Virulence spectrum of *Rhynchosporium secalis* isolates from Syria and Lebanon

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Scald is a common disease of barley in cooler and semi-humid growing areas of the world, including the Middle East countries of Syria and Lebanon where it is considered as a major limiting factor in barley production. Yield loss estimates can be as high as 35-40%.

Study of race composition would allow better management of the disease. Resistance and susceptibility patterns can be different depending of the isolates present in the crop. The main goal of this research was to determine the race differences among samples collected from different barley growing areas in Lebanon and Syria.

For this study twenty four samples 10 from Lebanon and 14 from Syria, were collected from farmers' field in different locations and from different varieties.

For field inoculation, samples were mixed by country, creating two inoculum sources for the study – Syria & Lebanon. A set of germplasm consisting of advanced promising and elite lines from the ICARDA breeding program and scald differential were grown in Terbol (Lebanon) and Tel Hadya (Syria), under artificial inoculation and mist irrigation.

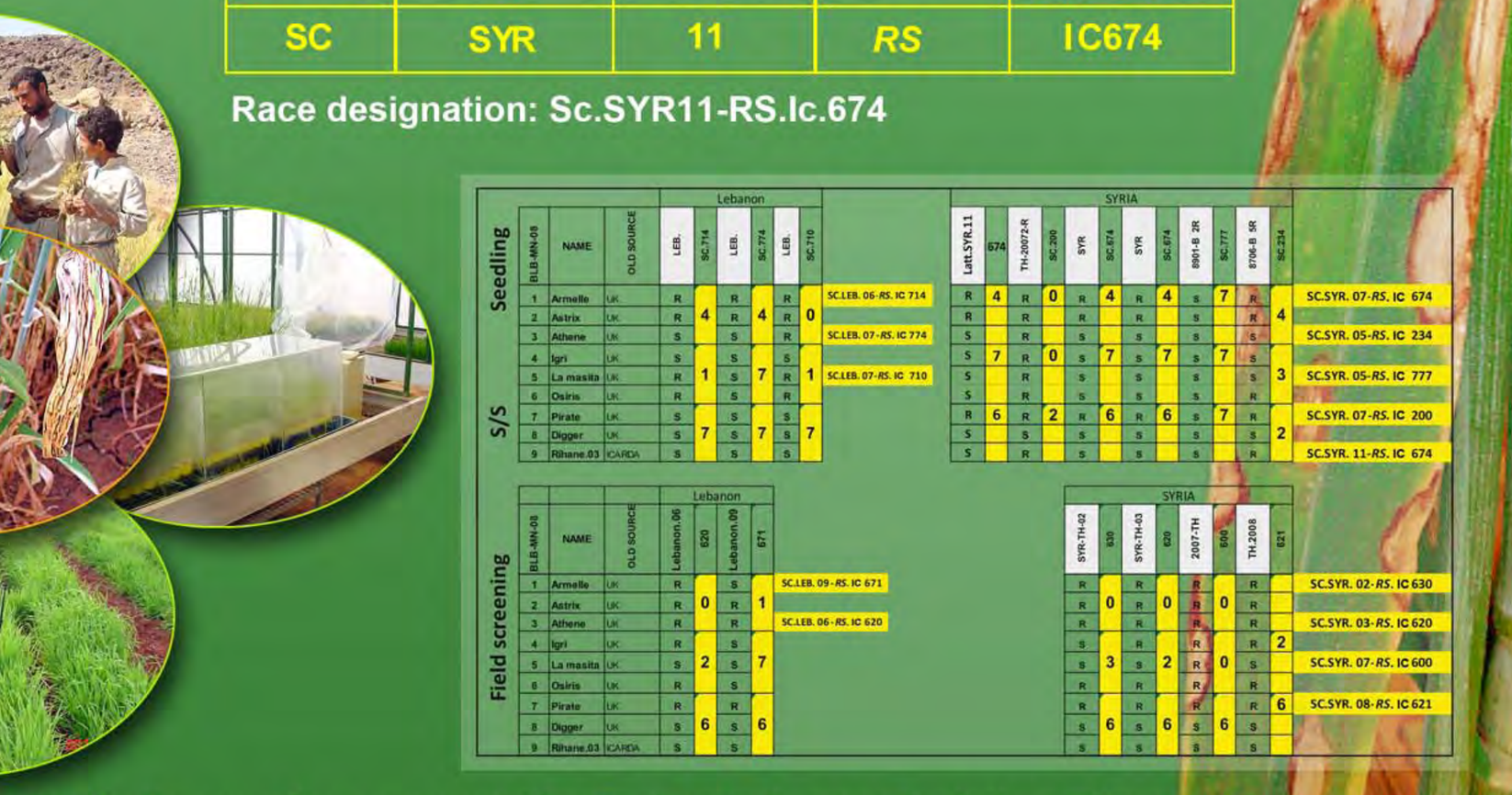
Seedling tests for race determination were carried out using single spores and bulk inoculum from Syria and Lebanon. Scoring scald reaction was on the basis of 0-4 scale at seedling and 0-9 at adult plant growth stages.

Race designation

At ICARDA we use a simplified race nomenclature that includes disease name, country of origin, year of collection pathogen, and ICARDA's reference number. The table below shows details

Disease (Scald)	Country of origin	Year of collection	Pathogen	ICARDA Reference
SC	SYR	11	*RS*	IC674

Race designation: Sc.SYR11-RS.Ic.674



Results revealed 80% similarity in severity amongst the Syrian Lebanese isolates. The seedling tests allowed identifying 4 races from Syria and three from Lebanon.

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