DRAFT Infraspecific Taxon Protocol

This protocol is used to assess the potential invasiveness and impact of a cultivar, selection, or infraspecific hybrid relative to the original species that presents a threat in Maryland. This protocol is used only for species that are ranked Tier 1 or Tier 2 based on a WRA and Maryland Filter. Information in italics is for the guidance of the assessor.

Infraspecific taxon: _____

Species: _____

Requestor Name and Affiliation: _____

Assessor: _____

Date completed:_____

Summary of Results

1. How long has the infraspecific taxon been in cultivation and how long has it been available for sale in the United States? If the infraspecific taxon has naturalized, provide evidence for its distribution. (*This information is used to determine if the infraspecific taxon has been in cultivation long enough to make its escape possible, but does not influence the other questions.*)

2. Will botanists/field regulatory personnel typically be able to distinguish the infraspecific taxon from the species or other infraspecific taxa? (*If the infraspecific taxon cannot be distinguished easily, it cannot be determined which taxon has naturalized*)

    a. YES. *Provide information below, then go to question 3.*

    b. NO. ***Tier ranking for infraspecific taxon is the same as the Tier ranking for the species.***

3. Is there evidence that the infraspecific taxon will maintain its own characteristics and not revert to the characteristics of the species, or produce hybrids that would have characteristics of the species? (*If the infraspecific taxon reverts or hybridizes, it is likely to behave like the parent plant*)

    a. YES. *Provide information below, then go to question 4.*
    (Species can be distinguished and maintains its own characteristics)

    b. NO or UNKNOWN. *Provide information below.* ***Tier ranking for infraspecific taxon is the same as the Tier ranking for the species***.

4. Does the infraspecific taxon have 100% female sterility (including no seed production) AND are vegetative growth and reproduction so limited that the infraspecific taxon would be unlikely to become abundant in natural areas? (*If plants are not female sterile or they can reproduce vegetatively, they can spread*)

    a. YES or UNKNOWN. *Provide information below. Go to question 5*
    (Plants can be distinguished, maintain their own characteristics, and are female sterile or female sterility/vegetative reproduction is unknown, now we want to see if they are male sterile in question 5.)

    b. NO. *Provide information below.* ***Tier ranking for infraspecific taxon is the same as the Tier ranking for the species.***

5. Is the plant male sterile (i.e., produces no pollen) or is the impact linked to pollen-based hybridization with natives or commercially important species low enough to have limited negative impacts in natural areas? (*Plants that produce pollen and hybridize have the potential to impact native or agriculturally important species*)

    a. YES. *Provide information below. Go to Question 6.*
    *(Plant can be distinguished from species, will maintain own characters, is sterile -- should go to Question **6** here because we need to know whether non-hybridization impacts are LESS than those of the species)*

    b. NO or UNKNOWN. *Provide evidence below*. ***Tier ranking for infraspecific taxon is the same as the Tier ranking for the species.***
    (Plant can be distinguished from species, will maintain own characters, is female sterile, but produces pollen and its primary ecological impact is hybridizing or we do not know if it is male sterile or whether it hybridizes.)

6. Is there evidence that combined characteristics that differ between the infraspecific taxon and the species will result in such decreased impacts to natural, anthropogenic, and production systems compared to the species that the infraspecific taxon would be unlikely to have negative impacts in these systems in Maryland? Examples of characteristics could include dense growth, twining habit for vines, nitrogen fixation, allelopathy, wildlife toxicity, or host of a pest or pathogen. If there is insufficient information about which traits in the species cause impacts in the WRA, then answer NO. (*Even if a cultivar is sterile and cannot readily spread, it could still impact systems negatively if widely planted*)

    a. YES. *Provide evidence below*. ***Not a problem. Infraspecific taxon may be recommended***
    (Plant can be distinguished from species, will maintain own characters, is sterile, has impacts OTHER than hybridization and those impacts are LESS than those of the species)

    b. NO. *Provide information below.* ***Tier ranking for infraspecific taxon is the same as the Tier ranking for the species.***
    (Plant can be distinguished from species, will maintain own characters, is sterile, has impacts OTHER than hybridization and those impacts are NOT LESS than those of the species)