
Division Overview/Program Updates

- Plant Pathology
 - A novel discovery that hemp abnormal growth is attributed to up to three pathogens was recently published in PhytoFrontiers Journal (<https://apsjournals.apsnet.org/doi/epdf/10.1094/PHYTOFR-05-23-0064-SC>). This paper revealed that beet curly top virus and two bacteria, all transmitted by leafhoppers, are the cause of widespread hemp growth abnormalities in Nevada and other western states.
 - Plant Pathology Lab recently diagnosed 4 batches of commodity samples collected from phytosanitary inspections and cleared a list of quarantine pathogens imposed by each importing country. The clearance allows the issuing of phytosanitary certificates for shipping commodities (onion and sorghum) to Guatemala, New Zealand, Honduras, and Mexico.
 - A total of 321 garlic samples collected from certified garlic fields were tested negative for the stem and bulb nematode. Annual sampling and testing aims to detect this nematode in the early stage and take quarantine measures to stop its spreading via seeds in allium production fields.
- Seed
 - The Nevada Department of Agriculture (NDA) Seed Program hosted its first native seed road show in Yerington, Nevada on October 3, 2023. These regional events will be held throughout Nevada in strategic locations with the goal of educating the production community on how native seed is grown, harvested, cleaned, and ultimately used for restoration purposes.
 - The State Seed Laboratory is integrating a Laboratory Information Management System (LIMS), administered through Accelerated Technology Laboratories (ATL). The lab is scheduled to go live with the initial version of the LIMS in the Fall of 2023.
 - In the Fall of 2023, a Request for Applications (RFA) was made available for producers to apply for seed from the Foundation Seed Program that will be used to support the growth of native seed production in Nevada for site restoration and market diversification. Two successful applicants were selected in October to receive seed for planting. Seed species acquired by the program for dissemination to producers included sulphur-flower buckwheat (*Eriogonum umbellatum*), yellow beeplant (*Cleome lutea*), and great basin wildrye (*Leymus cinereus*). There are currently 4 active growers in the Foundation Seed Program.
 - In October, the Seed Program was awarded a 5-year assistance agreement with the Bureau of Land Management for a combined total of \$462,987.78. This project is a continuation of previous efforts involving the promotion of locally adapted seed as an alternative crop, education & outreach, as well as enhancement of the Department's Foundation Seed Program.

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- The Seed Program anticipates an increase in Source Identification inspections for the 2023 season. This program allows for plant species to be verified at different ecological sites, allowing for seed collection that is used for land restoration at locations that are ecologically similar.

Source Identified	158	123	90

**Season site total through October 2023*

- The Seed Program has completed all certified seed crop inspections for the 2023 crop year. Statistics are as follows:

Crop Kind	2023 Acres	2022 Acres
Alfalfa	1,249.00	2,203.00
Barley	545.50	280.00
Grass	13.00	13.00
Triticale	551.00	255.00
Wheat	113.00	85.00
Oats	38.00	35.00
Rapeseed – Canola	220.00	283.00
Field Peas	30.00	0.00

- NDA's Seed Program completed registration of garlic and onion fields per the Nevada Administrative Code (NAC) 554 for the 2023 crop year. Statistics are provided below:

Crop Kind	2023 Acres	2022 Acres
Total Garlic	852.83	734.95
Certified Seed Garlic	656.86	587.99
Total Onion	5,532.45	5,689.08

- Crops
 - Export/Shipping point
 - As of July 1, 2023, through September 30, 2023, 103 federal and state phytosanitary certificates were issued allowing for the export of 9,399,728 pounds of varying commodities, including hay, coffee, mushroom spawn, onions, and sage. Ninety-six state and federal phytosanitary certificates totaling 23,967,484 pounds were issued during the same time in State Fiscal Year (SFY) 2023.
 - Other items certified for export that are not measured by weight, but by count totaled 7,492 and included nursery stock, and hay.

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- The onion shipping season is started on September 5, 2023. Compared to the same time for SFY23, there is a decrease in onion exports by 294,850 lbs.

The table below shows the monthly breakdown of onions exported 1st Quarter FY 2024

Month	2023 Pounds Shipped Outside USA	2024 Pounds Shipped Outside USA
July	0	0
August	0	0
September	978,160	683,310
October	993,300	
November	1,091,010	
December	1,054,225	
January	1,138,964	
February	485,800	
March	393,510	
April	249,250	

Phyto Sanitary Certificate Inspections FY24 year to date have remained similar to FY23, as shown in the table below.

Month	FY23	FY24
July	21	22
August	23	30
September	52	51
October	54	
November	49	
December	21	
January	23	
February	26	
March	31	
April	34	
May	30	
June	26	

** FY24 data accurate through September 30, 2023*

- Compared to the same quarter in SFY23, State Phytosanitary Certificates show an increase from 14 to 20 certificates issued focused in the Las Vegas office for nursery stock.

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- Hemp
 - In the first quarter (Q1) of SFY24, the NDA conducted a total of 6 hemp sample inspections and 3 site compliance inspections. For the 1st quarter of SFY24, hemp inspections yielded 19 hemp samples, of which 1 (5.3%) sample exceeded the acceptable THC threshold. This is a slight increase from SFY23. As of September 30, 2023, the NDA has conducted a total of 3 hemp sampling inspections and 2 site compliance inspections.
 - NDA coordinated with the Nevada Farm Service Agency (FSA) to ensure that growers completed their crop reporting through FSA. This is a federal requirement.
 - The following data reflects hemp samples collected by the NDA and tested for federal compliance, above compliance, and approved crop disposals of non-compliant crops between January 1, 2021, and September 30, 2023.

Year over year Samples Tested, Non-Compliant Samples, and Disposals

State of Nevada Statistics	Samples
2023 Total Samples Collected =	10
2023 Non-Compliant Samples =	1
2023 Approved Crop Disposals =	0
2023 Approved Crop Remediation =	1
2024 Total Samples Collected =	19
2024 Non-Compliant Samples =	1
2024 Approved Crop Disposals =	3
2024 Approved Crop Remediation =	0

- Entomology
 - Invasive species surveys have almost been completed with no target species found. The entomologist presented two lectures for pesticide continuing education units (CEU)s at the Desert Green conference.

<u>Activity</u>	<u>Number</u>
Grasshopper/Mormon Cricket stops	1210
Palm Weevil Commodities	1
Palm pest survey	1
Asian Defoliator Surveys	1
Khapra Beetle Surveys	1
CAPS Infrastructure	1

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CAPS Exotic Wood Borer	1
CAPS Gypsy Moth	1
CAPS Pine Shoot Beetle	1
CAPS Imported Fire Ant	1
Traps placed/surveyed	4859
Identification Specimens	330
Identification Emails	51
Identifications Text	60
Identification Phone	10
Education	3733
Treatments	80
Japanese Beetle Survey	1
European Corn Borer survey	0
State quarantine survey	0
Survey ID	66900
Collection processing	17850
Honeybee Surveys	30
General collection/collecting	60

- Chemistry
 - The chemistry laboratory has secured the instrument maintenance contracts which will cover the water and vacuum system until Fiscal Year (FY) 2026.
 - The NDA chemistry laboratory’s LIMS system is almost completed and in the process for the validation and will begin the live testing phase soon.
 - The NDA HEMP program is in the process to get initial assessment on site for the International Organization for Standardization (ISO) 17025 accreditation. The initial accreditation assessment will be conducted soon.

Total Samples Analyzed			
	FY22	FY23	FY24 (7/1 ~ 9/30/23)

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Ground / Surface Water (Pesticide Residue Monitor Program)	73	56	6
HEMP (Percentage THC analysis)	118	118	25
Pesticide Formulation / Use Dilution	98	95	24
Pesticide Residue (EPA Enforcement)	21	35	5

- Nursery
 - There are currently 972 licensed nurseries as of Q1
 - Program staff have conducted:
 - 18 nursery inspections (FY to date)
 - Renewed California Department of Food and Agriculture (CDFA) Origin Inspection Program (OIP) Turf agreements with 3 Nevada Turf growers.
- Noxious weed program
 - Regulatory actions: the NDA noxious weed team performed a big regulatory push this year to follow up, survey and notify landowners of noxious weed issues. Most of the work focused on following up on reports of listed early detection and rapid response (EDRR) species. When EDRR species are reported NDA noxious weed team procedure is to notify the landowner and request a management plan to address the species. The majority of work this year focused on the Spring Creek area in Elko County.
 - **206** regulatory letters issued
 - FY 2023 - 123
 - FY 2022 - 25
- Nevada Department of Transportation (NDOT) staff are working to develop a NDA hosted webpage to assist NDOT construction staff and contractors with information on regulations regarding noxious weed species. NDA has also begun a monthly training program to discuss noxious weed management plan requirements. The target audience is contractors and the NDOT construction team.
 - NDOT Weed Plans Reviewed **13**
 - FY 2023 - 63
 - FY 2022 - 51
 - NDOT Weed Plans Approved **13**
 - FY 2023 - 53
 - FY 2022 - 47
 - NDOT Project Sites Visited **17**
 - FY 2023 - 46

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- FY 2022 - 23
- Weed Free:
 - It is important to note that a noxious weed staff position is currently on the North American Invasive Species Management (NAISMA) Certified Weed Free Committee. This committee is responsible for developing the NAISMA weed free standards and is working on developing other programs for weed free products. NDA also donated funding to the Ventenata mini campaign which was a push to include this invasive grass species on the NAISMA prohibited weeds list and provide education and outreach on the species.
 - Weed Free Certificates Issued **43**
 - FY 2023 - 75
 - FY 2022 - 75
 - Weed Free Gravel Inspections **12**
 - FY 2023 - 58
 - FY 2022 - 49
 - Weed Free Forage Inspections **3**
 - FY 2023 - 26
 - FY 2022 - 24
 - Weed Free Mulch Inspections **1**
 - FY 2023 - 4
 - FY 2022 - 4
- Biological control
 - NDA staff were able to meet with our region 4 United States Forest Service (USFS) partner in August 2023. Noxious weed staff spent 2 days visiting biological control sites and discussing plans to move the NDA biological control program forward. Staff are currently working on a Nevada Biological Control Strategic meeting to be held in Elko, Nevada in the spring of 2024.
- Early Detection and Distribution Mapping System (EDDMapS)
 - EDDMapS Identifications **14**
 - FY 2023 - 81
 - FY 2022 - 140
 - EDDMapS Verifications **389**
 - FY 2023 - 7073
 - FY 2022 - 186
- Nevada's Early Detection and Rapid Response (EDRR) Plan
 - Continuing to move forward with Nevada's EDRR plan. The NDA noxious weed team hosted fall follow up meetings for Nevada's 3 regional areas (Western, Southern and Central/Eastern regions).
- Outreach and Education
 - Noxious weed staff continue to provide education and outreach opportunities focused on invasive and noxious plant species in Nevada. Education typically focuses on identification, reporting, management, and state regulations related to State noxious listed species.