



STING OPERATION:

HOW THE U.S. CONTROLS MOSQUITO VECTORS

Webinar

September 7, 2021

Today's Speakers



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Today's Presentation

- › Introduction to Kline & Company
- › Report Scope and Methodology
- › 2020 Market Highlights
- › Outlook

Kline has served the international specialty chemicals & materials industry for more than 60 years.

MARKET RESEARCH REPORTS



We identify market opportunities and create action plans with off-the-shelf reports.

Industries served:

- Agribusiness
- Automotive
- Consumer Products
- Chemicals
- Construction Materials
- Food & Nutrition
- Personal Care
- Industrial Goods & Services
- Lubricants, Fuels, and Specialty Petroleum
- Life Sciences
- Medical Devices
- Minerals



TRUSTED FOR

- Strategy & Business Development
- Manufacturing & Supply Chain
- Technology & Innovation
- Customer Relationships

MANAGEMENT CONSULTING



Individual client work to solve business issues and help implement solutions



Americas

Parisspany, NJ (HQ),
Sao Paulo, Brazil



Europe

Brussels, Belgium;
London, United Kingdom
Prague, Czech Republic



Asia

Shanghai, China
Tokyo, Japan;
Hyderabad, India
New Delhi, India



Middle East

Dubai, UAE

Our project teams are staffed with seasoned management consultants and operating executives from the chemicals industry.

➤ Kline's Methodology

PRIMARY RESEARCH



Kline research leans heavily on a high number of in-depth interviews conducted for each report.

Kline has attendance at trade shows and conferences.

We have local researchers fluent in native languages, and our interviews engage hands-on experts across all pertinent fields, including:

- Suppliers/manufacturers
- Distributors
- End users
- Opinion leaders
- Government agencies
- Trade organizations

SECONDARY RESEARCH



Primary research is supported by constant tracking of annual company reports, national statistics bureaus, and trade/industrial/ professional associations. New developments are diligently followed and their impact closely monitored.

BUSINESS INTELLIGENCE



Interviews and conversations with the main players within each field, together with our rigorous analyses and cross checks, create an insightful and comprehensive market intelligence.

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 - › **Report Scope and Methodology**
 - › 2020 Market Highlights
 - › Outlook

➤ Mosquito Control: Market Analysis and Opportunities

- This is the 21st edition.
- The base year is 2020, with forecasts to 2025.
- There is only U.S. profile presently, but other countries are planned.
- The market is segmented into Sales for Adulticides and Larvicides.
- The study includes insights from an end-user survey.
- The also report includes an interactive database.

**Mosquito Control:
Market Analysis and Opportunities**

Base Year: 2020 A comprehensive analysis examining the mosquito control/disease vector and the pesticides used for its treatment control by governments*. This report provides suppliers and formulators with the latest information on product usage for the mosquito control market with a breakdown for adulticides and larvicides.

Published: Q3 2021

21st edition

Regional Coverage:

- Brazil
- India
- Indonesia
- Malaysia
- Mexico
- Thailand
- United States

SCOPE

Each country report features:

- › Sales by brand
- › Sales by supplier
- › Product types covered:
 - Adulticides
 - Larvicides
 - Biologicals
 - Insect growth regulators
 - Chemicals
 - Surface films/oils
- › Active ingredient usage
- › Key trends
- › Industry structure
- › Zika virus update
- › West Nile virus update
- › Other diseases

* Includes insecticides for governmental professional mosquito control; excludes insecticides for consumer end users or pest control operators

**Now including
interactive database**

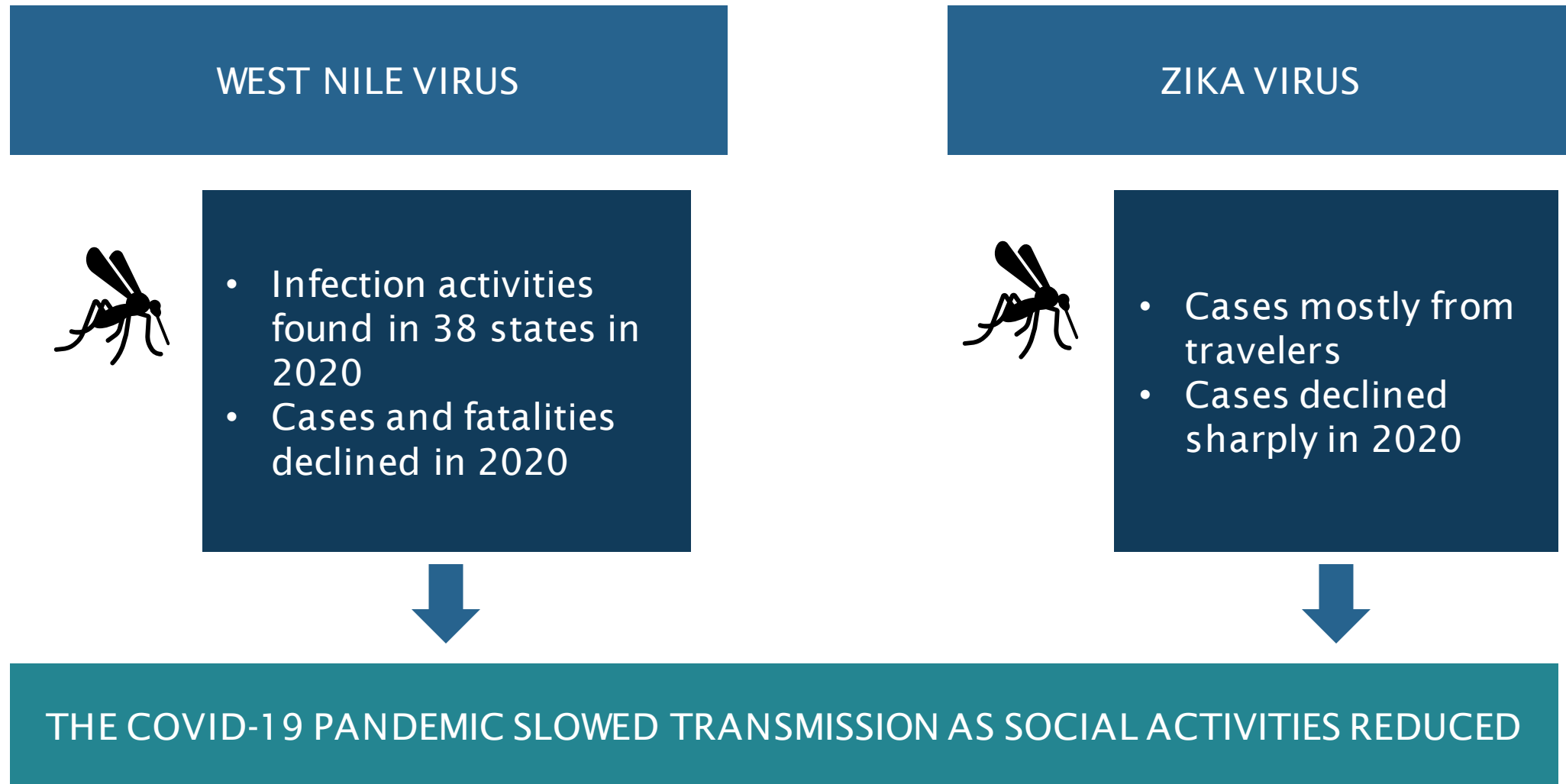
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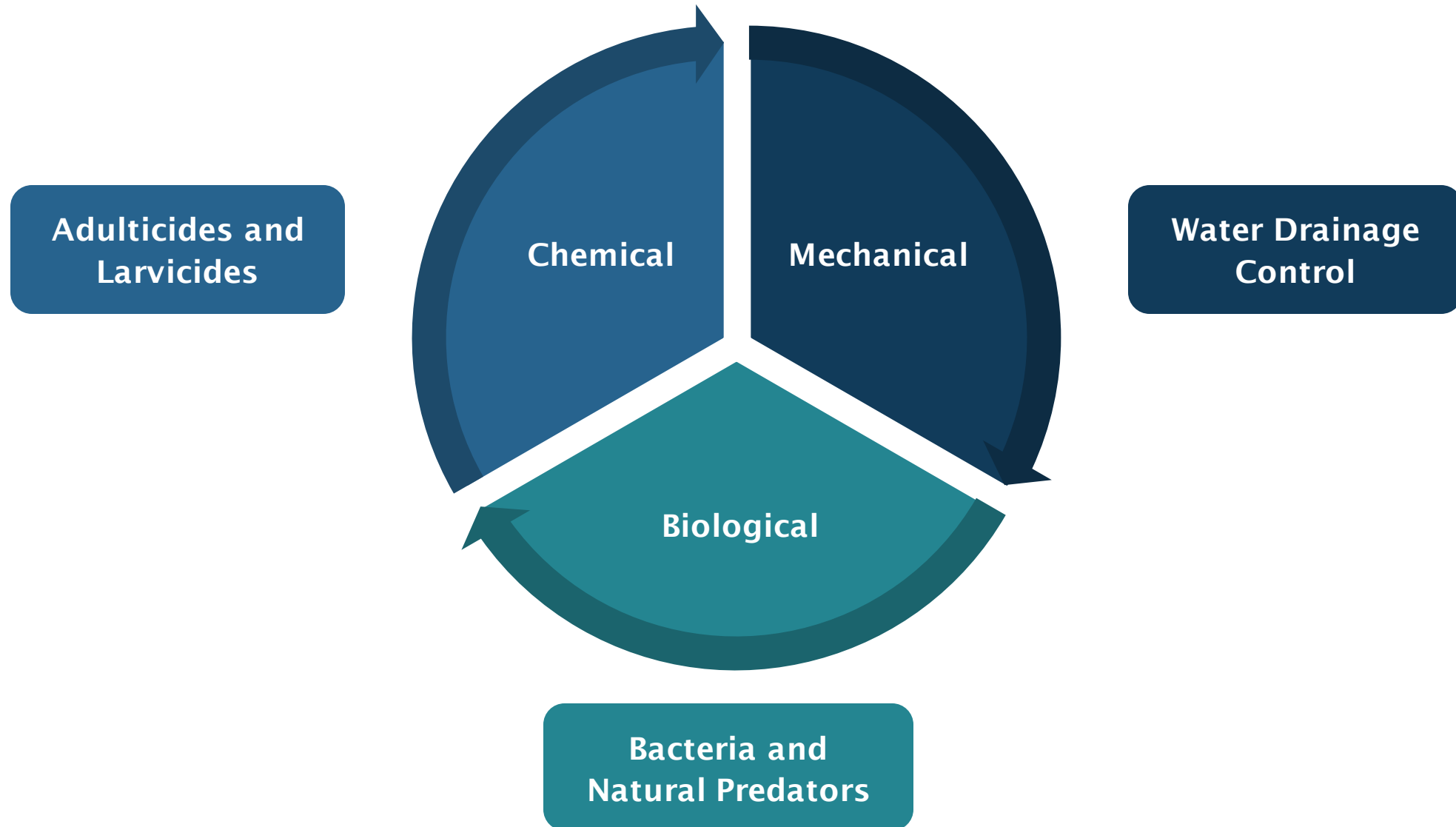
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➤ Mosquito vectors can transmit numerous diseases in the U.S.



➤ Use of biological treatments is increasing.



➤ Drone technology is the near future.



- Ground applications are the leading application method.
- These include handheld and vehicle-mounted spreaders.



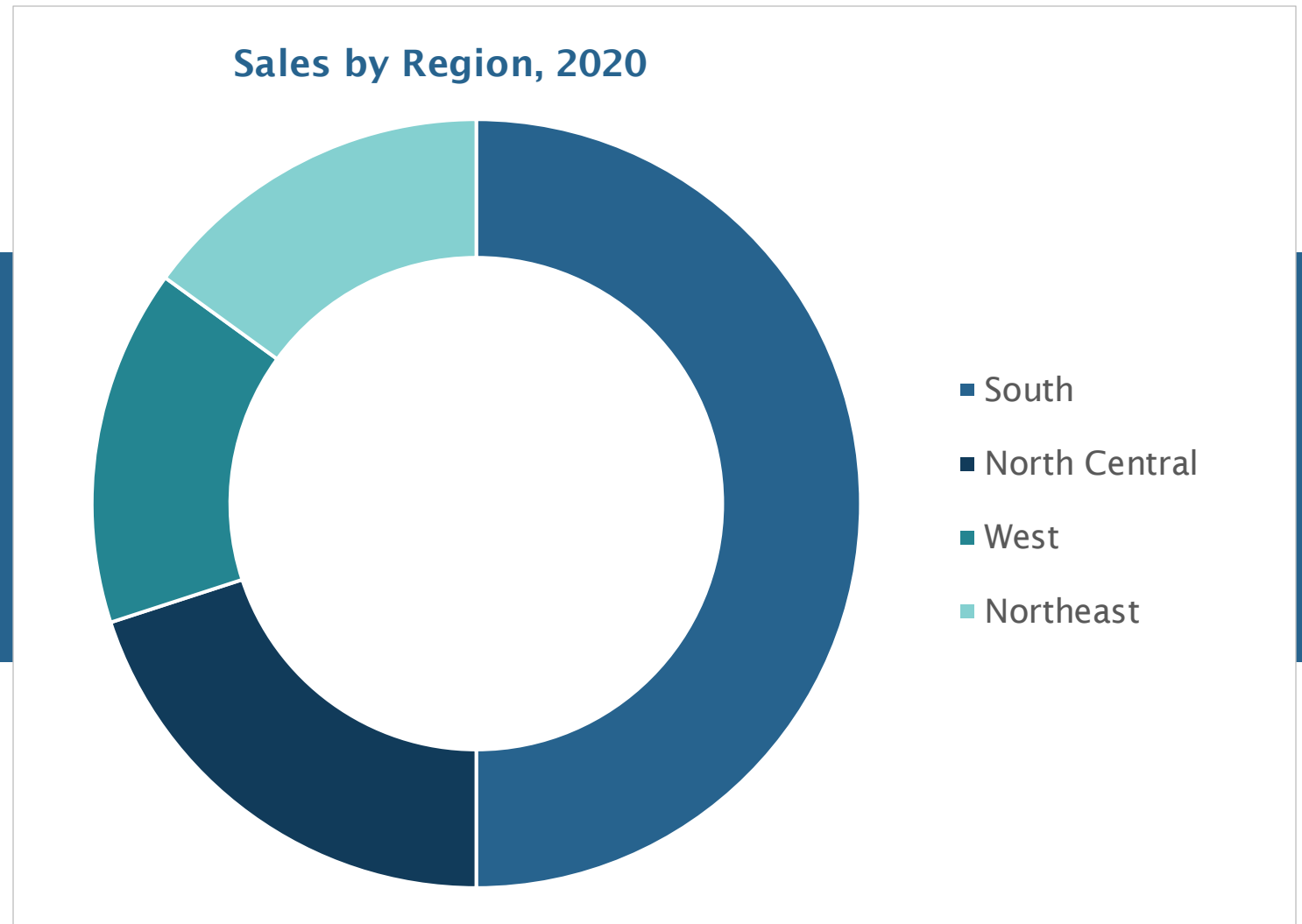
- Drones are being tested for applications.
- They are currently used for scouting and photography.



- Aerial applications include helicopters and fixed-wing airplanes.
- Mostly granular insecticides are applied

➤ Insecticide sales increased by 3% to more than USD 90 million in 2020.

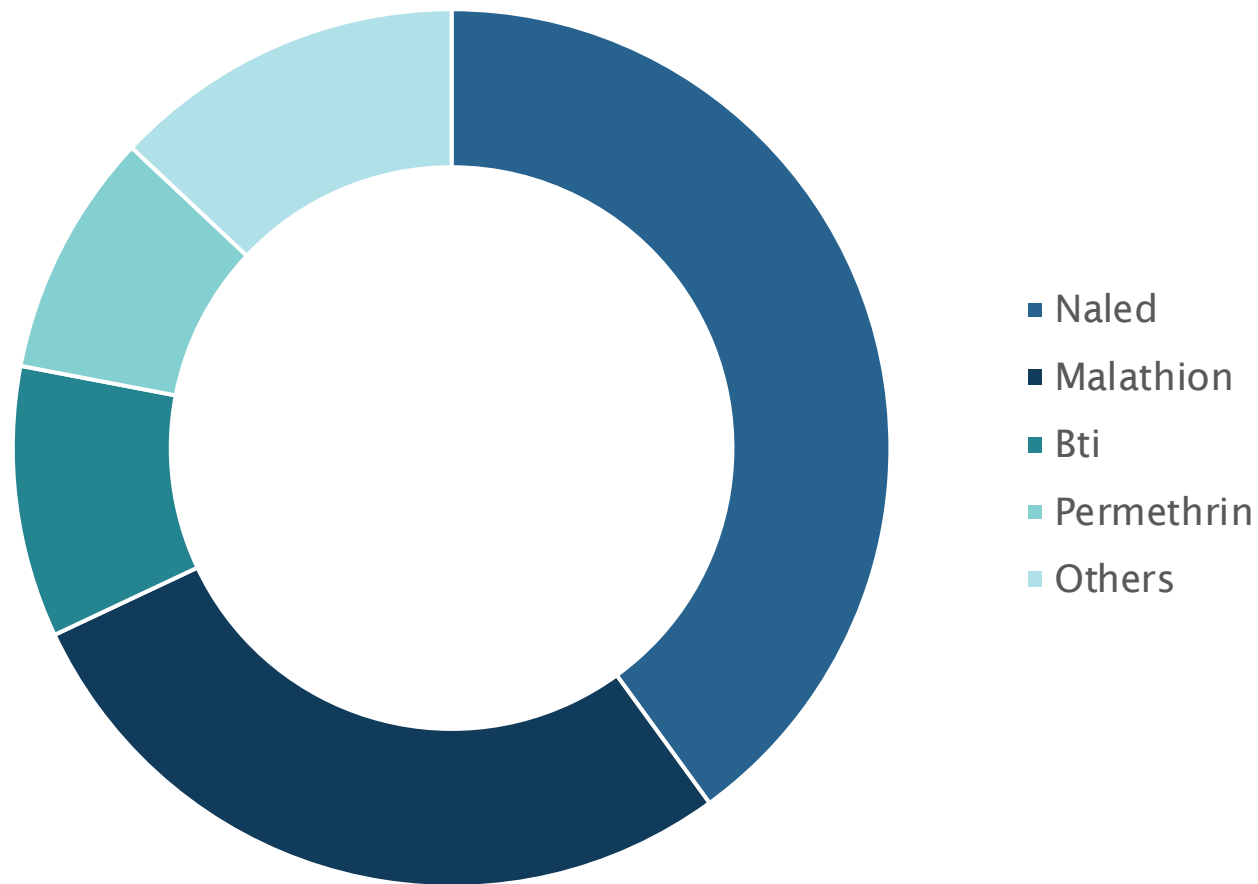
- Climate is the biggest factor for regional sales, with the South being top-ranked for its more humid weather.



➤ An estimated 1.7 million lbs of active ingredients were applied in 2020

- Naled and Malathion are commonly used in adulticide brands, such as Dibrom and Fyfanon.
- There is a wide range of Bti-based products, making up the largest share of larvicide sales.

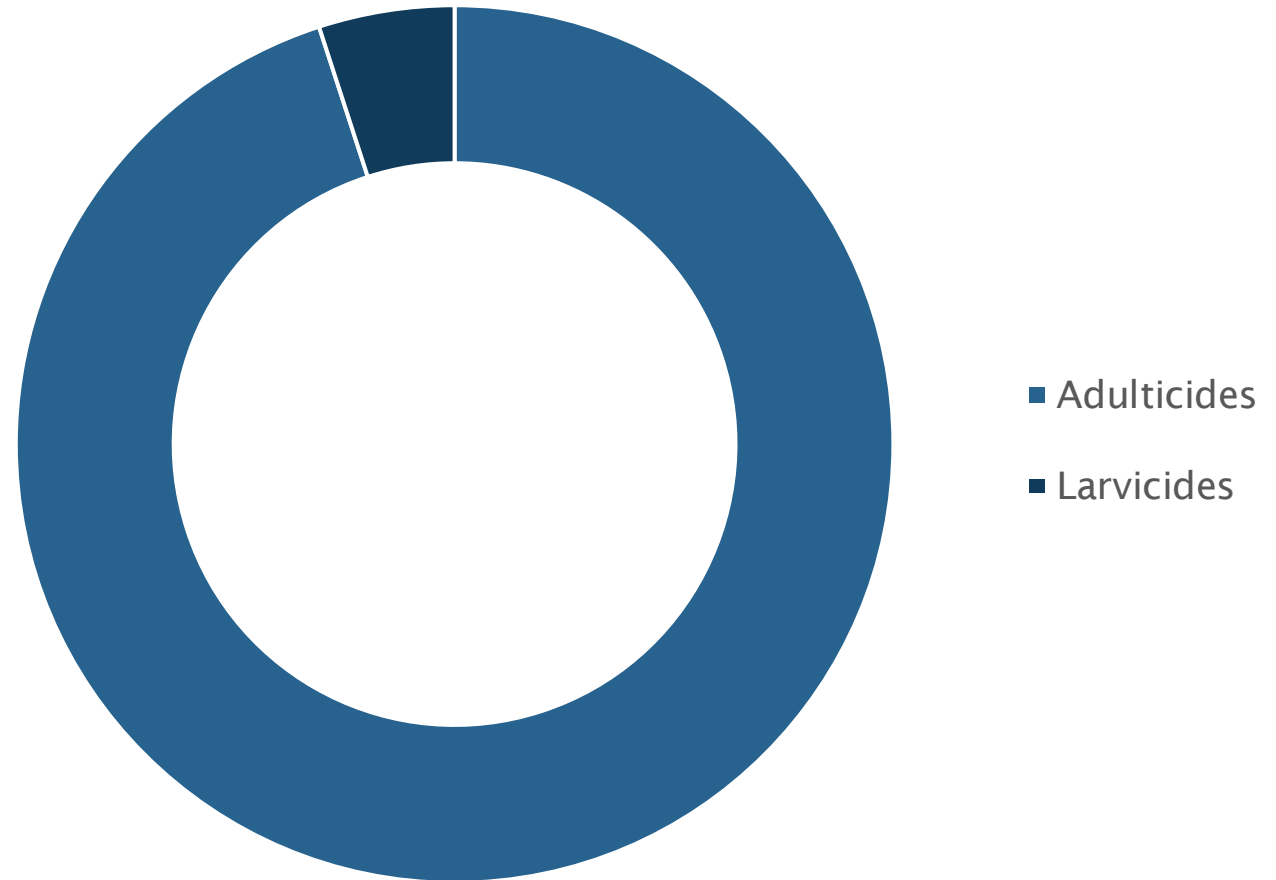
Volume of Active Ingredients, 2020



➤ 60% of the total available acres were treated in 2020.

- Not all acres are treated every year due to various constraints, including budget and environmental concerns.
- Adulticides were the predominantly applied products in 2020.

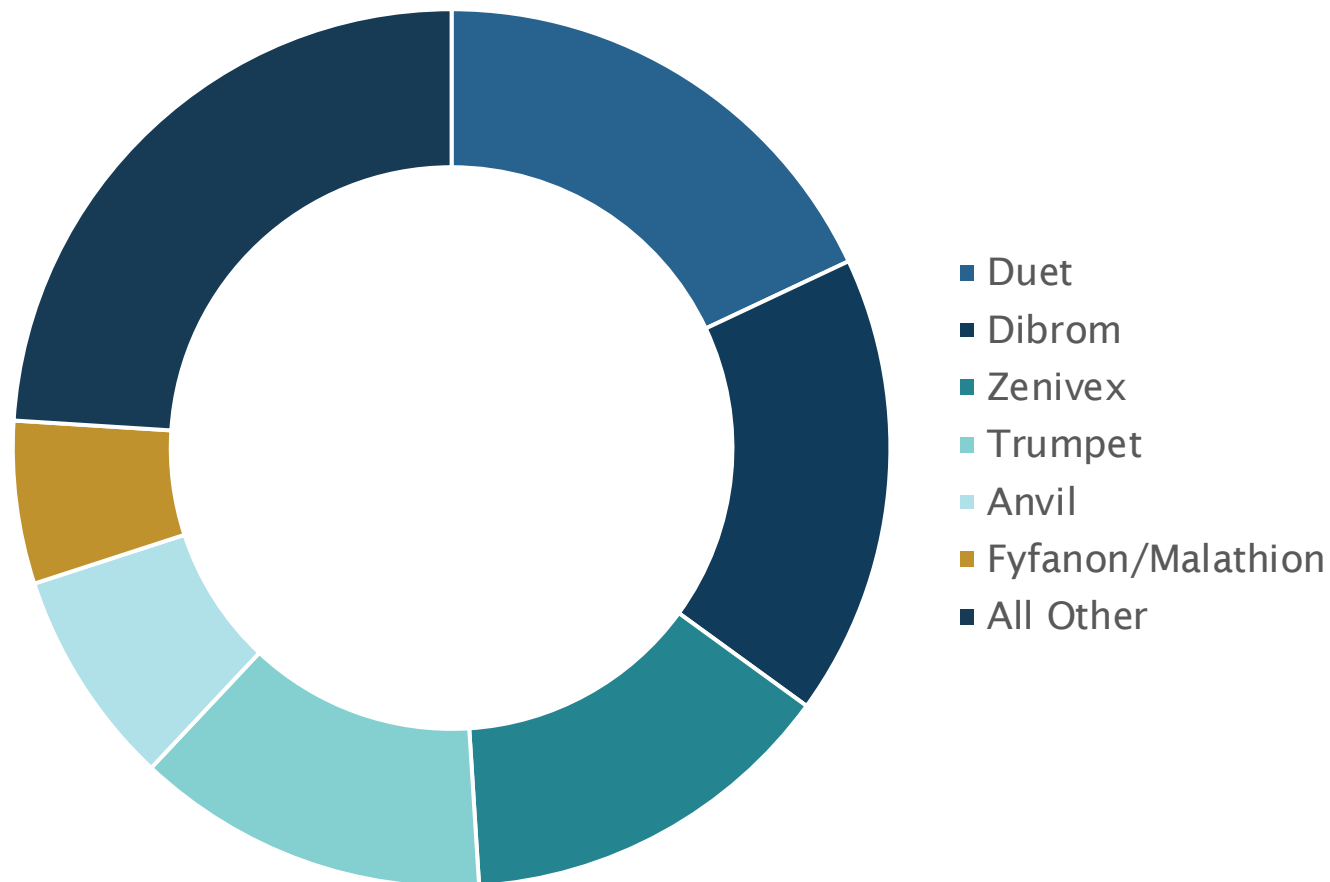
Acre Treatments by Product Type, 2020



➤ All adulticide products are applied as liquids.

- While there are various products, the top three account for almost 50% of sales.

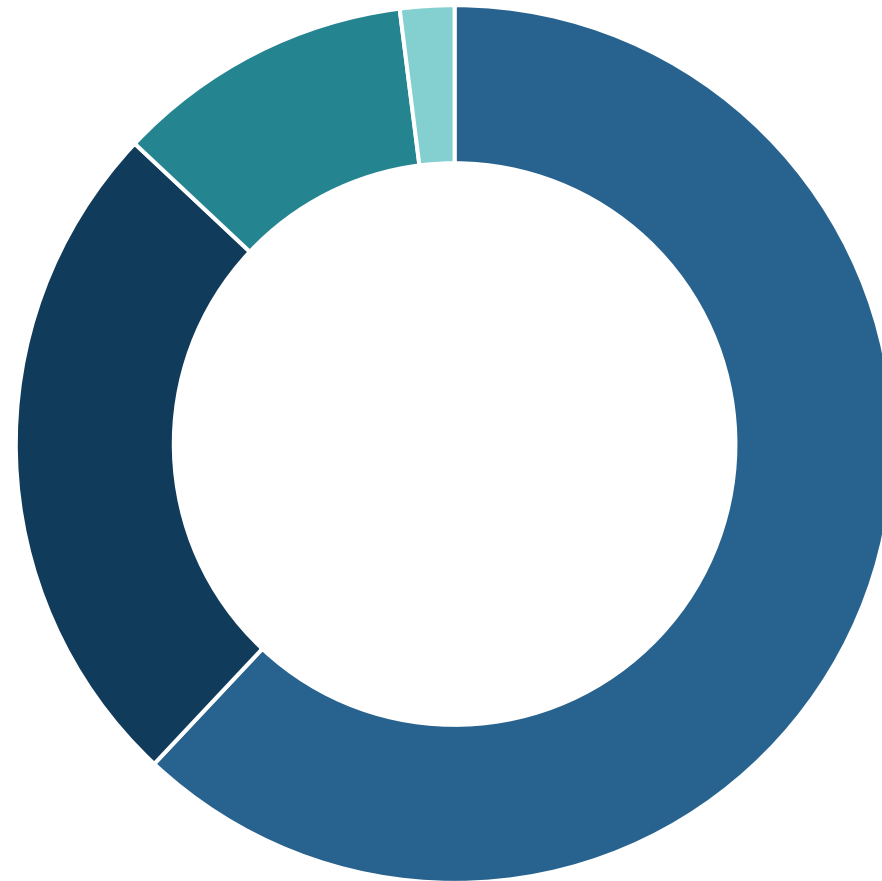
Sales by Adulticide Brands, 2020



➤ There are four main types of larvicide treatments.

- Biologicals, primarily based on Bti or Bs, account for almost half of the sales.
- Altosid, an IGR product, has the largest individual sales.

Sales by Larvicide Brands, 2020



- Biological
- Insect Growth Regulator
- Chemical
- Surface Films

➤ Mosquito Control Practices and Opinions

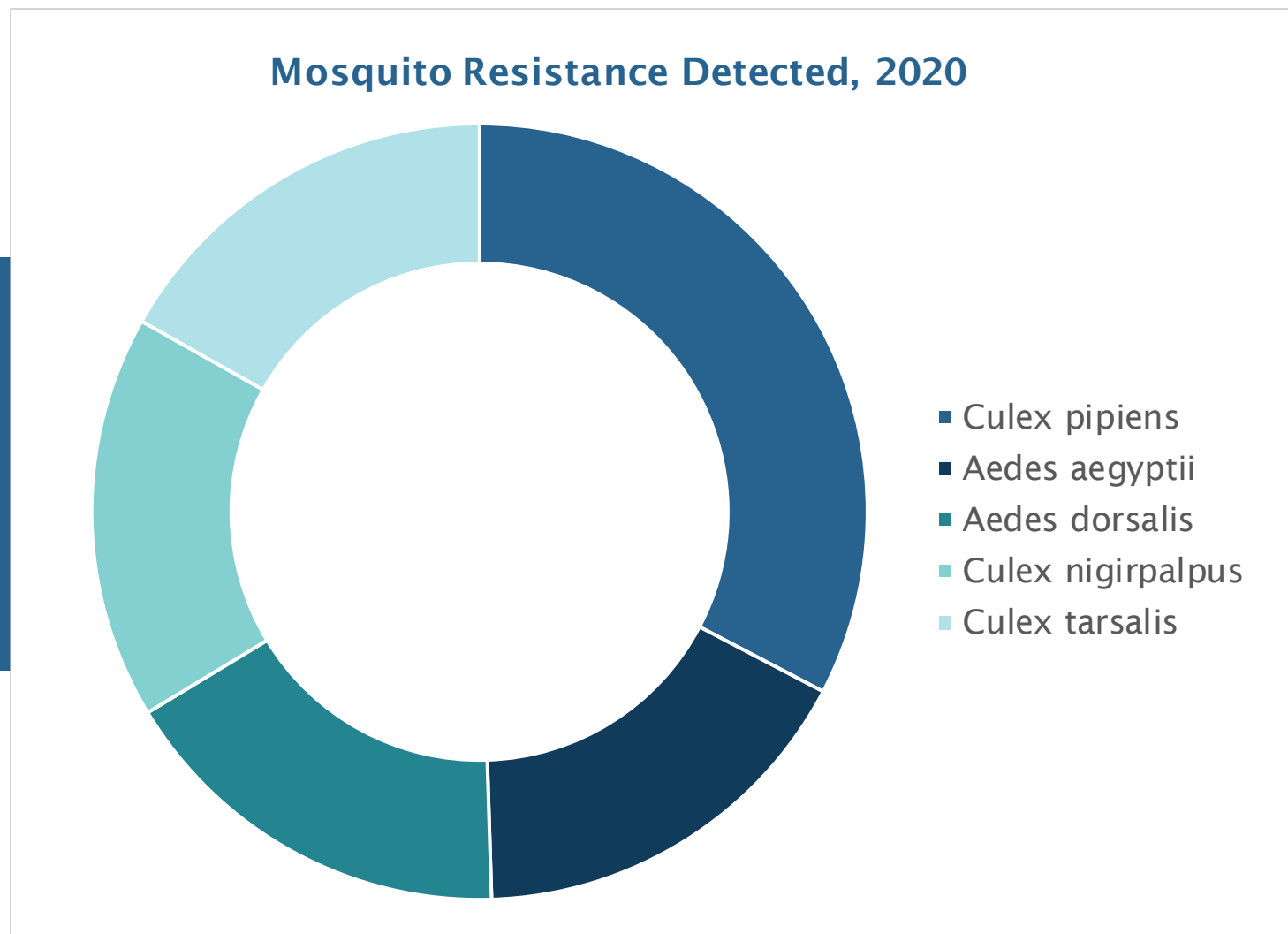


Kline conducted surveys with District Managers and Applicators to determine:

- Expenditures
- Contracting
- Chemical purchases for larvicides vs. adulticides
- Changes in purchasing in the past few years
- Vector control vs. nuisance control
- Diseases treated
- Mosquito resistance
- Public support for larvicide vs adulticides
- Most frequent citizen complaints
- Planned changes for 2021

➤ Example: Responses to Mosquito Resistance

- 95% of respondents noted no resistance.
- Those that encountered severe resistance indicated they would switch products to counteract the effect.



➤ Growth forecasted at 2.4% over the next five years

KEY DRIVERS



Changing climate
factors



Increased mosquito
surveillance



Drones



Increased larvicide
treatments



Kline is a worldwide consulting and research firm dedicated to providing the kind of insight and knowledge that helps companies find a clear path to success. The firm has served the management consulting and market research needs of organizations in the agrochemicals, chemicals, materials, energy, life sciences, and consumer products industries for more than 60 years.

For more information, visit www.KlineGroup.com

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