.0	
Less: Insect Damage			(0)	-0.00%	(0.0)	0.00%
Less: Defects			(0)	-0.00%	(0.0)	0.00%
Edible Inshell Wt.			0	0.00%	0.0	0.00%
<b>LOOSE KERNELS</b>			20	0.04%	1.8	0.20%
Less: Shell			47	0.10%	1.2	0.24%
Total Loose Kernel and Loose Shell			85	0.16%	3.0	0.64%
<b>UNDER 30/64 INCH SPLIT INSHELL</b>			52	0.05%	0.8	
Less: Insect Damage			(0)	-0.00%	(0.0)	0.00%
Less: Defects			(0)	-0.00%	(0.0)	0.00%
Edible Inshell Wt.			52	0.05%	0.8	0.12%
<b>TOTAL EDIBLE INSHELL FROM S.S.</b>			694	1.40%	17.8	3.60%
<b>TOTAL EDIBLE KERNELS FROM S.S.</b>			347	0.72%	9.0	1.79%
<b>Total Insect from ST and SS (% of ST + SS)</b>			(10)	-0.04%	(0.5)	-0.13%
<b>CLOSED SHELL or OPEN NOT ON SUTURE</b>			1,125	2.32%	111.6	22.30%
Less: Insect Damage			(0)	-0.00%	(0.0)	0.00%
Less: Defects			(1,421)	-2.97%	(30.0)	-7.38%
Less: Blanks			(1,384)	-2.81%	(25.7)	-7.14%
<b>EDIBLE INSHELL WT. from Closed Shell</b>			1,808	3.73%	38.9	7.78%
<b>EDIBLE KERNEL WT. from Closed Shell</b>			754	1.56%	10.5	3.89%
<b>TTL EDIBLE WT. (Split Inshell + kernel from SS &amp; Closed)</b>			15,161	31.04%	398.5	79.55%
<b>TOTAL INSHELL WEIGHT</b>			16,552	34.32%		
Timestamp: 6/4/2021 2:52 PM Processor: CDFA						
Culver Count: 10						

DRAFT

***Addendum 5. CDFA Grower Agreements***

Agreement example forthcoming once CDFA clears for release.

DRAFT



***Addendum 6. NOW Budget Planning for FY 2025***

In FY 2024, APHIS received an estimated allocation of \$6.74 million. The table below estimates FY 2025 allocations across PPQ core functional areas and agreements with CDFA based on FY 2024 allocations. PPQ has not received its FY 2025 allocations to date but has developed possible allocations across core functional areas.

<b>Budget Item</b>	<b><i>Planned FY 2025</i></b>
Science and Technology	\$958,053
Emergency & Domestic Programs	\$258,251
Field Operations Phoenix Rearing Facility  CDFA - PPQ Cooperative Agreement (Moth Storage, Quality Control, Monitoring Almond & Pistachio Damage Assessment)	\$5,085,743
Field Operations - PPQ Aerial Equipment Office for Aerial Contract and Distribution	\$445,072
<b>Total Program Budget</b>	<b>\$6,747,118</b>