

Concrete beehive helps create a more sustainable beekeeping industry

Ivan Brown, an MTech Industrial Design student from the Faculty of Arts, Design and Architecture (FADA) at the University Johannesburg (UJ), is exhibiting his improved model of a beehive at the Design Indaba Festival 2017 in Cape Town, Artscape Theatre Centre.



The improved model aids in the survival of bees; offers a more sustainable option for beekeepers and additional income sources for small-scale farmers.

Brown was selected for Design Indaba [Emerging Creatives](#) Exhibition on the basis of being passionate about tackling the problem of deteriorating bee populations – an increasing problem that beekeepers are facing around the world. The project was developed for agriculture – more specifically, the business of beekeepers and urban farmers.

Brown's "Beegin" project is a dual research and product design project in which he is developing an improved system of beekeeping and beehive production to aid in the survival of bees and by extension, tackle the problem of decreasing pollination. Under the supervision of Dr Naude Malan of UJ's Development Studies Department and Angus Donald Campbell, head of industrial design, Brown aims to develop beekeeping technology that is accessible, affordable and sustainable for small-scale farming communities, to stimulate socioeconomic development.

“Although I have always been fascinated by bees and apiculture, the project emerged from thorough research. I interviewed urban farmers who told me they were interested in beekeeping but could not afford the equipment. I interviewed beekeepers who explained how the industry is in decline due to theft, vandalism, diseases, pests, fires, floods and pesticides. I began working with the farmers and beekeepers to develop a solution, and at the moment I have five urban farmers and five beekeepers testing out the system, with some great initial results,” says Brown.

Contributing to food security in South Africa

He adds: “The aim of the project is to develop an appropriate (sustainable and accessible) system for beekeeping in South Africa. If successful, it will contribute towards food security in two ways: indirectly by bringing additional income to marginalised, small-scale farming communities and directly by helping to protect the pollination source of 70% of food crops.



The concrete beehive

At the core of Beegin lies the lightweight concrete beehive - a more durable, low-cost and protective structure that emerged through participatory development with beekeepers and urban farmers.

The moulds that are used to create the beehives are part of the Beegin system Brown designed. The moulds can be sold or sponsored so people can produce beehives locally for themselves and their communities, says Brown.

With over 400 applications from young designers across the country, this year's Emerging Creatives lineup looks set to impress. The Design Indaba Emerging Creatives programme provides a year-long programme of support, mentorship and guidance to talented young designers who have little industry exposure. The programme helps them learn how to manage and grow small businesses and provides opportunities to show their creative work.

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