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CVR No: 57607556
EAN-No: 5798000877412

To whom it may concern

GRRC report:
Samples of stem rust infected wheat from Italy. 01/2016

Samples of stem rust infected durum wheat were received by GRRC in May 2016. Seventeen samples went through standard recovery procedures and all were recovered, the details shown in the table below.

Antal af Testing lab Country	Collection year	Dept_Region	Location	Host species	Sampled by	Status	Total
Italy	2016	Sicily	Ciminna	Durum wheat	Biagio Randazzo	Recovered	17
	2016 Total						17
Italy Total							17
Hovedtotal							17

Spores were multiplied on susceptible standard, harvested and used for inoculation of a set of 20 North American wheat differential lines + selected additional lines, and race typed according to Jin et al., 2008 with modifications. After initial scoring of differential sets, 1-2 pustules per sample were sub-cultured to develop single-pustule isolates, which were used to confirm initial results.

Results and interpretation
A total of 24 single-pustule isolates were race typed. All of these were race TTTTF based the North American classification system (Jin et al., 2008), see virulence pattern below. The race has a virulence formula, which is almost similar to TKTTF, which has been commonly observed in Europe, the Middle East and East Africa in recent years. Race TTTTF is clearly different from stem rust race Ug99, e.g., with avirulence to *Sr24* and *Sr31,* and it was also avirulent to *Sr25.*

The results will be made public via the WheatRustToolbox (e.g., www.wheatrust.org) in the near future.

Thanks for your co-operation, which is essential for our efforts to follow spread and evolution of rust fungi affecting wheat crops globally.

Mehran Patpour
Post doc scientist

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Professor

Race decoding:

Race	Avirulence/virulence formula
TTTTF	*24,31 / 5,6,7b,8a,9a,9b,9d,9e,9g,10,11,17,21,30,36,38,McN,Tmp*