FAPESP WEEK GERMANY

March 25-26th, 2025

FAPESP SÃO PAULO RESEARCH FOUNDATION

DFG Deutsche Forschungsgemeinschaft

Agro Bee

"Enhancing Coffee Production: The Vital Role of Bee Pollination in Yield and Quality"

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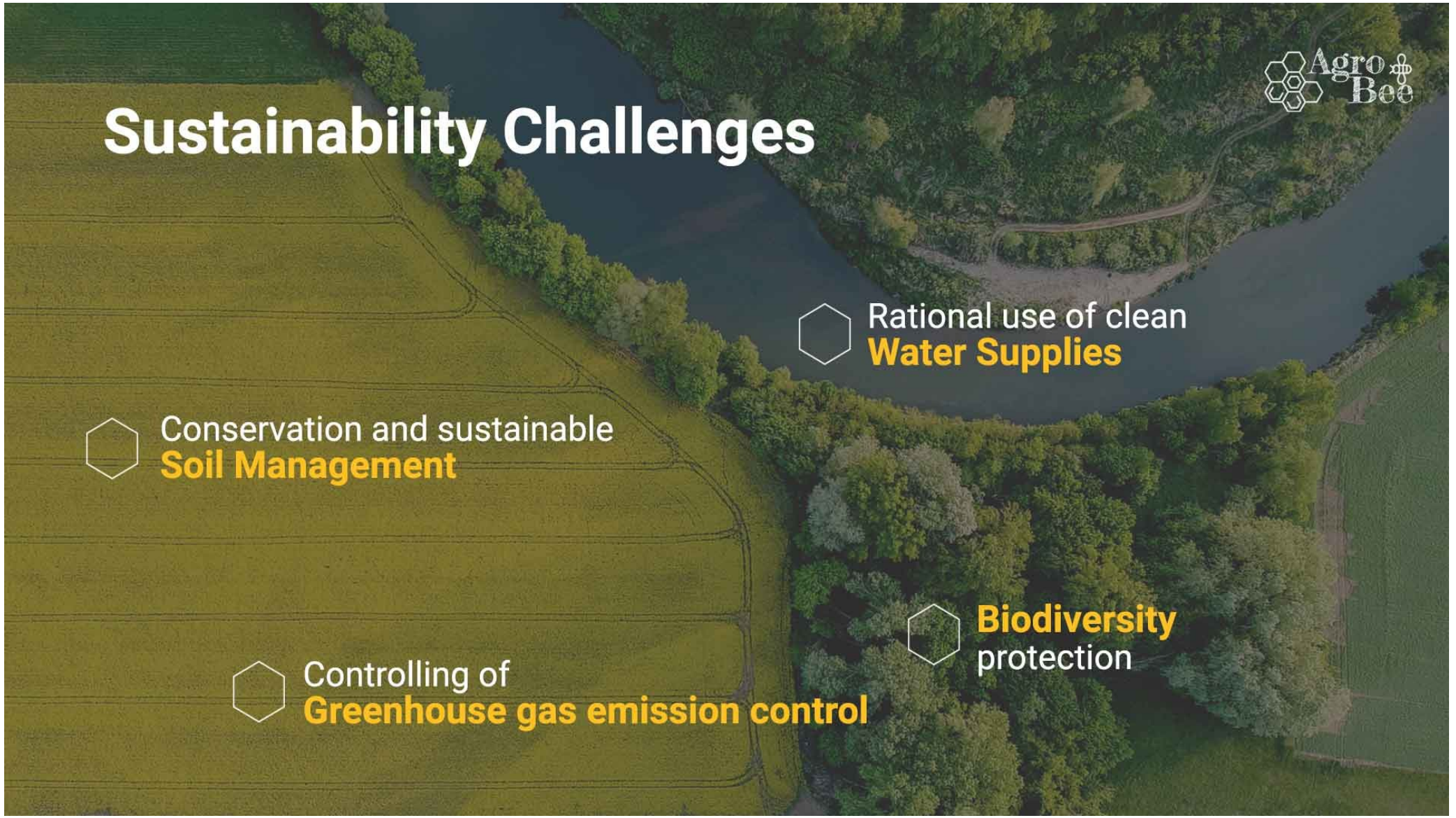
FCFRP/USP

Agro Bee
Planet's Challenge:
Promote food security, increasing the food production by 70% until 2050.
(FAO Brasil)


Sustainability Challenges
Agro Bee
Rational use of clean
Water Supplies
Conservation and sustainable
Soil Management
Biodiversity
protection
Controlling of
Greenhouse gas emission control

Agro Bee
The planet suffers its most
serious climate changes

Decrease in pollinators.

Bees are the main pollinators of the planet
Agro Bee

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AgroBee Assisted Pollination

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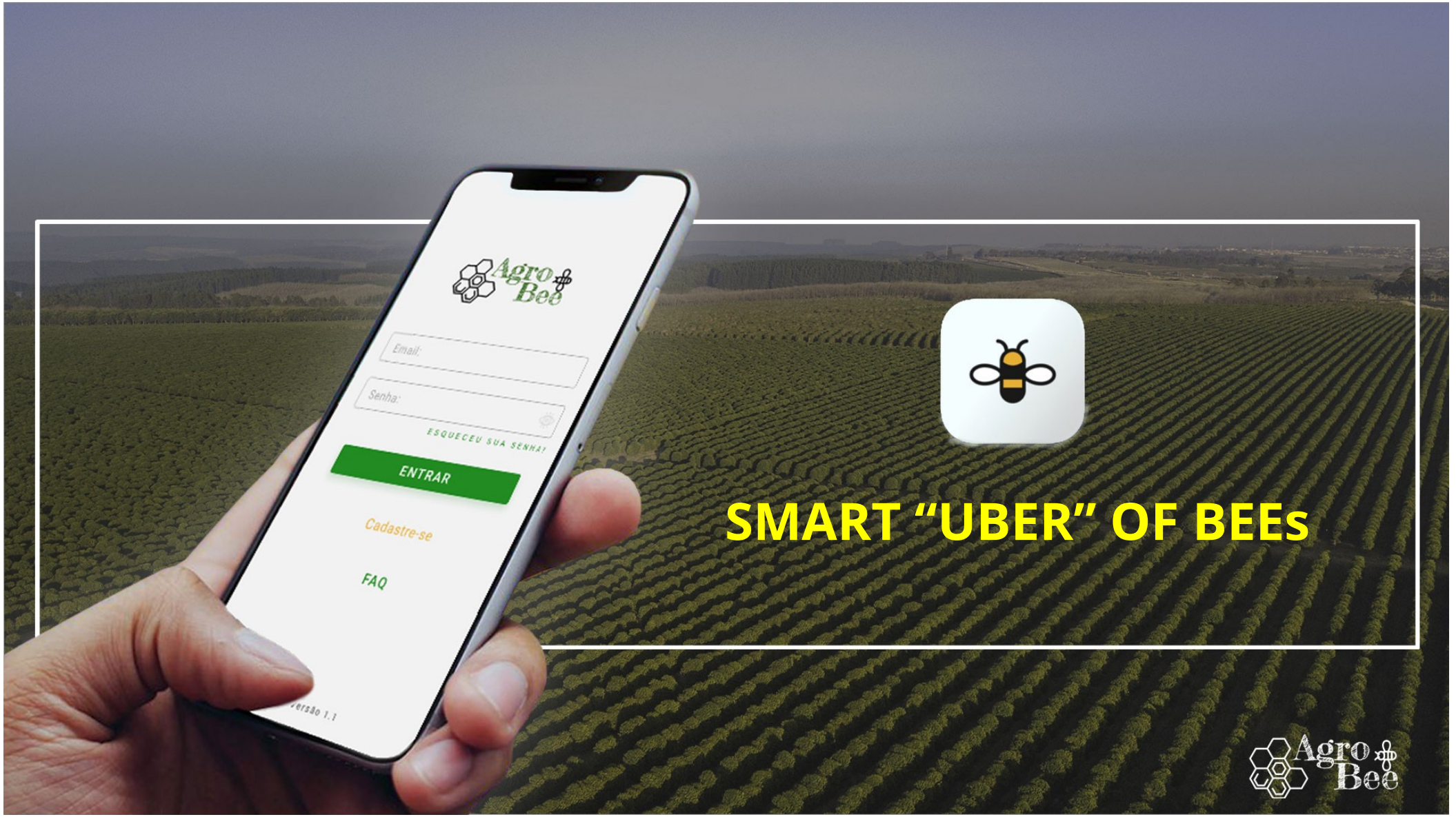

Agro Bee
Email:
Senha:
ESQUECEU SUA SENHA?
ENTRAR
Cadastre-se
FAQ
SMART "UBER" OF BEEs
Agro Bee

Assisted Pollination Methodology

Treated and Control areas are from the **same field**, to evaluate all, in the same conditions

Control Area : without bees

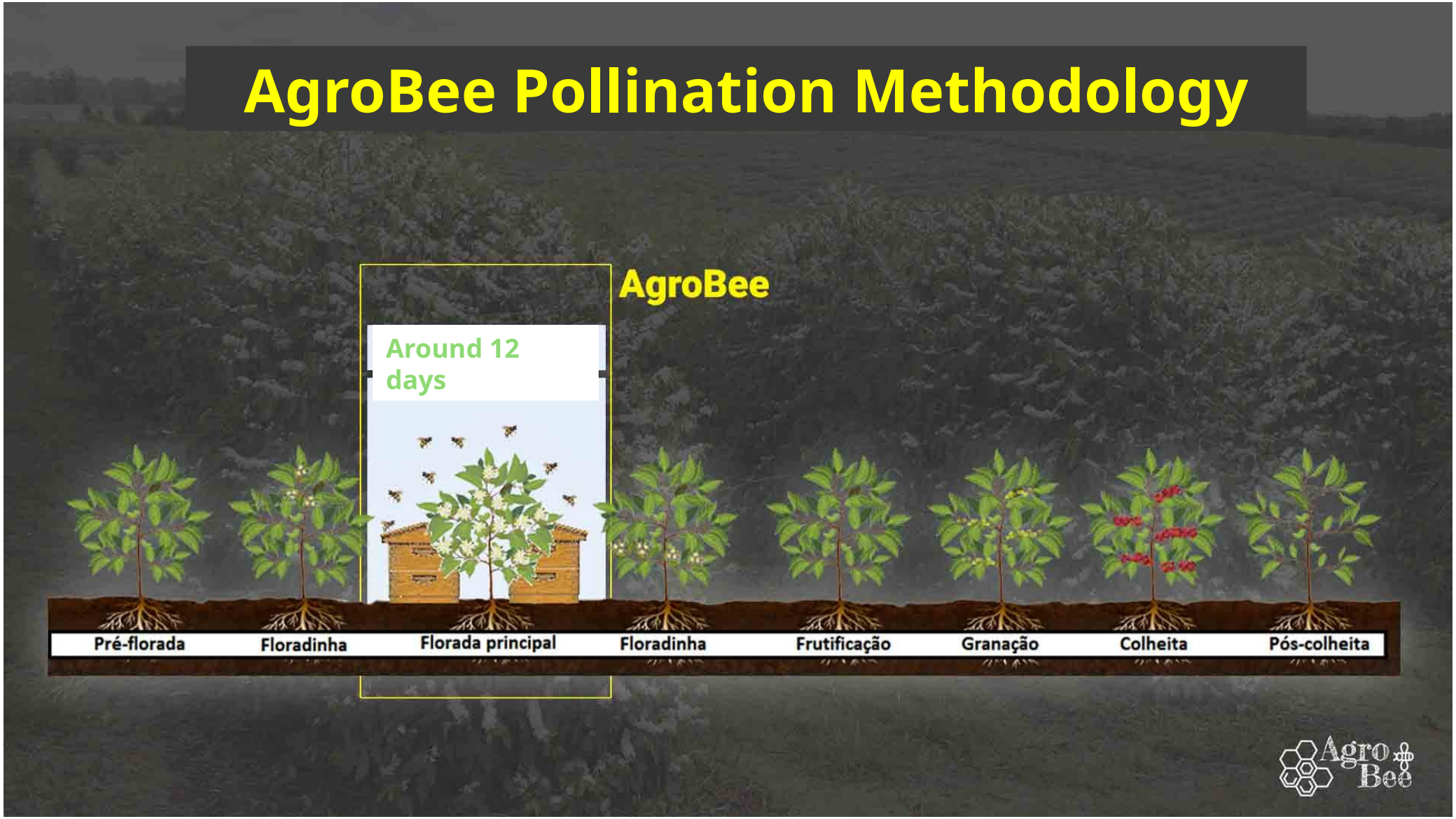
Treated Area : with bees

Beehives are inserted inside the crops.

Safety protocols and signs are instaled in the crop field according to each farm/client

Agro Bee

AgroBee Pollination Methodology



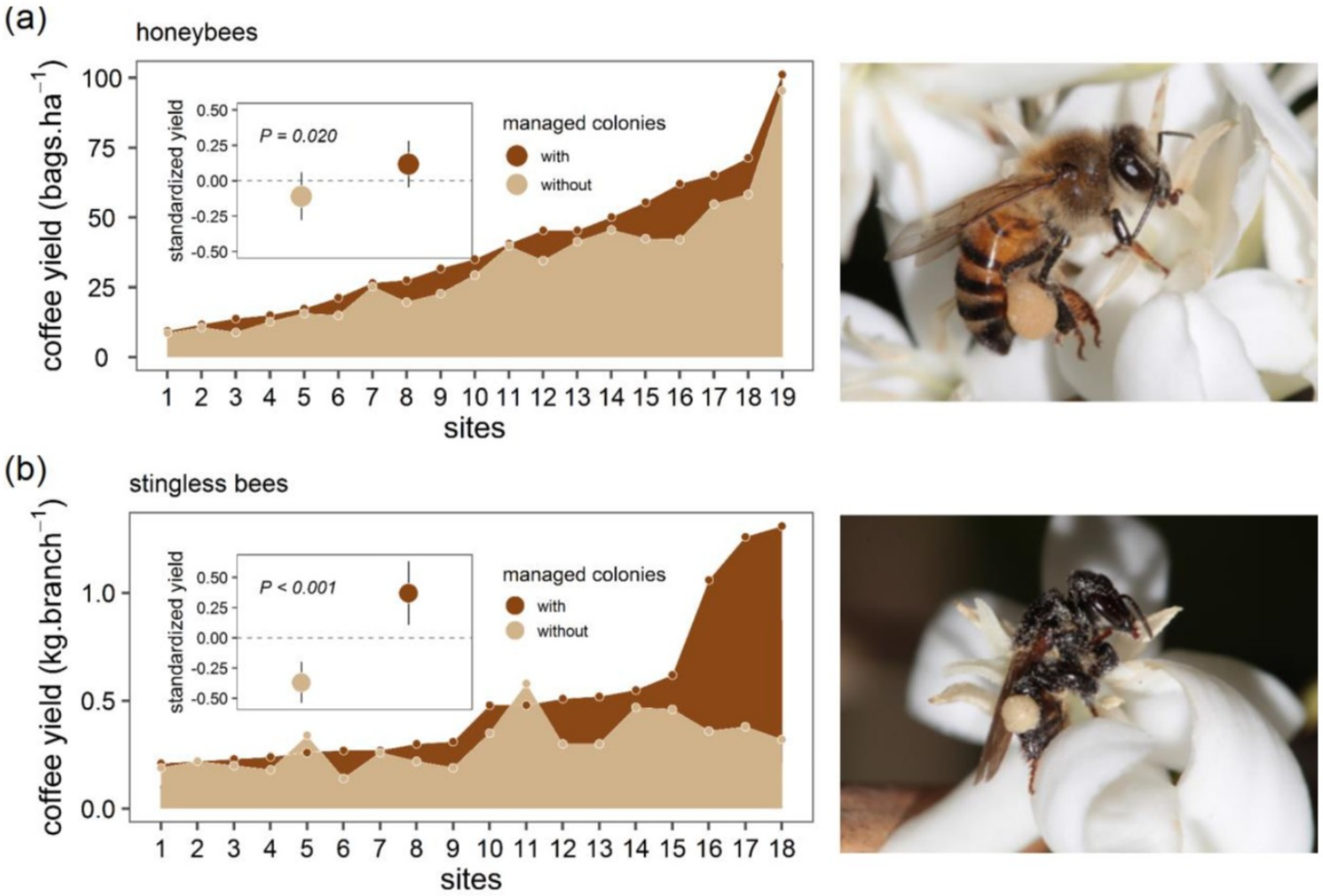


Fig. 1 | Benefits of managed bees to coffee yield. Increased coffee yield (bags ha^{-1} and kg branch^{-1}) with the deployment of managed (**a**) honeybee and (**b**) stingless bee colonies on coffee sites in dark brown. Coffee yields in fields without managed bee colonies are in light brown. Inner figures correspond to the effect of pollination treatment (with and without managed bees) on log-transformed coffee yield (data are standardized with mean 0 ± SE to allow comparison of effect sizes).

Paper Submitted

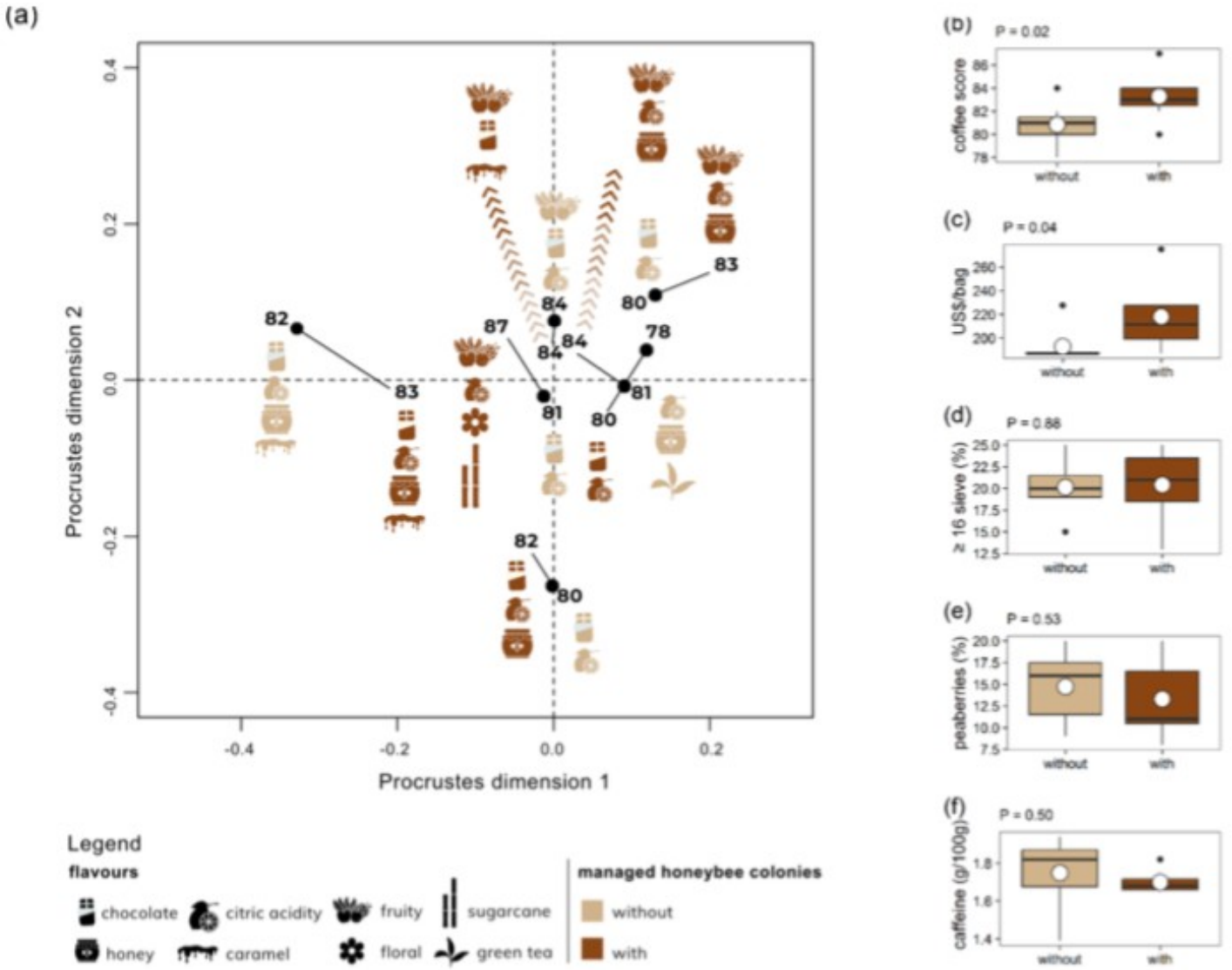
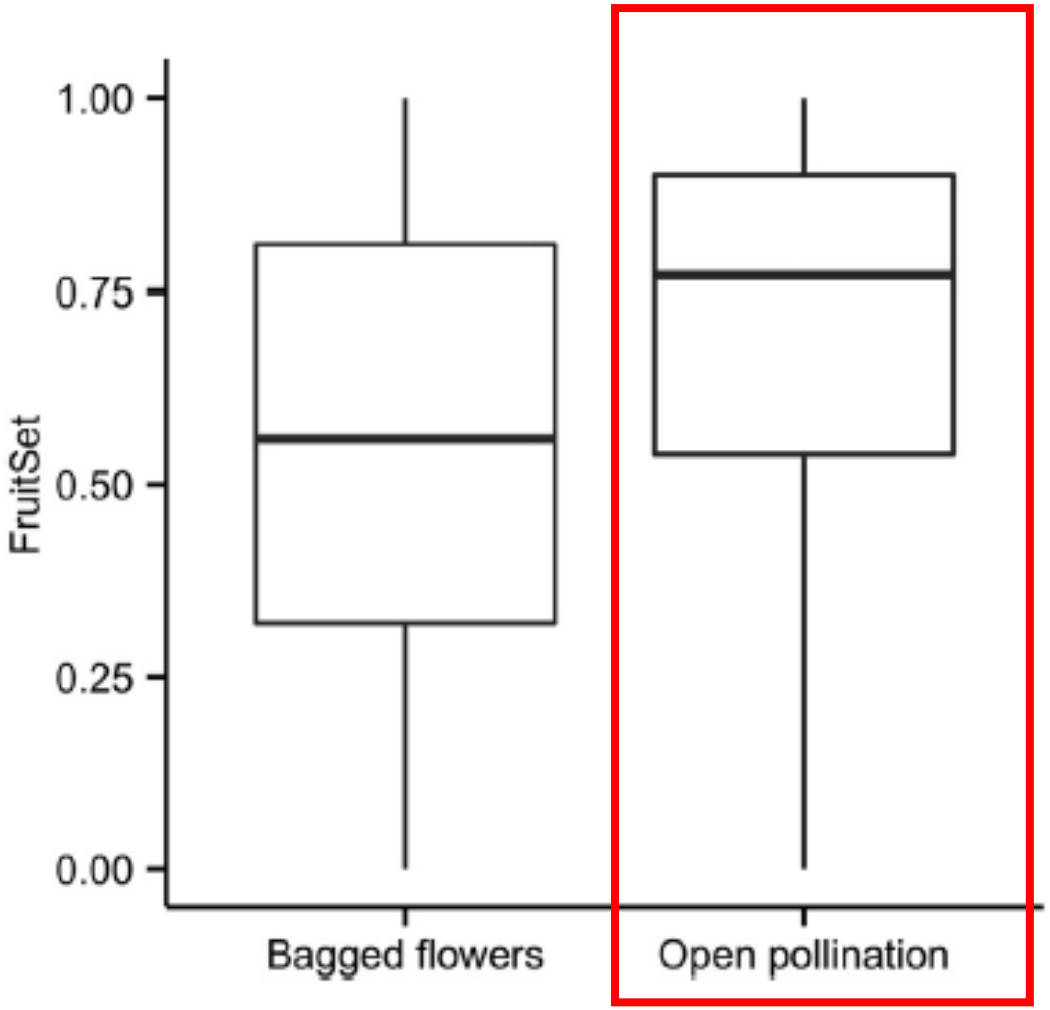
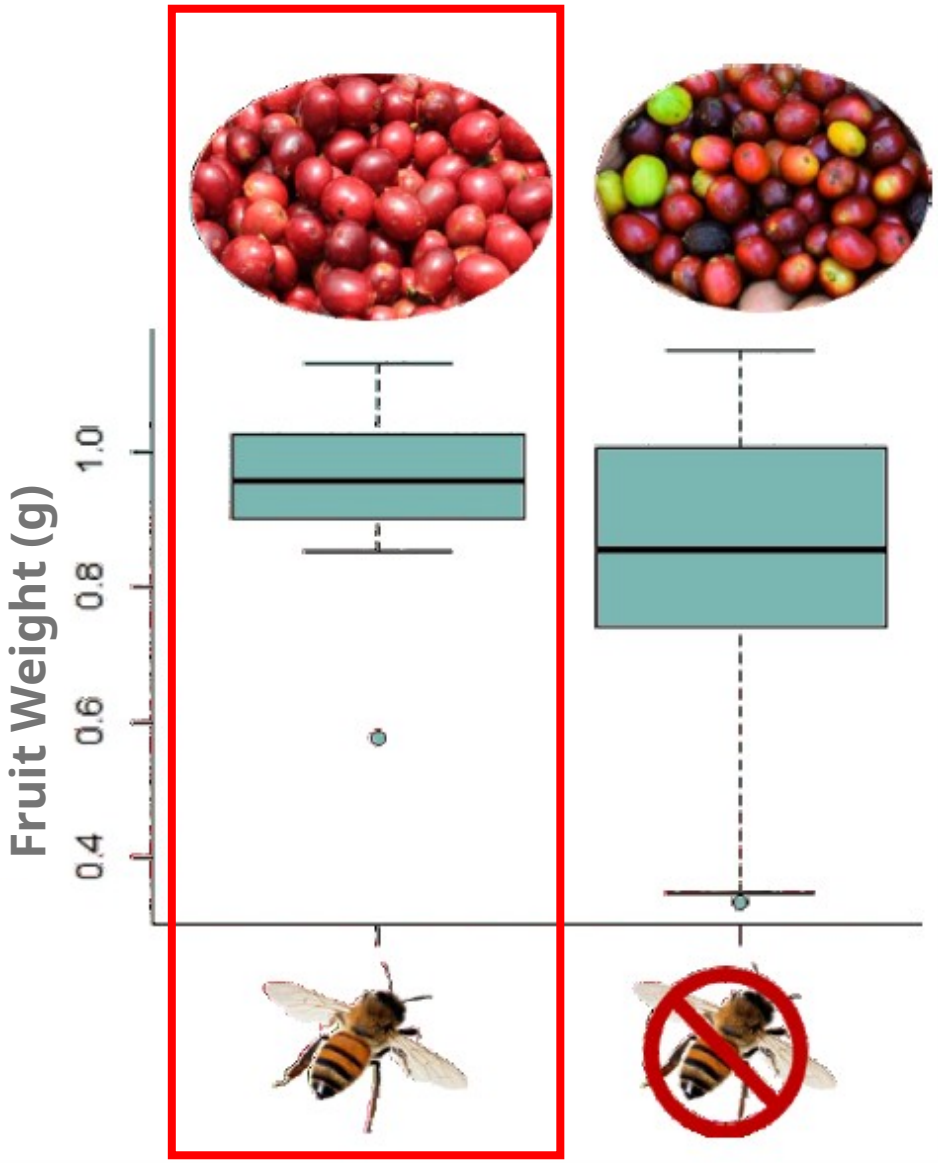


Fig. 2 | Contribution of managed honeybees to coffee quality. (**a**) Significant mismatch (Procrustes analysis, $M^2 = 0.19$, $R = 0.89$, $P = 0.04$) between the coffee fields with and without managed honeybee colonies, based on 44 coffee parameters (physical, chemical, sensorial, and economic). These discrete

Paper Submitted

Higher Productivity and Higher Quality



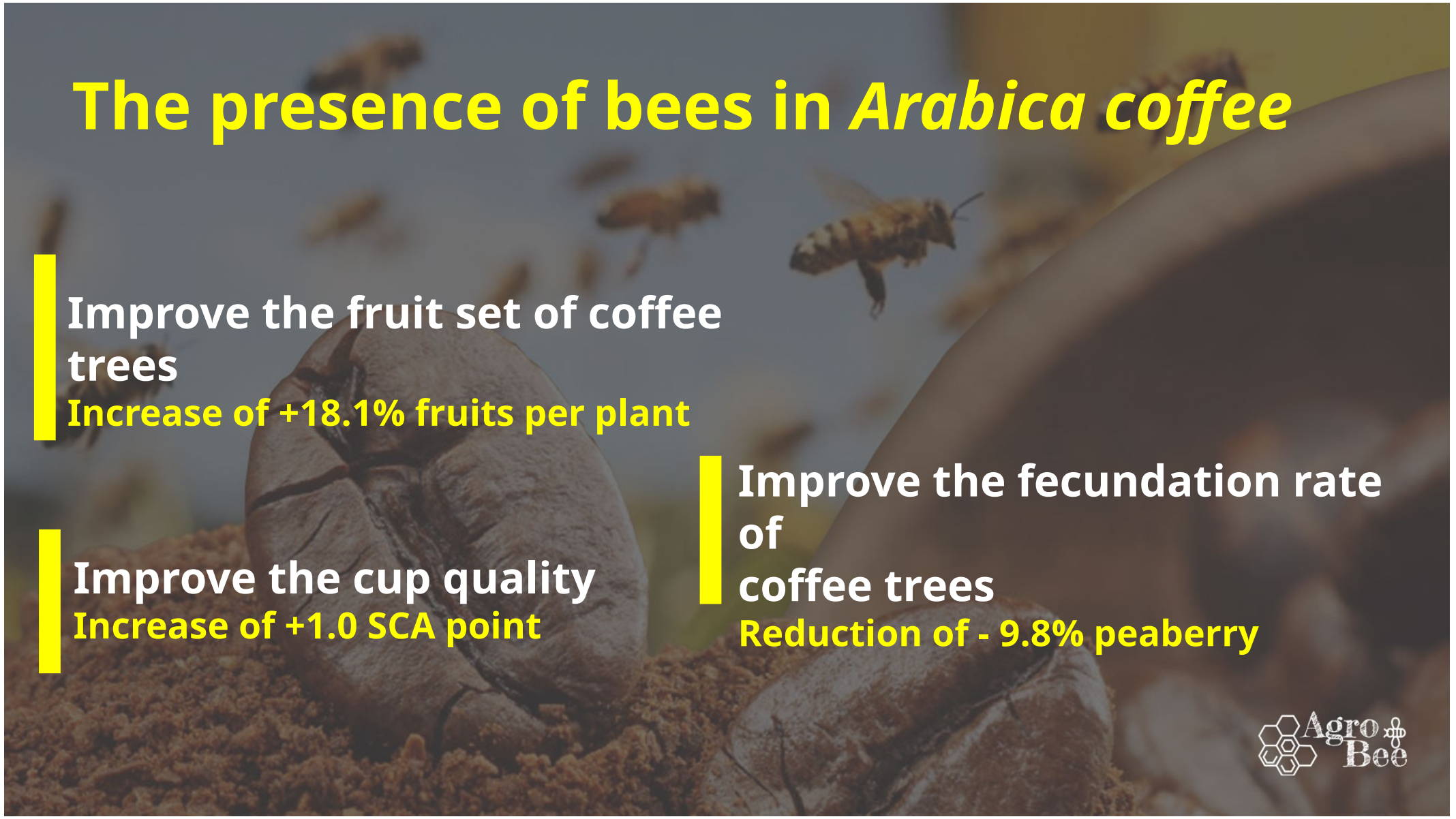


Results – Average of the last 6 years Crops

Results from the last 6 years
Average of the Productivity Increase 18%

Equivalent to around 5 to 6 bags/pollinated hectare when compared to control area

Results – Average of the last 6 years Crops



Pillars of AgroBee

Productivity and Quality

Social Responsibility

Sustainability and Respect to the Environment

Brazilian Bee Pollinated Coffee

Sustainable Coffee
Economic, social and environmental Aspects

Higher Productivity with the same resources consumption and area

Higher Quality

AgroBee Coin

Agro Bee
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Senha:
ESQUECEU SUA SENHA?
ENTRAR
Cadastre-se
FAQ
AGROBEE'S
TECHNOLOGIES
Agro Bee

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Coffee AI Project

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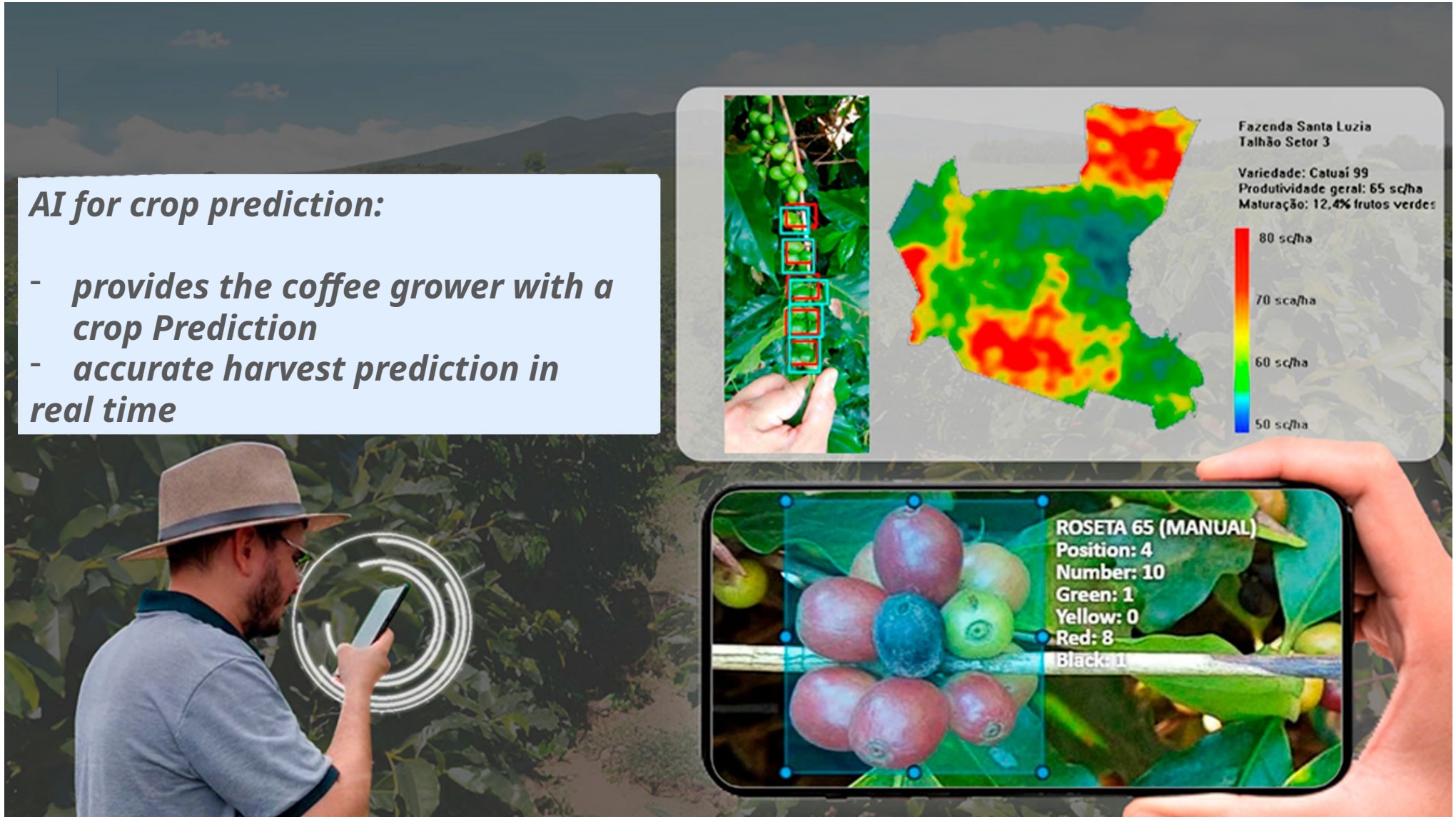
AI for crop prediction:

- ***provides the coffee grower with a crop Prediction***
- ***accurate harvest prediction in real time***



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Artificial intelligence for automated inspection of managed honeybee hives

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Apis mellifera beehive multiplication process for commercial use

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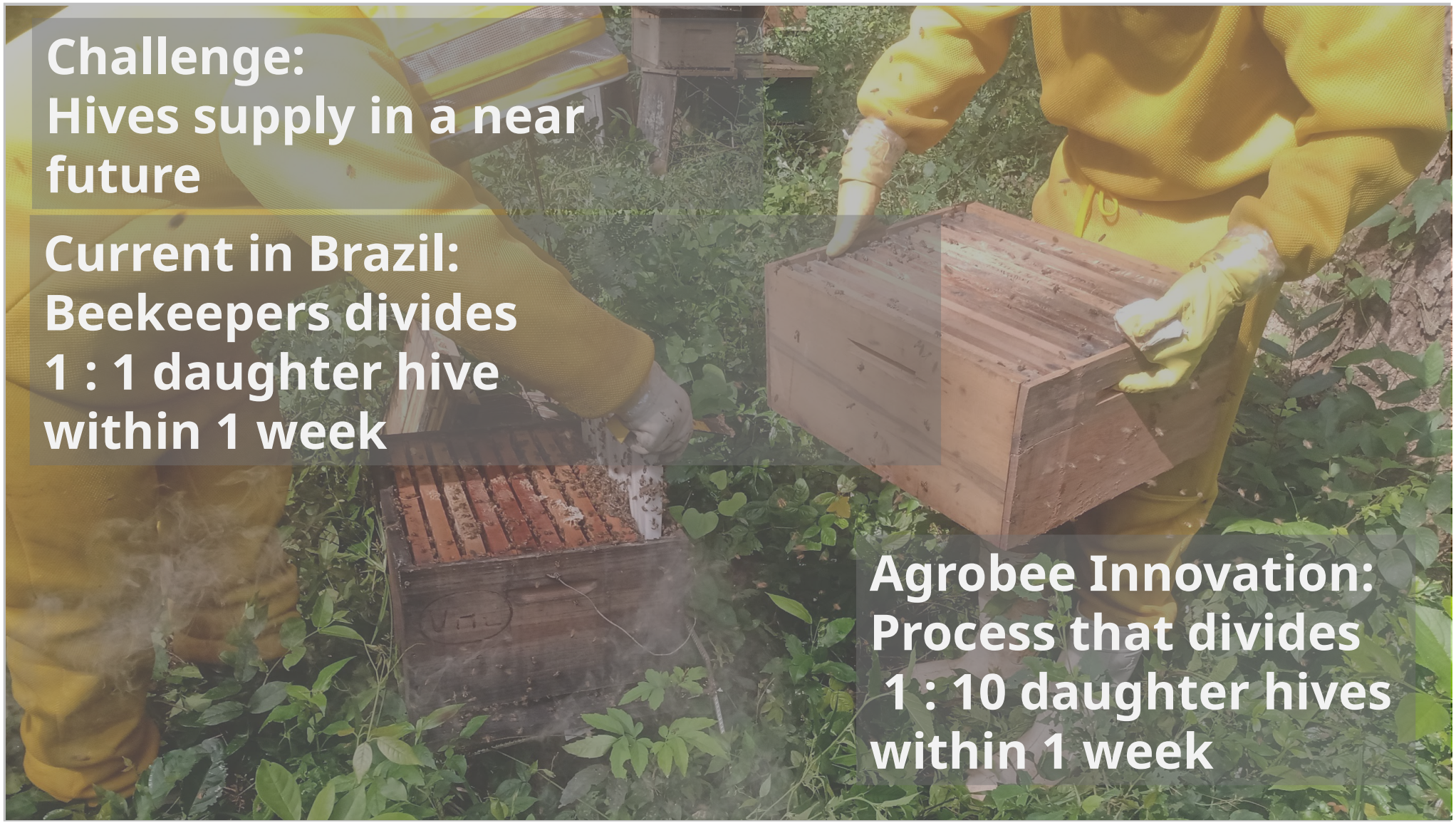

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AgroBee Startup

AgroBee in evidence

DOW JONES NEWSWIRES

Dow Jones Newswires, 25 May 2021 12:12:09 PM

Brazil Coffee Farmers Using Killer Bees to Boost Productivity, Improve Taste

By Jeffrey T. Lewis

SAO PAULO--Brazil is the world's coffee powerhouse, growing more than one-third of the world's beans, and the country's already efficient farmers are starting to use an unusual secret weapon to boost productivity even more: killer bees.

Brazil is the world's biggest producer of the arabica variety of coffee and the second-biggest grower of the robusta variety, after Vietnam, and bees are seldom used in the South American country to pollinate arabica plants because the plants are self-pollinating. But now farmers in Brazil can use a cell phone app called AgroBee to order dozens or even hundreds of hives delivered to their plantations, and then let the bees work their magic in the fields.

Participation of the ***Ministers of Brazilian Agriculture*** in lives.

AGROBEE

Bienen-Vermittlung per App: Brasilianisches Start-up hilft Farmern und Imkern

Die Gründer von Agrobee bringen die Bienenzüchter mit den Kaffeebauern in Brasilien zusammen. Auch Investoren sind bei der Plattform schon eingestiegen.

Handelsblatt

AgroBee

AgroBee Partners

Guilherme Sousa
Computer Engineer
by UNICAMP
CEO

Dra. Andresa Berretta
Biochemical-Pharmacist by
USP - Researcher
Marketing and
Communication

Daniel Gonçalves
Maganer by FGV
Germany Honorary Consul
Sustainability Director

AgroBee

Thank you

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