

Mr Chancellor,

I am thrilled to help celebrate how a leading entomologist – a specialist in the study of insects – has dedicated her life’s work towards achieving the United Nations Sustainable Development Goal of ‘zero hunger’. It is with the deepest respect Newcastle University is honouring the outstanding achievements of Silvia Dorn, an inspirational scientist and professor Emerita of Applied Entomology at the Swiss Federal Institute of Technology (ETH) in Zürich, Switzerland.

The United Nations Food and Agriculture Organisation estimates agricultural production must rise by 60% in the next three decades to feed a larger global population. Understanding how insects interact with plants is Professor Dorn's area of expertise. These relationships are critical to building resilient food supplies in the future.

Silvia received her degree with honours in Natural Sciences and her PhD in phytomedicine from ETH Zurich in the early 1970s. Professor Dorn identified a novel plant protectant called fenoxycarb. This meant that the ‘bad guy’ pests like mosquitos could be controlled without harming the ‘good guy’ insects which farmers rely on to help produce healthy and sustainable crop yields. Fenoxycarb is an environmentally friendly insect growth regulator that disrupts the pests' ability to develop from the juvenile into the reproductive stage.

Silvia continued to apply the scientific knowledge she had learnt to develop practical solutions for farmers to help improve managing pests and mitigate crop damage. In the face of unprecedented changes in the severity and

frequency of extreme climate events, the wider implications of her research are helping to eradicate food crises in vulnerable farming nations. These innovations triggered the rapid switch from conventional fruit production to the more ecologically sound integrated production in over 20 countries from the 1980s onwards.

So how does such an eminent scientist become interested in plants and insects? Franz Dorn, Silvia's husband told me how proud he is of his wife's work and how, as a young girl, she made daily journeys along wild-flower meadows and forest edges near her parents' home. From these early adventures she became more and more curious about the environment in which the plants thrived but woe betide anyone who picked a bunch of flowers. She would be very upset if she saw you helping yourself to her beloved plants.

This passion for plants influenced her choice to study biology at a time when intelligent girls from her farming village were expected to go on to higher education to become elementary school teachers. Professor Dorn has not only pioneered advances in integrated agriculture systems she has also pioneered the role of women in science, a subject she is equally passionate about. After graduating with her doctorate, she held leading positions in a Swiss based international crop protection company. Here she was the first female scientist to be employed and later the first woman to be promoted to 'middle management'. Silvia's son Jonas tenderly shared this short story. "Shortly after my mother became a professor following a successful career in industry, she had an appointment at the Hoenggerberg campus of ETH Zurich. As she was about to enter one of the buildings, somebody told her jokingly "Don't go in there, they may not let you out again!" My mother looked puzzled, so he added "They're desperately looking for admins". A middle-aged woman in business attire on a university campus - to any informed mind, such a person

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had to be an administrator. After all, my mother was only the fourth female full professor in the history of ETH Zurich, and the first ever in her department". She also served as the first female Dean of the Department of Agricultural and Food Sciences.

I am hugely honoured to be sharing the wonderful achievements with you all of a fellow mother and scientist. Silvia gives her time generously to supporting and mentoring women in science, working tirelessly to promote a greater gender diversity in senior management roles. She believes this will allow better access to funding and a higher degree of innovation in science. Yet, largely unconscious biases based on widespread cultural stereotypes continue to hinder progress towards higher gender equality. Here at Newcastle University we are working hard to promote equality and diversity in our student and staff communities, which is recognised by our Athena SWAN Silver Award. Professor Dorn is an inspirational leader to us all regardless of our gender or background. I hope when my daughter decides on her own career, and if that path should lead her to science or engineering, that she will no longer hear echoes of the phrase 'first woman to achieve this or that' in whatever path she chooses to take.

Professor Dorn's gift for effective engagement is captured in another story her son Jonas proudly told. "During the cold war, my mother and a colleague were visiting the Soviet Union on business. After a long day of meetings, they were taken out for dinner, and sat at a table next to two rather inquisitive Russians - a beautiful woman next to my mother's colleague, a pretty young man next to my mother. As he started probing for secrets or juicy stories, she happily talked to him about her love for gardening, until he eventually gave up. My mother being the great teacher she is, I cannot help but imagine that

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although this possible spy failed in his mission, he at least learned something useful about flowers, and maybe even about their interaction with insects”.

The timing of Professor Dorn’s award is made extra special because we are marking 125 years of agriculture at Newcastle University. Two new exciting research centres have been launched to improve crop performance so safe and sustainable sources of food continue to be available for another 125 years.

I asked Silvia what this award means to her and I would like to finish with her reply, “This Honorary Degree is very special to me as it recognizes both my contributions to food security and to greater gender diversity. This appreciation of my work is extraordinary, and it touched me even more when I realized that Newcastle University endowed Honorary degrees – some 50 years ago – to the greatly inspiring insect scientist Sir Vincent Wigglesworth, and to the charismatic human rights advocate Martin Luther King”.

Mr Chancellor, in recognition of her outstanding achievements as a pioneering scientist in academia and industry, I present to you Professor Silvia Dorn for the award of Doctorate of Science, *honoris causa*.

*Citation by Professor Selina Stead, Public Orator*

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