

A man with a beard and sunglasses, wearing a blue Oxitec cap and a blue button-down shirt with the Oxitec logo, is walking through a cornfield. He is carrying a large cardboard box with the Oxitec logo and the text "Spodoptera Bem-Ti" and "Como funciona a Spodoptera do Bem-Ti?". The box also features a diagram of a corn plant and a Spodoptera Bem-Ti caterpillar. The background is a dense field of corn plants under a clear sky.

oxitec

ANNUAL REPORT

2023



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Delivering IMPACT AT SCALE

The connection between climate change, public health and food security was front and centre in 2023, which has made the need for Oxitec's platform and technologies more critical than ever. And thanks to an outstanding global ecosystem of employees, partners, distributors, governments, foundations, universities, scientific institutes, local communities, vendors and many others, 2023 was a year of major growth for Oxitec.

In just 12 months, we expanded our Friendly™ technology platform; scaled our dengue mosquito solution to every corner of Brazil with award-winning campaigns; launched new operations in three new countries; launched three new multi-national technology programs; launched new partnerships with governments, companies, and communities; added new service offerings for new customer segments; and strengthened our technology platform to support our ability to deliver more impact on lives and livelihoods in 2024 and beyond.

The best part of all of this? Oxitec is purpose-built to take on the growing challenges associated with climate change at scale. Our work is led by passionate, talented team members from more than 15 countries, all of whom come together to form an organization to tackle urgent and rising global challenges with big, bold solutions, first-in-class execution, and at scale unmatched anywhere in the world.

In 2024, we will continue to grow. Our focus on execution and strong partnerships is working, and we will continue building, deploying, and scaling new and needed solutions with a growing coalition of stakeholders who will deliver impact where it matters the most. Thank you for your support of our efforts and we look forward to an exciting 2024 together.



Grey Frandsen, Oxitec CEO





Our Mission

LEADING A NEW GENERATION OF SOLUTIONS TO
ADDRESS THE CHALLENGES OF A CHANGING PLANET

We exist to fundamentally **improve lives and livelihoods** by developing safe, highly effective, accessible and sustainable biologically-engineered solutions to control pests that spread disease, threaten livestock and destroy crops globally.



In 2023, We Solidified Our Leadership Role as the
FIRST MOVER AND CURRENT LEADER IN BIOLOGICAL PEST CONTROL

#1

Biological Engineering Platform for Pests

We're the first-movers in genetic engineering of safe, self-limiting pest solutions that use proven, patent-protected methods that enable diverse, rapid modification and product selection and development.

#1

Biological Pest Product Innovation Platform

We're the only full end-to-end biological pest control developer with expertise in product development, manufacturing, quality control, logistics, marketing, regulatory affairs, commercial scale-up, and more.

#1

Scalable Manufacturing of Biological Pest Solutions

We're the world's leading, diversified insect rearing and mass-production experts and the only manufacturer diversified across multiple insect species, with efficient facilities operating in the UK and Brazil.

and now

#1 TO MARKET

In 2023, Oxitec rolled out the first-ever national commercial operation to control the dengue mosquito at scale.

FIRST MOVER

CATEGORY LEADER IN BIOLOGICAL CONTROL

First-in-class, proven, chemical-free, multi-pest management platform

100+

SCIENTIFIC PUBLICATIONS
+ 12 PATENT FAMILIES

1 billion

OXITEC MOSQUITOES
DEPLOYED, AND COUNTING

7

FRIENDLY™ SOLUTIONS IN
DEVELOPMENT

5

PROGRAMS UNDERWRITTEN
BY WORLD-CLASS PARTNERS

225+

PASSIONATE, DIVERSE PEOPLE

30+ PhDs & management team with strong track record



SUSTAINABILITY AT OUR CORE

“The most sustainable and
environmentally friendly technology ever
created for insect control”

PROF. THOMAS MILLER, UNIVERSITY OF CALIFORNIA

Our Year IN REVIEW

1st



company to carry out a national commercial launch (Aedes do Bem™ in Brazil)

200M+

people reached by organic Oxitec campaigns in Brazil

New partnerships

including Rentokil, Ecolab, CSIRO, U.S. CDC, the Roslin Institute

New countries

Oxitec Scotland
Oxitec Panama
Oxitec in Australia



15+

NATIONALITIES represented, with 30+ PhDs

1st



Oxitec program targeting a non-insect pest: the cattle tick

10k acres

Friendly™ Fall Armyworm product pilots completed

WOMEN IN LEADERSHIP

58%



of Oxitec's managers are female

3



New product development programs launched

Awards:

Cannes Lions runner-up
Winner, Brazilian product design and social impact awards





AEDES DO BEM™

Disrupting HOW PUBLIC HEALTH SOLUTIONS ARE SCALED

In 2023, we broke new ground as the first company to launch and scale a biological self-limiting mosquito control solution to all market segments - not just governments - across one of the world's largest dengue-impacted countries, Brazil.

With the world's largest mosquito factory commissioned in Campinas, Brazil, we are now manufacturing at scale and servicing customers from all market segments across the entire country. Supported by innovative digital systems developed by Oxitec's multi-disciplinary software team, strong partnerships with leading pest control operators, distributors and some of Brazil's largest retailers, this product launch was as innovative as the product itself.



NATIONAL
DISTRIBUTION
PARTNERS



SELECTED
CUSTOMERS



AEDES DO BEM™

Inspiring COMMUNITIES TO ACT

In 2023, Oxitec's ground-breaking Friendly™ *Aedes aegypti* commercial campaign in Brazil set a new standard for vector control programs and products, for marketing and engagement with customers, partners, and communities.

Our strategy is simple: empower and inspire everyone, not just governments, to participate in efforts to control the dengue mosquito with safe, sustainable and accessible products that people will love. Through this democratization of the world's most effective vector control solution, we believe we can deliver more impact on more lives than by using traditional technologies or traditional marketing.

We believe ground-breaking solutions should also be accompanied by ground-breaking marketing. And that's what we did.

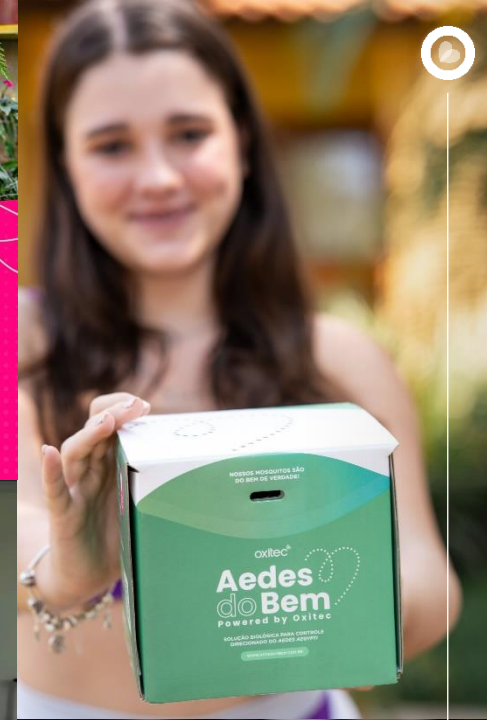
As the first company to launch and scale a biological control solution to this dengue mosquito, Oxitec centred its campaign on building and maintaining trust with customers, the public, and partners alike. We build a joyful brand and used organic marketing...and quickly other companies, governments, social media influencers and partners took it from there.

In fact, Oxitec's marketing in Brazil has made it the most viewed mosquito control product in the world.



Nova parceria:
**Compre sua
Caixa do Bem MINI
em lojas Unishop**

Aedes do Bem oxitec UNISHOP



**MINI e PRO: veja as diferenças
entre as Caixas do Bem!**

posse para o lado >>

Aedes do Bem oxitec





FRIENDLY™ FALL ARMYWORM Preparing the Next Generation of Sustainable AGRICULTURE

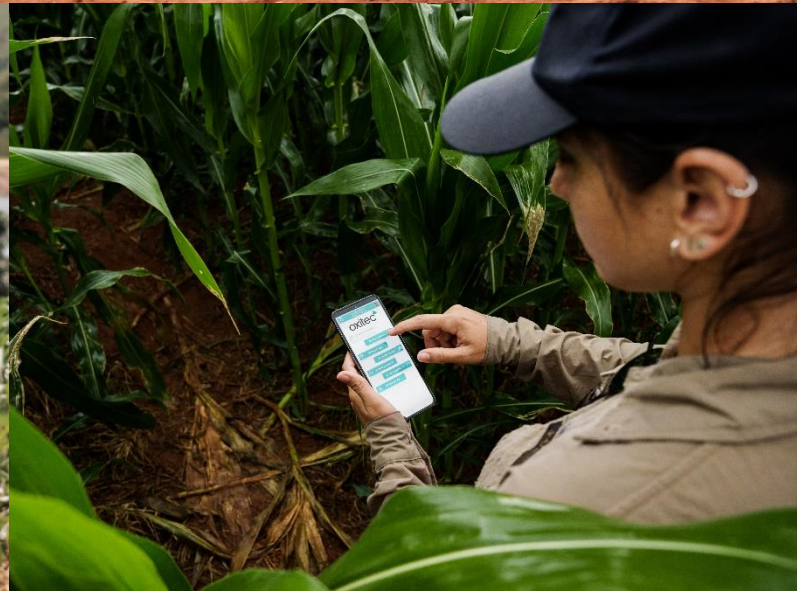
Targeting one of the world's most devastating pests of food crops globally, Oxitec's Friendly™ fall armyworm solution is in the final stages of development and has started product demonstration and pre-commercial pilots.

The Friendly™ fall armyworm solution is designed to deliver targeted, biological management of the pest; and to actively counteract fall armyworm resistance to other important crop protection solutions.

In developing a complete, end-to-end solution to meet growers' needs, and following full commercial biosafety approval, the product has undergone:

- **Multiple seasons of increasingly large pilots** on thousands of commercial corn acres across Brazil.
- **Product optimisation and validation** in diverse on-farm conditions.
- **Factory scale-up** in Oxitec's new Chrysalis facility, in São Paulo state.
- **Interstate delivery** of the product from factory to farm, over thousands of miles.
- **Testing in parallel with new digital tools** designed to support end-users and product tracking.

Next up: Oxitec is preparing to launch this solution in beta in 2024. Stay tuned for more.



FRIENDLY™ AEDES AEGYPTI

Serving Florida

COMMUNITIES

At the end of 2023, we celebrated the conclusion of the third season of our landmark Florida Keys Mosquito Control District (FKMCD) - Oxitec Mosquito Project. The project was an outstanding success on two fronts: we successfully demonstrated Oxitec's Friendly™ *Aedes aegypti* solution over three successive seasons; and we did so in close partnership with local government and local communities, making it an exceptional demonstration of what can be done when a diverse coalition of stakeholders come together to do good.

During the 2023 pilot season, Oxitec's just-add-water devices were tested and optimized for performance in Florida Keys communities and beyond, and data for a commercial application was generated. Monitoring of the local mosquito population is continuing into 2024.

Over the three pilot seasons conducted to date, the project has:

- **Demonstrated that Friendly™ male *Aedes aegypti* mosquitoes perform well** in the Florida Keys.
- **Demonstrated that Friendly™ males can reduce the local abundance of the invasive *Aedes aegypti* mosquito in these communities.**
- **Maintained strong support from host communities,** from which the project was oversubscribed for households to host mosquito egg devices and traps.

Next up: Oxitec and FKMCD will continue their partnership into 2024 with a focus on operational integration.





FRIENDLY™ ANOPHELES STEPHENSI Targeting Africa's Urban MALARIA VECTOR

Since its arrival in Djibouti, in the Horn of Africa, the invasive *Anopheles stephensi* mosquito has caused significant rises in urban malaria. It is spreading fast, posing a threat to hundreds of millions of people in African cities.

Supported by funding from the Bill & Melinda Gates Foundation, Oxitec has partnered with Djibouti's National Malaria Control Programme (PNLP) and the public health not-for-profit, Association Mutualis to combat this invasive malaria threat.

In preparation for pilots with a newly developed Friendly™ *Anopheles stephensi*, the Djibouti Friendly™ Mosquito Program team has:

- Conducted extensive field ecology surveillance in and around Djibouti city.
- Engaged with and built trust with Djiboutian communities and stakeholders at all levels.
- Conducted multiple workshops with local, national and regional stakeholders to co-develop the next pilot phase.
- Assembled a dedicated development hub and expert team in Djibouti.

Next up: Led by the Djiboutian government and local communities, Oxitec's Friendly™ *Anopheles stephensi* will be piloted in the field to demonstrate safety and efficacy.



FRIENDLY™ ANOPHELES ALBIMANUS

Preparing to Fight

MALARIA IN PANAMA

Efforts to eradicate malaria in Central America are stalling, partly due to difficult-to-manage malaria-spreading mosquitoes. *Anopheles albimanus* is the dominant vector in many locations, is widely resistant to chemical methods and bites people outdoors.

To regain momentum in the region's battle to eliminate malaria, new tools are needed to control this mosquito: with the support of the Bill & Melinda Gates Foundation, Oxitec is building a Friendly™ *Anopheles albimanus*.

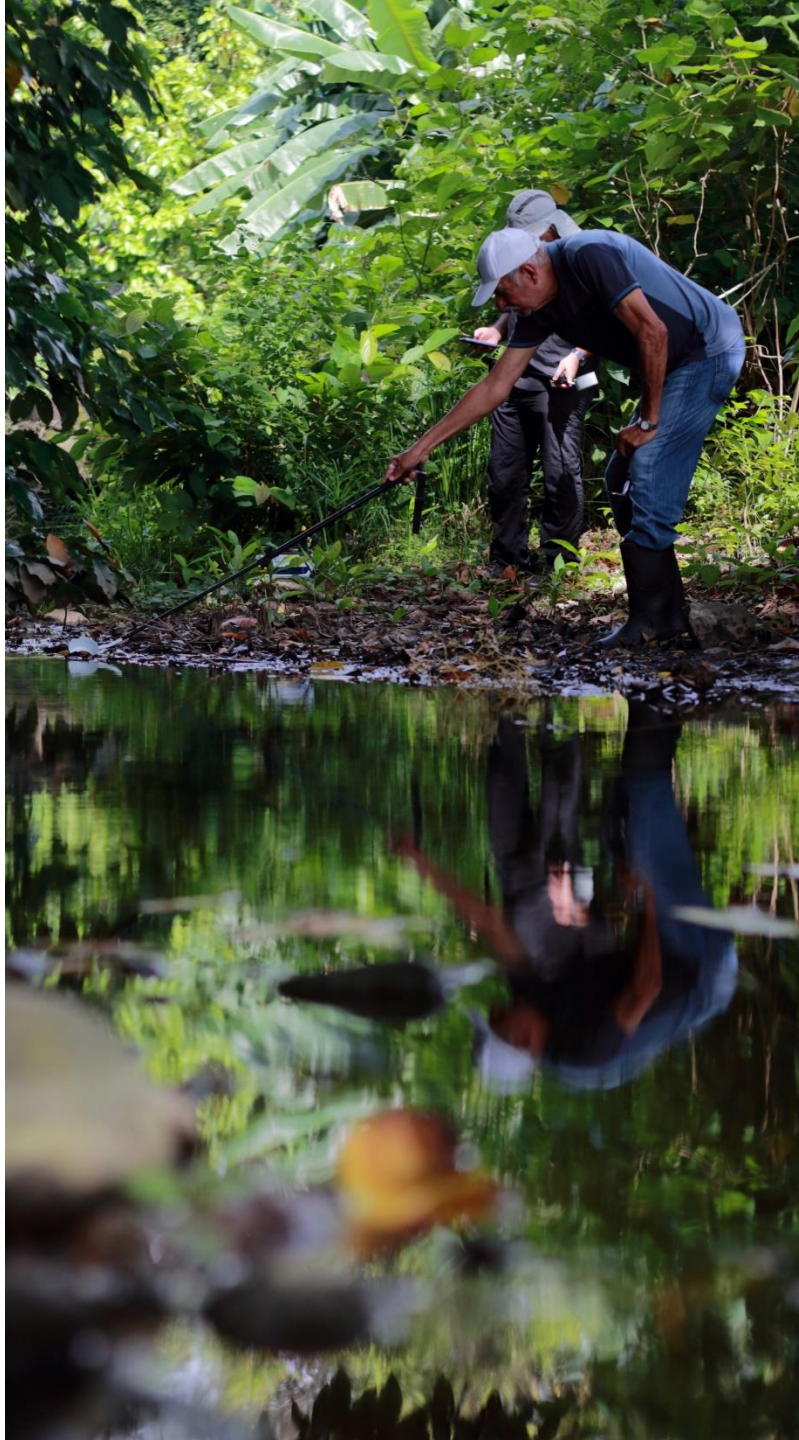
In parallel with development of a Friendly™ solution, Oxitec and Panamanian partners have:

- **Conducted early field studies in malaria-threatened communities in Panama** to characterise the behaviour and abundance of the *Anopheles albimanus*.
- **Established a new Oxitec hub in Panama City**, including a team of the region's leading mosquito field experts.
- **Established strong partnerships and alliances** with Panama's foremost malaria research and public health organisations.

Next up: In preparation for field releases from 2025, stakeholder consultations, community engagement, regulatory affairs, and field surveillance will continue in 2024, alongside planned importation of a Friendly™ *An. albimanus*.



**PANAMA
FRIENDLY™
MOSQUITO
PROGRAM**





FRIENDLY™ CATTLE TICK

Building a Solution for the World's Most Important CATTLE PEST

The invasive cattle tick, *Rhipicephalus microplus*, is the world's most devastating blood-feeding parasite of cattle. Spreading disease and reducing yields, this tick threatens the lives and health of cattle and the livelihoods of farmers across Sub-Saharan Africa, South America, Central America and Asia.

With the support of the Bill & Melinda Gates Foundation, Oxitec is developing a Friendly™ cattle tick solution to enable targeted, biological management of this dangerous invasive pest for which there are no effective control measures.

As the Friendly™ cattle tick program transitioned from early feasibility to full development in 2023, the Oxitec program team has:

- **Launched the full development phase** of the program.
- **Partnered with the globally renowned livestock research organisation, the Roslin Institute**, based near Edinburgh.
- **Established a new Scotland hub**, including a diverse team of tick experts, to enable close collaboration with Roslin Institute partners.

Next up: Initiate development of prototype Friendly™ cattle ticks and production systems, alongside engagement with tick-affected farmers across Africa and the Americas.



FRIENDLY™ AEDES ALBOPICTUS

Taking on the World's MOST INVASIVE MOSQUITO

The Asian tiger mosquito, *Aedes albopictus*, is an aggressive daytime biter which transmits debilitating and dangerous viral diseases such as dengue, Chikungunya and Zika. Experts predict that if it continues to spread uncontrolled it will pose a disease threat to more than 6 billion people.

In 2023, with funding from Australia's national science agency, CSIRO, Oxitec launched a new development program in the UK to develop a Friendly™ *Aedes albopictus* – a safe, effective, and self-limiting strain of the mosquito that results in non-biting, non-disease transmitting male mosquitoes. This is the first step towards delivering an urgently needed, highly effective biological solution for *Aedes albopictus* in the Pacific region and beyond.

The Friendly™ *Aedes albopictus* program is building momentum, making significant progress in 2023:

- **Achieved the first technical milestone of germline-transformed *Aedes albopictus*.**
- **Conducted early engagement with *Aedes albopictus*-threatened communities and governments.**

Next up: Oxitec will complete development of Friendly™ *Aedes albopictus*; and continue engagement with governments and communities to learn where the solution can deliver most impact.





FRIENDLY™ AEDES AEGYPTI Preparing for Impact in the MARSHALL ISLANDS

In 2023, Oxitec joined a new partnership to combat the *Aedes aegypti* mosquito in the Republic of the Marshall Islands (RMI) in the Pacific. Working in partnership with RMI, the US Centers for Disease Control and Prevention (CDC) and the Pacific Island Health Officers' Association (PIHOA), Oxitec will supply Friendly™ *Aedes aegypti* and transfer knowhow for self-sustained releases of the solution on Ebeye Island, which has been affected by serious dengue outbreaks and is home to more than 15,000 people.

In 2023, Oxitec and its partners carried out a range of activities, including:

- **Close consultations with local communities** in the Marshall Islands.
- **Establishing a dedicated on-island facility** to support next-phase field activities.
- **Capacity-building visits in the Marshall Islands** for teams that will conduct releases.

Next up: The project team aims to start releasing Friendly™ *Aedes aegypti* following regulatory approvals by RMI government authorities, and will focus deployments on the island of Ebeye.



Gates Notes



We Build Trust with TRANSPARENCY

We believe that a critical element of establishing and sustaining trust comes from being transparent, open, and accessible to all of our stakeholders. That's why we publish, announce, and share our partnerships, our programs, our new technologies, how our technologies work, and with whom we work with the world throughout the year.

In 2023, we welcomed new partners, launched new technology programs, carried out new projects, published new scientific findings, and even were nominated for a Cannes Lions award for marketing creativity in Brazil (which we believe is a first for any mosquito-related product, ever). We shared all of these across multiple information-sharing platforms.

We also answered questions from the public, held 15 public webinars, held town hall events, hosted tours, gave radio and TV interviews, published op-eds, and stayed true to our commitment to trust-building via transparency. More to come in 2024!



3 November 2023

Florida Keys Mosquito Control District-Oxitec Mosquito Project Reaches Successful Conclusion of Mosquito Release Phase of Project in the Florida Keys



26 September 2023

Oxitec Partners with CSIRO, Australia's National Science Agency, to Launch Development of a Friendly™ Solution for the Invasive, Dengue-Spreading Asian Tiger Mosquito



31 August 2023

The Amazon's Tourism Authority Selects Oxitec's Friendly™ Aedes aegypti to Safely Combat Dengue Vector in the Capital City of Brazil's Amazon Region



24 May 2023

Oxitec Launches New Technology Program to Develop a Friendly™ Solution for the World's Most Damaging Cattle Tick



ENVIRONMENT

The Future Of Invasive Species Mitigation

From the largest lake in China to the swamps of Florida, predicting and mitigating invasive species are among the defining conservation challenges of our time.



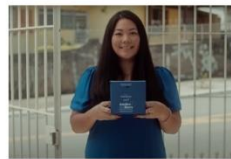
11 May 2023

Oxitec Announces Partnership with Ecolab to Join its Distribution Network of Friendly™ Aedes in Brazil



27 April 2023

Oxitec Announces Expansion into Central America to Launch New Program in Panama to Fight Malaria-Transmitting Mosquitoes Threatening Meso-America



14 April 2023

Latin America's Fastest-Growing Real Estate Platform Chooses Oxitec's Friendly™ Aedes to Protect Residential Customers from Dengue Mosquitoes



13 April 2023

Oxitec Launches New Scale-Up of Friendly™ Fall Armyworm Commercial-Scale Pilot Deployments on Large Farms in Brazil



31 March 2023

Groundbreaking Partnership to Combat Dengue Mosquito in the Republic of the Marshall Islands Will Deploy Oxitec Friendly™ Aedes aegypti Solution



27 March 2023

Florida Keys Mosquito Control District and Oxitec Announce the Start Date for Phase One of the 2023 Mosquito Project Season



27 February 2023

Djibouti Friendly™ Mosquito Program Launches New Phase of Preparatory Field Ecology Studies in Malaria-Threatened Communities



25 January 2023

Florida Keys Mosquito Control District and Oxitec Conclude Another Mosquito Season in the Florida Keys, Plans for Third in 2023

The New York Times

Forbes



Our VALUES

We continue to operate with a strong set of values that are ingrained in our daily lives and our work. Every partner, customer, vendor, community leader, householder, and any other stakeholders can trust that Oxitec's people strive to embody our values every day and in every interaction. We believe this is the foundational element to allowing us to have impact.

TRUST

We seek to earn it, grow it, and sustain it inside Oxitec and with our employees, partners, investors, stakeholders, customers and the public.

INCLUSIVENESS

We value and pursue diversity within our team and with those we work. We are working to serve as an agent for social justice.

AUTHENTICITY

We are made up of amazing and diverse group of humans who represent us in all of their uniqueness, together.

INTEGRITY

Always. There is no exception to full integrity and honesty in all we do and stand for.

TRANSPARENCY

We strive to be open and accessible to everyone, inside and out.

HUMILITY

We lift up those who lift up others, and we seek to serve. We are humble in the face of the magnitude of the global challenges we're trying to solve, and we see ourselves as part of a global community working together to solve them.





Our PEOPLE

Oxitec's efforts are led by a passionate, world-class team of experts in their fields from 15 countries dedicated to delivering global impact with our technology. Our people create a fun, open, purpose-driven culture where we help one another do our best work ever in service to our mission.



WOMEN IN LEADERSHIP
58% of Oxitec's managers are women



4 CONTINENTS
Oxitec now has seven hubs in the US, LATAM, Europe & Africa



15+ NATIONALITIES
represented, with 30+ PhDs



40+
new Oxitec team members welcomed



NOSSOS MOSQUITOS SÃO DO BEM DE VERDADE!

oxitec

Aedes do Bem

Powered by Oxitec

SOLUÇÃO BIOLÓGICA PARA CONTROLE DIRECIONADO DO Aedes Aegypti

WWW.AEESDOBEM.COM.BR

Aedes do Bem
Powered by Oxitec

TECNOLOGIA QUE CABE DE

UMA SOLUÇÃO INOVADORA NO COMBATE AO MOSQUITO

MAS O QUE SÃO OS A

São mosquitos *Aedes aegypti* modificados geneticamente pela Oxitec. Eles não picam e não se reproduzem no ambiente, só produzem fêmeas do *Aedes aegypti* que podem transmitir doenças como dengue, zika, chikungunya.

COMO FUNCIONA?

Essa Caixa do Bem contém os mosquitos em seu desenvolvimento até a fase adulta. Para usar, basta posicionar a caixa na sombra, preferencialmente em locais com pouca circulação de ar para o ambiente urbano, próximo a áreas de reprodução. Legal, né?

E QUAL É O RESULTADO?

O resultado do tratamento com as fêmeas do *Aedes aegypti* na área de atuação é a redução populacional da espécie. Para melhores resultados, use a caixa todo o ano e principalmente nas áreas de maior incidência a cada 28 dias!

LEARN MORE AT OXITEC.COM
OR BY SCANNING BELOW

