Plant stress physiology research group,
School of Environmental Sciences and Development

Prof. G.H.J. Krüger, Dr. J.M. Berner

Our research field is the quantification of the impact of environmental factors on crop plants and natural vegetation and the study of the physiological and biochemical basis of the response of plants to environmental stress. Our research activity has a strong fundamental as well as an applied component. We are especially well equipped to study the eco-physiology and biochemistry of photosynthesis and we collaborate with international experts on this topic. The main research projects are directed at air pollution impacts on vegetation and dark chilling in soybean.

Besides the high scientific relevance of our research activity, it lends itself ideally to the teaching of the principles of plant physiology to under- and postgraduate students.

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Research projects currently running:

1. Effect of the anti-ozonant, ethylene diurea, on development and photosynthesis of soybean under elevated ozone levels in open-top chambers (CCW Scheepers).


4. Quantification of the effect of SO₂ fumigation on different South African soybean genotypes (S Lindeque).


Open top chamber facility for studying air pollution impacts on plants

Measuring plant water potential using a Scholander pressure chamber
Measuring photosynthetic gas exchange

Preparing leaf sample for water potential measurement
Measuring plastochron index on plants grown in a hydroponic system

Test plants in a hydroponic system
State of the art open top chamber facility erected at the Potchefstroom Campus of the North-West University for studying air pollution impacts on plants.
Research group on plant stress physiology, section Botany, School of Environmental Sciences, NWU.
Nature exists where people do not.

Nature is best protected by keeping humans far away.