Data Entry Guide for Selected Taxonomic Groups

Data Entry Guide for Nematode Pests at the Genus and Species Level

Negative data at the <u>species</u> level should only be entered if 1) no individuals of that <u>species</u> are found in the sample, **and** 2) the sampling method used will capture individuals of that species if they are present in the environment from which that sample was taken.

Similarly, negative data at the <u>genus</u> level should only be entered if 1) no individuals of that <u>genus</u> are found in the sample, **and** 2) the sampling method used will capture individuals of that genus if they are present in the environment from which that sample was taken.

Do not enter data at the genus level if a species was targeted in the work plan and Survey Summary Form. Enter the data for the specific target.

All positives must be identified to species level; no positive entries at the <u>genus</u> level are allowed.

If these requirements cannot be met, then no data entry should occur.

Data Entry Guide for Mollusk Pests at the Family, Genus, and Species Level

Veronicellidae
In April 2013, the family Veronicellidae, a target on the AHP Prioritized Pest List, was broken down into six genera of concern. Now, all six genera in the family Veronicellidae (*Belocaulus*, *Colosius*, *Laevicaulis*, *Sarasinula*, *Semperula*, and *Veronicella*) are listed on the Pests of Economic and Environmental Importance List. When conducting a general mollusk survey, if you list the family Veronicellidae or any genera in this family as targets, then negative data must be reported for each of the six genera. All positives must be reported at the species level.

Cernuella*, *Cochlicella*, and *Monacha
Negative data for the genera *Cernuella*, *Cochlicella*, and *Monacha* can be entered at the genus level if 1) no individuals of that <u>genus</u> are found in the sample, **and** 2) the sampling method used will capture individuals of that genus if they are present in the environment from which that sample was taken. All species of these genera are exotic to the United States. All positives, regardless of genus, must be reported at the <u>species level</u>; no positive entries at the genus level are allowed.

Target Species
For States who choose to include mollusk species within a commodity or bundled survey, negative data at the species level may be entered as long as 1) the sampling method used will capture individuals of that species, **and** 2) the species is likely to be present in the environment from which that sample was taken (i.e., the target species would likely be associated with the commodity or environment being surveyed.)

For instance, states conducting Soybean and/or Small Grains surveys and targeting *Cernuella virgata* may enter negative data at the species level if no individuals of that <u>species</u> are found in the sample. *Cernuella virgata* is known for crawling onto plant heads and stalks which contaminates crops and clogs machinery. It is also a serious contaminant to wheat in countries

where it is established. Therefore, *C. virgata* is more likely to be found in small grains or soybeans due to contaminated machinery. *Cernuella virgata* is a threat to these industries, and it makes sense to survey for this target in these crops.

Please keep in mind that in general, mollusks are not host-specific and they are best surveyed for along a potential pathway of introduction.

Do not enter data at the genus level if a specific mollusk species was targeted in the work plan and Survey Summary Form. Enter the data for the specific target.

All positive data must be identified to species; no positive entries at the family or genus level are allowed.

If these requirements cannot be met, then no data entry should occur.

Data Entry Guide for Phytoplasma Pests at the Species Level

Phytoplasmas are classified using two different systems:
1. The '*Candidatus* Phytoplasma' system is a provisional taxonomy (mainly based on molecular data), principally using percent nucleotide sequence identity of 16S rRNA genes as the basis for separating distinct '*Candidatus* Phytoplasma' species.

2. In contrast, the 16Sr ribosomal group and subgroup system is based on Restriction Fragment Length Polymorphism (RFLP) analysis of the 16S ribosomal RNA gene (16S rDNA). In this latter system, each phytoplasma is placed in a 16S rDNA RFLP group and subgroup based on similarities and differences in the RFLP patterns.

A formal '*Candidatus* Phytoplasma' name may not be available for all phytoplasmas, particularly for newly described phytoplasmas. Table 1 indicates the current classification information for the phytoplasms of national concern to the CAPS program. Negative data at the '*Candidatus* Phytoplasma' species level should only be entered if no individuals of that species are found in the sample. For any phytoplasma that has yet to be given a formal '*Candidatus* Phytoplasma' name, negative data should be entered at the 16Sr ribosomal subgroup level until a formal species name is available.

All positives must be identified to species level or further classified to subgroup or strain level; no positive entries at the genus level are allowed. Positive data for '*Candidatus* Phytoplasma palmae', however, will need to occur at the subgroup level, because there are multiple subgroups within this species and several of the '*Candidatus* Phytoplasma palmae' subgroups are also known to have a limited distribution within the United States.

If these requirements cannot be met, then no data entry should occur.

Table 1: Phytoplasma National Survey Targets by Scientific Name, 16Sr Group, and Subgroup

Validly Published Scientific Name	Informally Proposed Scientific Name	Ribosomal Group	Subgroup	Common Name
Candidatus Phytoplasma australiense		16SrXII	Subgroup B (**16SrXII- B)**	Australian grapevine yellows
Candidatus Phytoplasma mali		16SrX	Subgroup A (**16SrX-A)**	Apple proliferation
Candidatus Phytoplasma phoenicium and related strains/subgroups		16SrIX	Subgroups B, D, F, and G (**16SrIX-B, 16SrIX-D, 16SrIX-F, and 16SrIX-G**)	Almond witches' broom
Candidatus Phytoplasma prunorum		16SrX	Subgroup F (**16SrX-F)**	European stone fruit yellows
Candidatus Phytoplasma solani		16SrXII	Subgroup A (**16SrXII-A)**	Bois noir; Stolbur
	Candidatus Phytoplasma palmae and related strains/subgroups	16SrIV	Subgroups A through F (**16SrIV-A**, etc.)	Palm lethal yellowing
	Candidatus Phytoplasma vitis	16SrV	Subgroups C and D (**16SrV-C and 16SrV-D)**	Flavescence dorée

Note that different authors use somewhat different criteria in published literature for designating a phytoplasma strain as a strain of a '*Candidatus* Phytoplasma' species or as a '*Candidatus* Phytoplasma' species-related strain. The former implies that the strain in question belongs to the species; the latter implies that the strain in question may possibly belong to a closely related, but separate, species. For example, a given strain might be designated as a strain of '*Candidatus* Phytoplasma pruni'. Whereas, a different strain might be designated as a '*Candidatus* Phytoplasma pruni'-related strain.

Data Entry Guide for Plum Pox Virus at the Species/Strain Level
Negative data should be entered into NAPIS at the species level (Potyvirus Plum pox virus).
New state positive records should be further identified to the strain level. Unusual positive
records (highly virulent pathogen, expanded host range, etc.) can be entered at the strain level if
strain-level information is available. Please contact Daniel Mackesy if you need assistance, have
questions, or want to enter an unusual record into NAPIS.

Work plans and the Survey Summary Form should only indicate survey for Potyvirus Plum pox
virus at the species level, not the individual strains. Strains of Plum pox virus are only identified
if there is a positive at the species level. Data entry of strains of Plum pox virus is always
positive, otherwise data entry defaults to the species level as negative.

Data Entry Guide for Other Viruses
Positive virus records must be entered at the species level. In addition, all virus targets which are
entered into the work plan or Survey Summary Form should be entered at the species level for
both positive and negative data. For all other virus surveys conducted by the states and not a part
of the work plan or Survey Summary Form, negative data may be entered at the genus level.

If you are targeting a specific virus, and a genus-level test comes up negative, then the specific
virus should be entered as negative at the species level.

NAPIS General Observation Pest Code 03051 –Lab Confirmed
There has been confusion regarding the use of a diagnostic lab when using the General Pest
Observation survey method (03051) and no samples were taken. This is a survey method, not a
confirmation method, and therefore requires an accompanying lab confirmation record with the
appropriate confirmation code.

For surveys where Field Identification is performed and no signs or symptoms are observed,
please record in the Diagnostic Lab field "0111- Field Identification Performed" and appropriate
diagnostics in the Confirmation Method field.