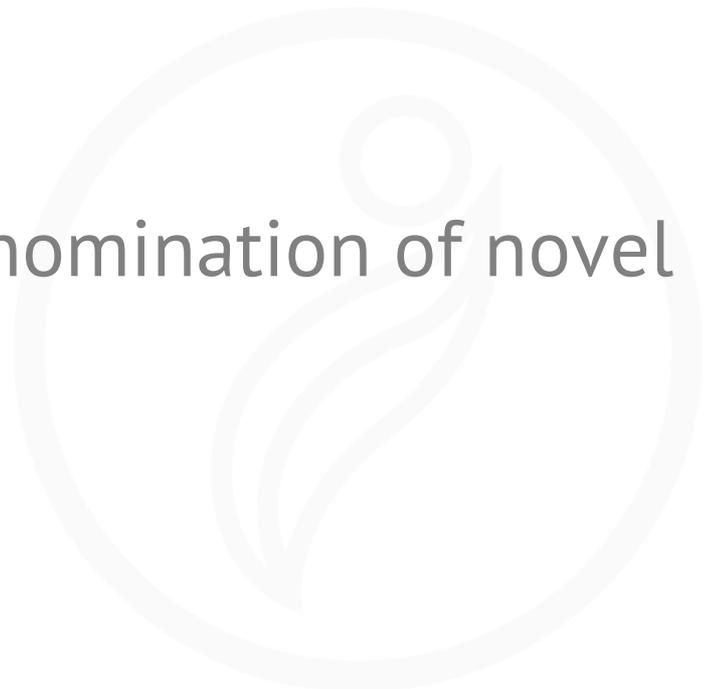


Guidelines on the nomination of novel plant pest races

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ISF GUIDELINES PREPARED BY THE
ISF Working Group Disease Resistance Terminology



INTRODUCTION

Accurate characterization and nomination of novel plant pests¹ is of high importance to all seed industry stakeholders which would include testing centers, registration bodies, plant raisers and growers, research institutes, seed companies or consulting parties. These stakeholders rely on this information for the development of new varieties, resistances claims, suitable crop or variety selection for a specific growing location and for the selection of crop protection strategies.

NOMINATION GUIDELINES

To support the decision process associated with the nomination of novel races, ISF Working Group Disease Resistance Terminology (WG DRT) has formulated the following guidelines. These five recommendations constitute the minimum criteria that should be fulfilled in order to nominate a novel race for a specific plant pest.

1. The pathogenicity and/or resistance-breaking event observed on the pest-host interaction should be novel.
2. The pathogenicity and/or resistance-breaking event should fulfill at least two of the three conditions below:
 - 2.1 The pest should have caused significant economic damage at least once.
 - 2.2 The geographical extent of this event should be of significance. Preferably it should have been observed in multiple geographical locations (several countries, regions or states).
 - 2.3 The event should be recurrent in time having been observed over multiple growing seasons and/or years.
3. A stable isolate must be available and established as reference material.
4. Using the reference isolate, the characteristic of the event must be reproducible in a controlled disease test (e.g. growth room, growth chamber, isolated greenhouse).
5. Nomination of a new race cannot be done by a single stakeholder. The novelty of a race should be validated by at least one additional, but preferentially several independent stakeholders.

¹ FAO defines a pest as: Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products. <http://www.fao.org/docrep/W3587E/w3587e01.htm>
Pathogens (microorganisms such as bacteria, viruses and fungi that cause a disease) are, therefore, included in the term "pest".

RACE NAMING RECOMMENDATIONS

ISF WG DRT recommends using the following guidelines when naming a novel race.

1. A race name should consist of the abbreviated pest species name followed by the number of the race. In cases where pest species have not been split into races, the abbreviated pest species name should be used on its own. A list of ISF approved abbreviations and formatting rules can be found at ISF website².
2. For each pest-crop combination where the first resistance-breaking event is characterized, the isolate breaking the resistance should be nominated as race 1. The original isolates for a pest-crop combination prior to the resistance breaking isolates being characterized become denominated as race 0.
3. Further discoveries of resistance-breaking isolates should lead to an incremental numeric system (2,3,4,5 etc.) for naming additional novel races .

² <http://www.worldseed.org/our-work/plant-health/pathogen-codes>