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# NSTF

*S.E.T. for socio-economic growth*

## Plant health in South Africa – threats to biosecurity, biodiversity and food security

### Disease resistance in small grain cereals – the South African approach

The [National Science and Technology Forum \(NSTF\)](#) is partnering with [Plaas/Farm TV](#) (YouTube channel) to broadcast a series of monthly talks during the year on the topic '[Plant health in South Africa – threats to biosecurity, biodiversity and food security](#)'.

Sixth up in the series is Prof Willem Boshoff talking to Plaas/Farm TV and RSG Landbou (Agriculture) about disease resistance in small grain cereals - the South African approach. He is the Associate Professor: Department (Dept) of Plant Sciences, University of the Free State (UFS). Prof Boshoff also presented at the above-mentioned NSTF Discussion Forum in June 2021. His presentation is available on video on the [NSTF YouTube channel](#).

***Tune in to this radio and TV interview with Prof Boshoff to hear more...***

<b>RSG FM radio talk</b> <b>Date:</b> Wednesday, 31 August at 05:00 – 05:30 <b>Frequency:</b> 100 – 104 FM <i>Radio Sonder Grense (RSG) is a radio station broadcasting in Afrikaans. Nationwide. It belongs to the South African Broadcasting Corporation (SABC).</i>	<b>Plaas TV/Farm TV broadcast</b> <b>Date:</b> Monday, 05 September at 08:00 am (GMT +2) <b>Plaas TV YouTube channel:</b> <a href="https://www.youtube.com/c/PlaasTVFarmTV">https://www.youtube.com/c/PlaasTVFarmTV</a> <i>Plaas TV is an agricultural media house focusing on Sound technical content across all media platforms.</i>
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**Biography:** Prof Willem Boshoff, after the completion of his BSc Agric and BSc Agric Hons degrees in Plant Pathology at UFS in 1995, was appointed by the Agricultural Research Council – Small Grain Institute (ARC-SG) to conduct rust surveillance and pre-breeding in wheat. He obtained both his MSc and PhD degrees in Plant Pathology, all at UFS. For his PhD, he researched the control of foliar rusts of wheat with emphasis on stripe rust. This study was inevitable after stripe rust outbreaks, first observed in South Africa during 1996, resulted in severe epidemics. From 2001 to 2016 he worked as a wheat breeder, firstly at the ARC-SG (2001-2003) in their spring irrigation wheat programme and thereafter at Pannar Seed (Pty) Ltd (2003-2016) as a winter wheat breeder where he also served as the wheat breeding lead (2006-2016).

During this time, he contributed to the development and release of 25 spring and winter wheat cultivars which resulted in a significant growth in the wheat seed market share of the company. He assumed duties in the Dept of Plant Sciences, Division Plant Pathology at the UFS in January 2017 where his current position is Associate Professor. His research focus is on rust diseases of field crops.

**Background:** Plant health is intrinsically linked to the survival of our planet and all that live on it. While plant health is a broad topic, it is imperative we understand the latest research and dynamics in the South African context. The NSTF hosted a Discussion Forum on the topic over two days in June 2021 with 11 professionals in plant health, of which three are previous [NSTF-South32 Award Winners](#).

**Interviews in the series so far:**

1. Prof Mike Wingfield, Professor: Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria; and winner of the 2022 NSTF-South32 Special Annual Theme Award: Plant Health, spoke about [tree and plant health](#).
2. Prof Wijnand Swart, Dept of Plant Sciences, UFS; and President: Southern African Society for Plant Pathology (SASPP) on [‘Whither \(or wither\) plant pathology in the next 50 years’](#) (about 3:25 into the broadcast).
3. Prof Michelle Hamer, Director: Natural Science Collections Facility (NSCF), South African National Biodiversity Institute tackled [the role of natural science collections and biobanks in plant health](#).
4. Dr Roger Price, Research Team Manager: Insect Ecology Division, Plant Health and Protection, Agricultural Research Council (ARC) addressed [threats posed by invasive and migratory insects pests, including locusts, the Fall Armyworm and the \*Tuta absoluta\* pest on tomato](#).
5. Prof Dave Berger, Professor: FABI, University of Pretoria; and winner of the 2016 NSTF-South32 Special Annual Theme Award: Crop Science and Food Security, talked about [artificial intelligence and the future of crop health monitoring](#).

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**About the NSTF**

The [National Science and Technology Forum \(NSTF\)](#), established in 1995, is a broadly-representative stakeholder body for all science, engineering and technology (SET) and innovation organisations in South Africa, which seeks to influence policy formulation and delivery.

The [NSTF Awards](#) are unique in SA, recognising the outstanding contributions of individuals and groups to SET and innovation.

The science [bursaries](#) page provides information on bursaries and bursary providers for science, engineering and related studies.

[STEMulator.org](#) attracts learners and students to the exciting world of science, technology, engineering and mathematics (STEM). It provides a virtual world full of stimulating content to excite and inform the youth, including STEM career guidance. Established under the auspices of the [NSTF proSET membership sector](#) (*Professionals in science, engineering and technology*).

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