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Appendix 3: Forms and Figures

(*Article begins on following page.)

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Finding Biological Control Agents: Federal Agency Research and Procedures

N. E. Rees, P. C. Quimby, Jr., and J. R. Coulson

The United States Department of Agriculture's Agricultural Research Service conducts a complex procedure for locating, screening, releasing and monitoring biocontrol agents of weeds. Every effort is taken to ensure that introduced biological weed control agents are limited in host range and do not threaten endangered and native plants. Precautions are taken to ensure that the introduced agents are not parasitized or diseased. Because each weed is so different, and because its complement of natural enemies is also quite varied, it is impossible to predict how long it will take to complete a particular study.

The following discussion outlines USDA, Agricultural Research Service procedures. Other agencies and organizations follow similar procedures. All potential biological control agents must be approved by the USDA, Animal and Plant Health Inspection Service.

Determining the suitability of a target plant

Quite often, public pressure determines the priority of target plants to be studied. At this stage of biological weed control technology, some target plants may not be good candidates for study because: 1) the cost of study might far exceed the economic benefits to be gained; 2) the weed does not appear threatening enough to be of concern; or 3) conflicts of interest exist. The conflict of interest may include the fact that threatened and endangered native plants are closely related to the target weed, or that the weed has some benefits such as nectar production.

When a weed is targeted for study, its native land is identified and scientists begin to check the literature and study the life cycle and natural enemies of that plant. If the plant is difficult to locate in its native environment, or does not attain the vigor, height, or density that it does in North America, then it is considered to be a good candidate for biological control. Discovering potential biological weed-controlling agents on the plant also assists in making this decision.

Conducting a foreign survey

After the target plant is approved for study, a survey of its homeland is conducted and natural enemies associated with the plant are cataloged. The potential agents are reared, identified, and tested to determine efficacy. This testing is generally conducted for the United States by the USDA-ARS European Biological Control Laboratory (EBCL), state or university scientists working with EBCL, and/or through the International Institute of Biological Control (IIBC). With the aid of published and unpublished literature, records, and observations, scientists evaluate the various organisms identified during the survey as passive feeders (such as bees), or as destructive to the

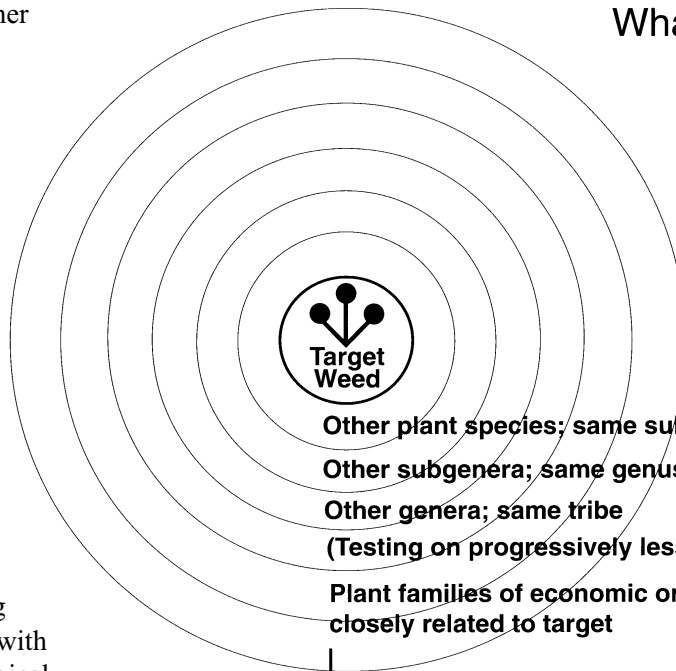
target plant. Those that are destructive are further examined to determine other plant species they damage. Those with limited host ranges become candidates for additional host-specificity testing.

Testing for host specificity

The purpose of conducting host specificity tests is to determine the host range of a potential biocontrol agent by exposing it to representative plant species. The plants tested are selected from a centrifugal (concentric circle) plant matrix with the target weed as the center, representatives of other species from the same subgenus as the first ring surrounding the center, representatives of species from other subgenera but within the same genus as the second ring, representatives from species of related genera of the same tribe as the next ring, and so on, with plants in each additional ring being less related to the target weed. In the next-to-last outer ring are plant families of economic or aesthetic value, but generally of no close relationship. The last ring includes unrelated plants with biochemical or morphological characteristics in common with the target weed, and plant species known to be attacked by close relatives of the biocontrol agent being tested.

Host-specificity testing

What plants - if any - are attacked by potential biological control agents?



Other plant species; same subgenus

Other subgenera; same genus

Other genera; same tribe

(Testing on progressively less-related plant species)

Plant families of economic or aesthetic value; not closely related to target

Unrelated plants with some characteristics in common with the target; plants attacked by close relatives of the proposed biological control agent.

The nature of the screening test depends on the target weed and control agent. The degree of specificity that must be demonstrated and the level of risk that is acceptable depend on the importance of the weed and the presence of closely related non-target plant species where the weed is to be controlled.

In “no-choice” feeding and egg-laying tests, agents are isolated as male/female groups in cages, each with a test plant, until the agents either die, feed, or lay eggs. When the agent dies from apparent starvation without physically damaging the plant or laying eggs on the plant, the plant group is designated as outside the potential host range. When feeding or egg-laying occur, the test continues to determine whether: 1) the agents can survive in or on the test plant; 2) deposited eggs hatch; and/or 3) the agents can complete their life cycle in or on the test plant. The amount of damage inflicted on the test plant is evaluated.

The highly artificial conditions of these tests may lead to abnormal results and the rejection of agents that are host-specific under field conditions. Therefore, when possible, outdoor testing of previously rejected candidates should be conducted in the native land of the biocontrol agent. This provides more natural information about the host plant range.

Petitioning

Petitions are written during three phases of the investigations to clear biological control agents for introduction into the United States. The first petition requests permission to work on a specific plant and its agents. The target weed must be shown to be a suitable candidate for a biological control program. The second petition requests permission to introduce biological control agents into quarantine for host-specificity testing. When all host range testing has been completed, a third petition containing the test results is written. This is written as an Environmental Assessment (EA), which is in reality a measurement of risk, or a risk assessment.

Copies of the petitions are sent to Plant Protection and Quarantine (PPQ), a branch of the USDA Animal and Plant Health Inspection Service (APHIS). PPQ is the federal government agency responsible for issuing permits to import, transport, and release insects into the United States. Associated with APHIS-PPQ is a group of professionals called the “Technical Advisory Group on the Introduction of Biological Control Agents of Weeds” (TAG), which is responsible for advising APHIS-PPQ about the accuracy and completeness of the host-specificity testing. Members also ensure that the concerns of the Endangered Species Act and the Native and Endangered Plant Act are addressed.

TAG may decide that: 1) the agent may be dangerous and should not be introduced; 2) the agent needs more testing; or 3) the agent appears safe and may be introduced. APHIS-PPQ then considers the advice of TAG, but is not obligated to follow TAG’s recommendations should APHIS-PPQ have additional concerns or information.

If more testing is required, the petition is returned and additional information and data must be obtained before the petition is resubmitted. If, after careful study APHIS-PPQ decides that all is in order, it then submits the petition for evaluation of the Environmental Assessment (EA). Failure to pass this examination means that more testing must be completed and the petition resubmitted, but this time possibly in the form of a more detailed Environmental Impact Statement (EIS). Approval of the EA or EIS satisfies the remaining requirements and allows a permit to be issued.

Obtaining permission to make field releases

Those who want to release biological control agents in their own state must complete a form PPQ-526, “Application and Permit to Move Live Plant Pests or Noxious Weeds” (see Appendix 3). This form must also be completed to move biocontrol agents across state lines. The application is sent to the Department of Agriculture in the state in which the release is to be made. The form must be signed and sent for processing to the USDA-APHIS-PPQ office, Biological Assessment and Taxonomic Support (BATS), 4700 River Road, Unit 113, Riverdale, MD 20737. When this is signed by PPQ, a copy will be returned to the applicant as an approval record. These permits are valid for a specified time. Penalties for misuse or nonuse of permits can be fines and/or imprisonment.

Validating shipments

After the researcher receives approval to introduce a biological control agent, collections are made overseas and the agent is shipped into a quarantine laboratory in the United States. Here some of the insects are killed, mounted, and sent to a taxonomist (an authority for that group, generally associated with the USDA Agricultural Research Service’s Systematic Entomological Laboratory) to confirm that the species designation is accurate. At the same time, some insects are sent to an insect pathologist to determine whether they contain any parasitoids or pathogens. Rearing the colony through one generation may eliminate parasitoids from the population.

If a pathogen is detected, two possible courses may be taken: either the colony can be destroyed and a pathogen-free collection site located, or the colony can be split up and reared in individual containers, each

containing one male and one female. Deposited eggs are kept under a “parent number” until the females have ceased laying eggs. The adults are then sacrificed and examined for pathogens. Eggs from contaminated couples are destroyed while eggs from healthy couples are reared. This process continues until the colony is pathogen-free.

Documentation

Scientists keep detailed records of all biological control agents imported into U.S. quarantine facilities, all shipments from quarantine, all field releases of the exotic species in the United States, and all transfers of established, introduced species into other areas of the United States. Voucher specimens of the introduced agents plus instructions for field releases are also retained by the quarantine facilities to provide specimens for later taxonomic studies, or for verification of the identity of the species released. Certain forms are used in this documentation process, including USDA Form AD-943 (see Appendix 3) for recording non-quarantine shipments and releases. Non-quarantine personnel involved in releases or recolonization of introduced biological control agents may be asked to help document the dispersal of the agents by using the forms or by providing pertinent data to the scientist evaluating the biological control program.

Forms and Figures

Sample Landowner Agreement

Sample Biological Control Agent Release Form

USDA-APHIS-PPQ Form 526 “Application and Permit to Move Live Plant Pests or Noxious Weeds”

USDA-APHIS-PPQ Form 549 “Interstate Shipment Authorized” (Shipping Labels)

USDA Form AD-943 “Biological Shipment Record - Non-Quarantine”

The following document is a sample of the agreement that USDA Agricultural Research Service scientists use with private landowners. It may be modified to be appropriate for many situations.

STANDARD COOPERATIVE AGREEMENT

AGREEMENT NO. _____

The United States Department of Agriculture, Agricultural Research Service, hereinafter referred to as ARS, and _____ (cooperator) _____, hereinafter referred to as the Cooperator, recognize that the results of _____ (type of research) _____ are of mutual benefit, as well as of benefit to all the people of the United States of America. In consideration of such mutual benefit, the parties hereto agree as follows:

A. THE COOPERATOR AGREES:

1. To be responsible for furnishing the following for use of ARS for the purpose of carrying out entomological experiments for the control of weeds which are injurious to _____ (location) _____.
2. To grant ARS representatives such rights to ingress or egress use of property as may be required for the conduct of the work and to obtain the results thereof.
3. To allow ARS to take necessary measures for the control of destructive and noxious weeds which are injurious to _____ for the purpose of developing more effective methods for economically controlling such weeds.

B. ARS AGREES:

1. To be responsible for furnishing such additional supplies, equipment, material, and personnel as may be required to conduct research.
2. To use only such materials and equipment on the land or crops of the Cooperator as have been previously tested and have shown no serious harmful effects at the concentrations and in the manner employed.
3. To exercise all reasonable precautions to avoid injury to the land, crops, or other property of the Cooperator.

C. IT IS MUTUALLY AGREED:

1. Federal Tort Claims Act procedures are available for use by the Cooperator to recover financial or other losses suffered by the Cooperator as a result of this Cooperative Agreement when the loss is over and above the Cooperator's insurance liability coverage and it can be demonstrated that the loss resulted from a negligent act by a Federal employee acting within the scope of his/her employment.
2. The responsibilities assumed by ARS are contingent upon funds being available from which the expenditures may be met.
3. This agreement may be terminated by either party upon 60 calendar days' notice in writing to the other party.
4. Copies of correspondence between the Cooperator and the Authorized Departmental Officer's Designated Representative shall be sent to the Authorized Department Officer.

Total time length of agreement is _____.

(Date)

(Cooperator)

(Date)

(ARS Representative)

SAMPLE
BIOLOGICAL CONTROL AGENT RELEASE FORM

Target Weed _____ **Date** _____
(Common name)

Agent _____ **Number released** _____
(Scientific name)

County _____ **T** _____ **R** _____ **Sec** _____ **1/4** _____
Township N S Range E W Section

Lat. _____ **Long.** _____ **GPS Derived?** Yes _____ No _____
Latitude Longitude

Land Owner: BLM ___ USFS ___ PRIVATE ___ USFWS ___ STATE ___ OTHER _____

Land Manager: _____
(BLM District & Ranger Area / National Forest & Ranger District / Refuge / Dept. of Transportation / City / County / Rancher, etc.)

Site Name: _____
(Use geographical reference: mountain, river, valley, road, campground, powerline, etc.)

SITE DATA Check all items that apply and fill in blanks. (Draw map on back of form.)

Nearest town _____ **Road** _____ **Mile Post** _____

Weather: Clear _____ Partly cloudy _____ Cloudy _____ **Temp** _____ **Wind** _____

Slope: None _____ Slight _____ Moderate _____ Steep _____ **Aspect:** S _____ E _____ W _____ N _____

Soil: Sandy _____ Loam _____ Silt _____ Gravel _____ Clay _____ **Elevation** _____

Terrain: Valley _____ Foothill _____ Mountain _____ Plain _____ River _____ Lake/Pond _____

Vegetation: Grassland _____ Shrub land _____ Crop land _____ Riparian _____ Conifer forest _____
Deciduous forest _____ Mixed forest _____ Other _____

Plant Cover: (estimate %) Target weed _____ Forbs (not including target) _____
Grasses _____ Shrubs _____ Trees _____ Litter _____ Bare ground _____

Dominant Plant Species: _____

Land Use: Range _____ Timber _____ Wildlife _____ Right of Way _____ Pasture _____ Crop _____
Vacant _____ Wetland _____ Recreation _____ Mining _____ Other _____

Disturbance Factors: Grazing _____ Logging _____ Road _____ Fire _____ Flood _____
Cultivation _____ Construction _____ Other _____

Infestation Type: Isolated _____ Patchy _____ Linear _____ Continuous _____

Size of Infestation: (Acres) ≤ 1 _____ 2-10 _____ 11-50 _____ 51-99 _____ ≥ 100 _____

Target Weed Height: (Feet) ≤ 1 _____ 1-2 _____ 3-6 _____ ≥ 7 _____

Weed Density: (plants/sq. yard) 1 _____ 2-5 _____ 6-10 _____ 11-25 _____ 26-99 _____ ≥ 100 _____

Stage of Development: Seedling _____ Rosette _____ Bolting _____ Budding _____
Flowering _____ (% Flower _____) Seeding _____ Dormant _____

Other Biocontrol Agents Present (list) _____

Source of Agents _____ **Date Collected** _____

Stage Released: Egg _____ Larva _____ Pupa _____ Adult _____ (In plant material) _____

Cooperators: _____

Reported by: _____

(Sample Biological Control Agent Release Form - continued)

Directions to release site: _____

Please draw or attach a map to the release site. Indicate the release site with an "X" in a circle. Indicate North with an arrow. Label roads and features.

Remarks: (Condition of insects, breeding or egg-laying observed, predators, etc.)

USDA APHIS/ARS Release Rec. No. (if applicable) _____

RETURN ORIGINAL FORM TO:
(Retain a copy for your records.)

If you have questions, call:

USDA-APHIS-PPQ FORM 526

Application and Permit to Move Live Plant Pests or Noxious Weeds

caution is required (7 CFR 330 (live plant pests) or 7 CFR 360 (noxious weeds)).

See reverse side for additional OMB information.

OMB NO. 0579-0054

Deborah Knott
 USDA, APHIS, PPQ, BATS
 4700 River Road, Unit 133
 Riverdale, MD, 20737-1236

APPLICATION AND PERMIT TO MOVE LIVE PLANT PESTS OR NOXIOUS WEEDS

SECTION A - TO BE COMPLETED BY THE APPLICANT

1. NAME, TITLE, AND ADDRESS (Include Zip Code)

3. TYPE OF PEST TO BE MOVED

- Arthropods Noxious Weeds Genetically Engineered
 Pathogens Other (Specify)

2. TELEPHONE NO. ()

A. SCIENTIFIC NAMES OF PESTS TO BE MOVED	B. CLASSIFICATION (Orders, Families, Races, or Strains)	C. LIFE STAGES, IF APPLICABLE	D. NUMBER OF SPECIMENS OR UNITS	E. SHIPPED FROM (Country or State)	F. ARE PESTS ESTABLISHED IN U.S.	G. MAJOR HOST(S) OF THE PEST
4.						
5.						
6.						

7. WHAT HOST MATERIAL OR SUBSTITUTES WILL ACCOMPANY WHICH PESTS (Indicate by line number)

8. DESTINATION	9. PORT OF ARRIVAL	10. APPROXIMATE DATE OF ARRIVAL OR INTERSTATE MOVEMENT
11. NO. OF SHIPMENTS	12. SUPPLIER	13. METHOD OF SHIPMENT <input type="checkbox"/> Air Mail <input type="checkbox"/> Air Freight <input type="checkbox"/> Baggage <input type="checkbox"/> Auto

14. INTENDED USE (Be specific, attach outline of intended research)

15. METHODS TO BE USED TO PREVENT PLANT PEST ESCAPE	16. METHOD OF FINAL DISPOSITION
---	---------------------------------

17. Applicant must be a resident of the U.S.A. If we agree to comply with the safeguards printed on the reverse of this form, and understand that a permit may be subject to other conditions specified in Sections B and C.	SIGNATURE OF APPLICANT (Must be person named in item 1)	18. DATE
--	---	----------

SECTION B - TO BE COMPLETED BY STATE OFFICIAL

19. RECOMMENDATION <input type="checkbox"/> Concur (Approve) <input type="checkbox"/> Comments (Disapprove) <input type="checkbox"/> (Accept USDA Decision)	20. CONDITIONS RECOMMENDED		
21. SIGNATURE	22. TITLE	STATE	23. DATE

SECTION C - TO BE COMPLETED BY FEDERAL OFFICIAL

PERMIT

24. PERMIT NO.

(Permit not valid unless signed by an authorized official of the Animal and Plant Health Inspection Service)

Under authority of the Federal Plant Pest Act of May 23, 1957 or the Federal Noxious Weed Act of 1974, permission is hereby granted to the applicant named above to move the pests described, except as deleted, subject to the conditions stated on, or attached to this application. (See standard conditions on reverse side).

¹If this request is for plant pathogens, please complete this form and PPQ Form 526-1. For biological control pathogens (entomopath, weeds, etc.) complete this form only.
²Complete APHIS Form 2000 for moving genetically engineered organisms or products.

25. SIGNATURE OF PLANT PROTECTION AND QUARANTINE OFFICIAL	26. DATE	27. LABELS ISSUED	28. VALID UNTIL	29. PEST CATEGORY
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USDA-APHIS-PPQ FORM 549

Interstate Shipment Authorized (Shipping Labels)

<p>U.S. DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE PLANT PROTECTION AND QUARANTINE FEDERAL BUILDING HYATTSVILLE, MD 20782</p> <p>INTERSTATE SHIPMENT AUTHORIZED</p> <p>The living organisms contained in this package are shipped interstate under authority of the Federal Plant Pest Act of May 23, 1957, the Plant Quarantine Act of August 20, 1912, as amended, or the Federal Noxious Weed Act of 1974.</p> <p>VALID UNTIL</p> <p>PPQ FORM 549 <i>Previous edition may be used.</i> (DEC 81)</p>
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USDA FORM AD-943

Biological Shipment Record - Non-Quarantine

U.S. Department of Agriculture		OMB NO. 0518-0013 (EXP. 2/28/87)		
BIOLOGICAL SHIPMENT RECORD - NON-QUARANTINE		M <input type="checkbox"/> NC <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/>		
SECTION I - REPORT OF MATERIAL RELEASED OR SHIPPED				
1. FROM (Name & address of Shipper/Releaser)		2. BENEFICIAL - A. Gen., sp., subsp., auth.		
		B. Order: Family		
		C. Determined by (Name and affiliation if known)		
		3. SHIPPER / RELEASER FILE NO. (see instructions)		
		4. TYPE OF BENEFICIAL		
		<input type="checkbox"/> Parasite <input type="checkbox"/> Weed feeder <input type="checkbox"/> Predator <input type="checkbox"/> Pollinator <input type="checkbox"/> Microbial <input type="checkbox"/> Other (Explain MI or OT):		
Part A. From U.S. Field Collection (Collected for field recolonization or laboratory culture)		And / Or		
Part B. From Laboratory Culture				
5. COLLECTION LOCALITY(S) - State, County, nearest Town (If more than 2 collection sites, give State & County only)		9. SOURCE FILE NOS.		
		<input type="checkbox"/> AD-942, AD-943: Nos. <input type="checkbox"/> Part A <input type="checkbox"/> Other:		
		10. COUNTRIES/REGION/STATE OF ORIGIN		
6. DATES OF COLLECTION (m,d,y)		11. ORIGINAL COLLECTORS (Names and affiliations)		
7. COLLECTORS (Names and affiliations)		12. NO. LAB GENERATIONS (At shipper/releaser location)		
		<input type="checkbox"/> F 1 - F 10 <input type="checkbox"/> F 51 + <input type="checkbox"/> F 11 - F 50		
8. U.S. FIELD HOSTS/PREY AT COLLECTION		13. LABORATORY HOST / PREY		
A. Genus, species		A. Genus, species		
B. Stage/part attacked (see codes)		B. Stage/part attacked (see codes)		
SECTION II - REPORT OF SHIPMENT				
14. SHIPPED TO (Name & address)		15. NO. & STAGES SHIPPED (use codes on reverse)		
		[Est]		
VIA :		17. SHIPPER'S REMARKS		
19. DATE RECEIVED (m,d,y)		18. SPECIMENS RETAINED BY SHIPPER		
20. NO. & STAGES (use codes)		<input type="checkbox"/> No <input type="checkbox"/> Yes _____ nos.		
A. Rec'd. Alive [Est]				
B. Emerged (Beneficials) [Est]				
21. RECEIVER'S REMARKS				
22. SPECIMENS RETAINED BY RECEIVER		24. INTENDED LAB HOST / PREY - Gen., sp.		
<input type="checkbox"/> No <input type="checkbox"/> Yes _____ nos.				
23. INTENDED USE				
A. <input type="checkbox"/> Immediate release (complete Sect. III)		Lab culture / study (complete Blk. 24)		
B. <input type="checkbox"/> Release intended				
C. <input type="checkbox"/> No release intended				
SECTION III - REPORT OF RELEASE/RECOLONIZATION (See instructions on cover sheet; use Form AD-943A for more details)				
25. Types of release	SITE 1		SITE 2	
	<input type="checkbox"/> Field <input type="checkbox"/> Greenhouse <input type="checkbox"/> Cage <input type="checkbox"/> Other:		<input type="checkbox"/> Field <input type="checkbox"/> Greenhouse <input type="checkbox"/> Cage <input type="checkbox"/> Other:	
26. Locations (State, County, nearest Town or physical feature, map coordinates) (Use AD-943A for more details; see instructions on cover sheet)				
	27. Number & stages released (Use codes; see instructions for recording multiple releases.)		27. Number & stages released (Use codes; see instructions for recording multiple releases.)	
[Est]		[Est]		
28. Dates of releases (m,d,y) (See instructions for recording multiple releases.)		28. Dates of releases (m,d,y) (See instructions for recording multiple releases.)		
29. Target hosts/prey at release		29. Target hosts/prey at release		
A. Primary - Genus, species		A. Primary - Genus, species		
B. Other - Genus, species		B. Other - Genus, species		
C. Families		C. Families		
30. Food (plant/animal/other) of target host/prey at release		30. Food (plant/animal/other) of target host/prey at release		
31. Released by (Name and affiliation)		31. Released by (Name and affiliation)		
32. REMARKS (Use AD-943A for more details)		33. REPORTED BY		
		A. Name		
		B. Date (m,d,y)		

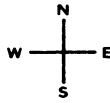
SUPPLEMENTAL DATA

NOTE: • Do not fold this sheet over form when writing—carbons will distort entries.
• If additional copies are needed, photocopy and staple to form.

Shipper's File Number
(From AD-943)

Section A — RELEASE SITE DETAILS, SITE NO. _____

• Township, route no., Farmer's name, etc. • Map of release site.



WEATHER	TEMP.
	WIND
	SKY
TIME OF RELEASE	
CONDITION OF CROP FIELD	
CONDITION OF RELEASE MATERIAL	
PREDOMINANT TARGET HOST/PREY STAGE PRESENT	
TARGET HOST/PREY ABUNDANCE	
ADDITIONAL HOST/PREY PRESENT	

OTHER COMMENTS

REPORTED BY & DATE

Section B — DETAILS OF ADDITIONAL RELEASES (Attach additional sheets as needed.)

	SITE 4	SITE 5	SITE 6
Types of release	<input type="checkbox"/> Field <input type="checkbox"/> Greenhouse <input type="checkbox"/> Cage <input type="checkbox"/> Other:	<input type="checkbox"/> Field <input type="checkbox"/> Greenhouse <input type="checkbox"/> Cage <input type="checkbox"/> Other:	<input type="checkbox"/> Field <input type="checkbox"/> Greenhouse <input type="checkbox"/> Cage <input type="checkbox"/> Other:
Locations (State, County, nearest Town or physical feature, map coordinates)			
Number and stages released (See codes)	[Est]	[Est]	[Est]
Dates of release (m,d,y)			
Target hosts/prey at release			
A. Primary - Genus, species	-----	-----	-----
B. Other - Genus, species	-----	-----	-----
C. Families			
Food (plant/animal/other) of target host/prey at release			
Released by			

Section C — DETAILS OF MULTIPLE RELEASES (Attach additional sheets as needed.)

(Alternatives 1 and 2)

Dates of release	SITE	Nos. Released (stages)	Dates of release	SITE	Nos. Released (stages)	Dates of release	SITE	Nos. Released (stages)

(Alternative 3)

Counties	Locations	Dates of Release	No. Released (Stages)

REMARKS

REPORTED BY
A. Name
B. Date (m,d,y)