



NAVIGATING PESTICIDE USAGE IN SOUTH AFRICA

A RETAILER'S PERSPECTIVE

TOM MURRAY

TOMMURRAY@WOOLWORTHS.CO.ZA

SUSTAINABILITY 2.0
IMPACT, *re-imagined*

WOOLWORTHS IN BRIEF

Woolworths Food



OFFERING

A mainly Woolworths-branded range of high-quality, innovative, and sustainable food products, complemented by a curated selection of customers' most sought-after proprietary brands, enabling customers to complete their entire shop with us



BASED IN

South Africa, and trading in South Africa and a further 6 countries in Southern Africa



309 217M²

trading space across 669 store locations

65%

contribution to Group turnover and concession sales

69%

contribution to Group adjusted EBIT

6.6%

online sales contribution, with sales fulfilled from physical stores, available for scheduled, Click-and-Collect or on-demand delivery

3.5M

active loyalty members, tracking 87% of revenue

Woolworths Fashion, Beauty and Home

OFFERING

Trusted, quality wardrobe essentials, edited relevant fashion, beauty and homeware, and highly selective offering of third-party brands that enhance the overall customer shopping experience



BASED IN

South Africa, and trading in South Africa and a further 10 countries in Southern Africa



421 849M²

trading space across 292 store locations

34 967

employees

19%

contribution to Group turnover and concession sales

31%

contribution to Group adjusted EBIT

6.6%

online sales contribution, with sales fulfilled from dedicated distribution facility, available for home delivery

89%

targets achieved on sustainability scorecard



WOOLWORTHS FOOD LANDSCAPE



**319m
UNITS**

**199
DATA
POINTS**

↑
**Collaborating in
industry bodies:**
AgriSA, SABO,
SAOSA, IPW &
SIZA

**R 8.58 BN
Turnover**
(Produce & Horti)

**6 FOOD
GROUPS**

**161 Primary
& 154
Secondary
Suppliers**
(+900 Sites)

**± 88 812
Ha**

**25 FARMING
METHODOLOGIES**

**+550
VARIETIES**



WOOLWORTHS FOOD LANDSCAPE



**AGRICULTURE IS WW FOOD BIGGEST
OPPORTUNITY BUT ALSO OUR
GREATEST RISK.**



PUBLIC CONCERNS

DEADLY PESTICIDES
Cabinet approves Terbufos ban in crucial step towards protecting SA's children

BAN HARMFUL PESTICIDES NOW!

WARNING PESTICIDES
FIRE WILL CAUSE TOXIC FUMES

What killed them?
Nairobi tragedy

Toxic Pesticide Terbufos Identified as Cause of Death for Six Soweto Children
October 28, 2024 | 0 comments

Are South Africa's pesticide rules outdated?
Farm workers and consumers should be worried, says public health expert. But industry body says food security depends on the pesticides in use.
4 July 2022 | By Liezi Human
News | South Africa

CAUTION!
PESTICIDE APPLIED AREA
KEEP OFF

Bayer, your pesticides are deadly
WomenOnFarmsProject @PesticidesR4U

AS A RESPONSIBLE & TRUSTED RETAILER, WE HAVE “FIELD TO FORK” ACCOUNTABILITY ACROSS THE LIFE-CYCLE OF THE PRODUCE WE SELL TO ENSURE THE HEALTH & SAFETY OF OUR FARM WORKERS AND CONSUMERS.



PESTICIDES: FRIEND OR FOE?



USAGE CONCERNS

- **EC50 = HOW MUCH FUNGICIDE IS NEEDED TO SLOW DISEASE BY 50%.**
- **LOW EC50: ONLY A SMALL AMOUNT OF THE PESTICIDE IS NEEDED TO PRODUCE 50% OF THE MAXIMUM EFFECT.**
- **HIGH EC50: A HIGH VALUE, PARTICULARLY ABOVE 1, INDICATES A LOWER POTENCY SUBSTANCE, I.E. THE DISEASE IS HARDER TO CONTROL.**
- **IT IS BEST MEASURED OVER TIME AND RESULTS COMPARED.**



USAGE CONCERNS

Fungicide susceptibility testing: Botrytis Job 2026-Q07

Table 1. EC50 values of different fungicides against Botrytis isolates

Crop	Folpan (Folpet)	Luna Privilege (Fluopyram)	Odeon (Chlorothalonil)	Scala (Pyrimethanil)	Score (Difenoconazole)	Switch (cyprodinil & fludioxonil)	Teldor (Fenhexamid)	Teacher (Fludioxonil)	Essence (azoxystrobin)	Sumisclex (Procymidone)
Rose	3.18	0.5	1.26	17.32	1.76	0.05	0.04	0.14	R	R
Rose	0.25	>30	0.99	5.52	0.08	0.13	R	0.14	R	R
Rose	3.3	R	0.86	0.01	0.04	0.1	1.59	0.07	R	R
Rose	0.1	R	1.58	8.87	0.04	0.13	R	0.18	R	R
Rose	1.65	8.19	1.77	4.38	35.03	0.56	R	0.05	R	R
Rose	0.43	0.04	X	0.01	1.91	X	R	0.26	R	R
Rose	0.4	0.5	0.3	21.54	0.34	0.41	R	0.16	R	R
Rose	0.82	0.35	1.85	X	0.14	0.03	0.29	0.11	R	R
Rose	0.64	R	49.73	R	R	R	R	0.6	R	R
Rose	0.05	R	X	X	0.44	0.01	R	0.33	R	R
Rose	>30	R	1.6	0	2.81	0.18	R	0.24	R	R
Rose	2.13	R	1.9	1	2.81	0.11	0.27	0.6	R	R
	M04	7	M05	9	3	9 & 12	17	12	11	2

X – test failed

R – no effect on fungal growth at highest fungicide concentration (resistance phenotype)



BALANCING ACT



WOOLWORTHS VISION ZERO

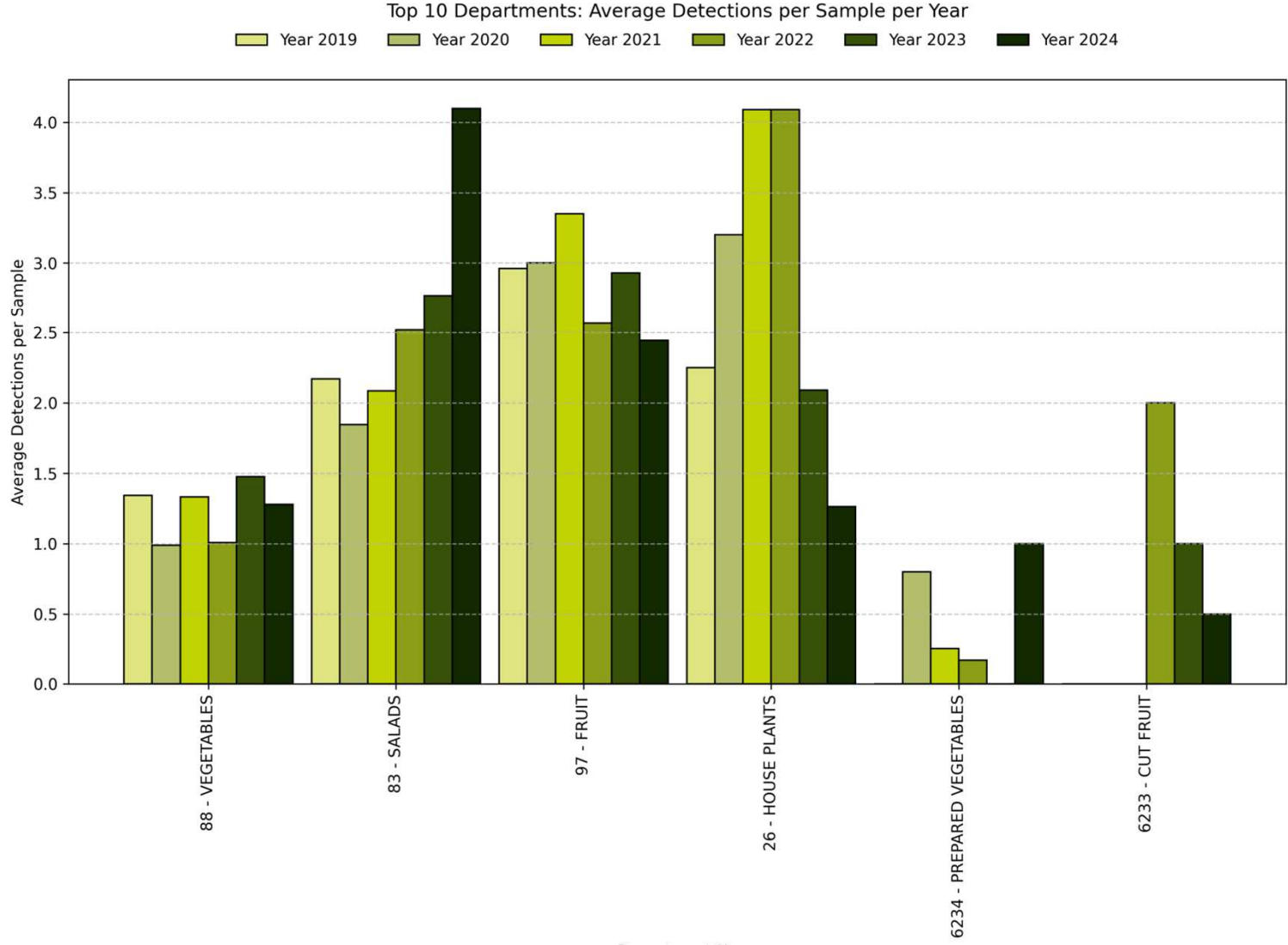
- Not criminalising pesticides
- Protect non-HHP pesticides
- No routine usage
- < 0.01ppm (excluding post-harvest fungicides)
- Follow EU/UK standards
- Pragmatic – must make economic sense
- Food security – must address challenges
- Critical part of FFF going forward

OUR GOAL IS TO REDUCE OUR DEPENDENCY ON SYNTHETIC PESTICIDES.

THEY MUST FORM PART OF A FULLY INTEGRATED PROGRAM, WITH THE OPTIMAL CONTROL MEASURE, WHICH MAY NOT BE A PESTICIDE, BEING USED AT THE OPTIMAL TIME.



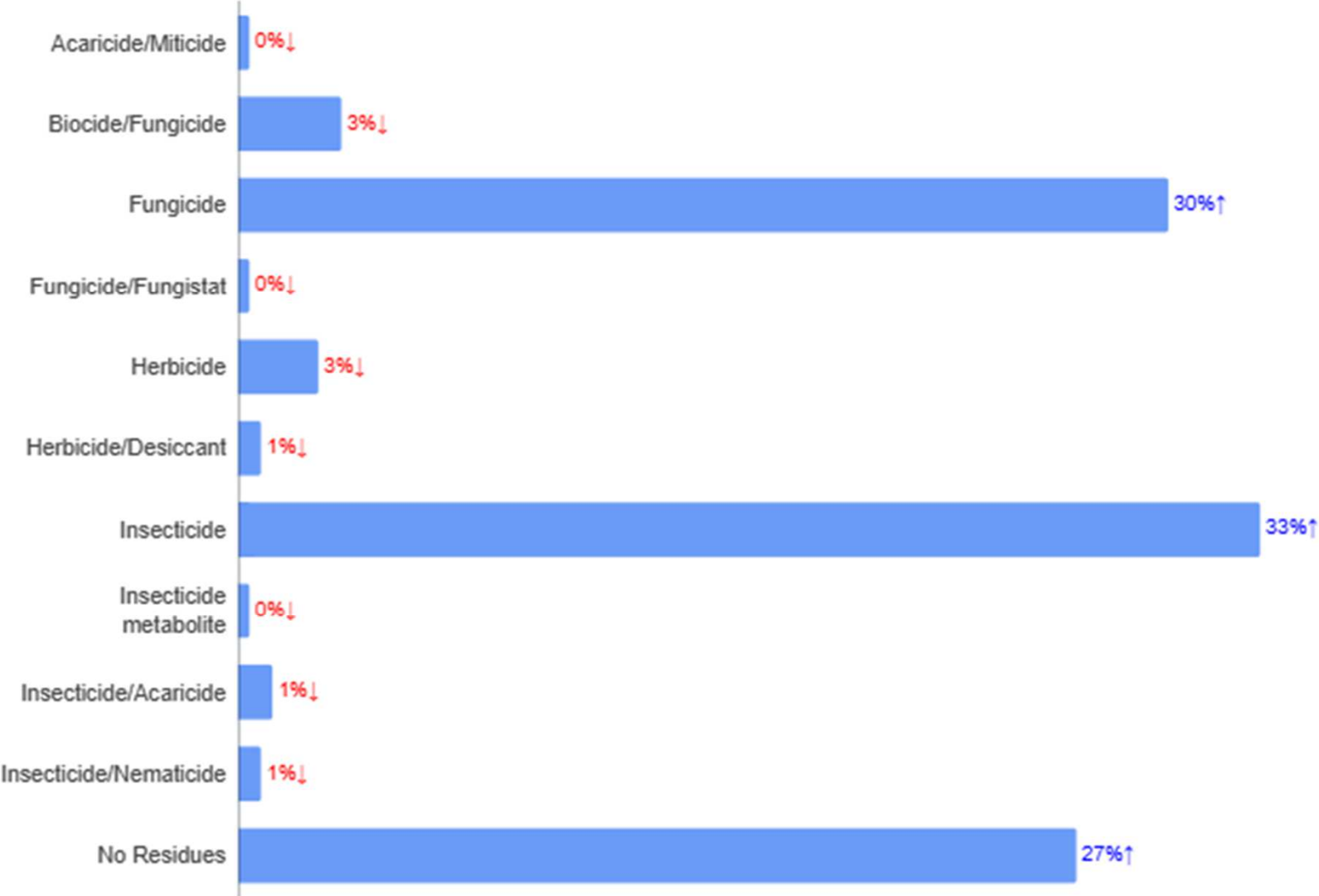
WOOLWORTHS APPROACH



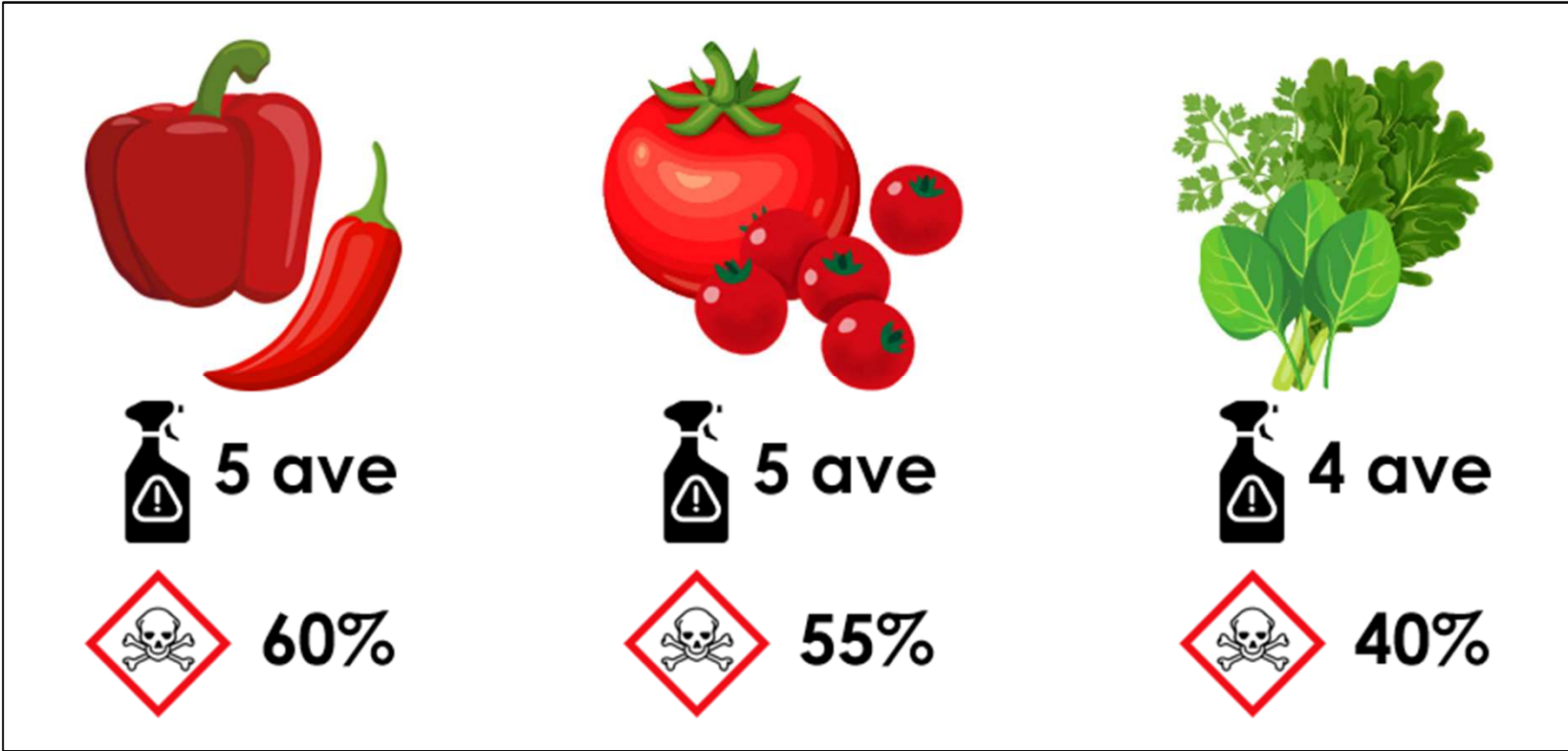
- **HISTORICAL ANALYSIS OF WW BRAND INTEGRITY FINDINGS.**
- **USED TO MAKE DATA-DRIVEN DECISION ON CROP FOCUS.**



WOOLWORTHS RESIDUE TESTING DATA



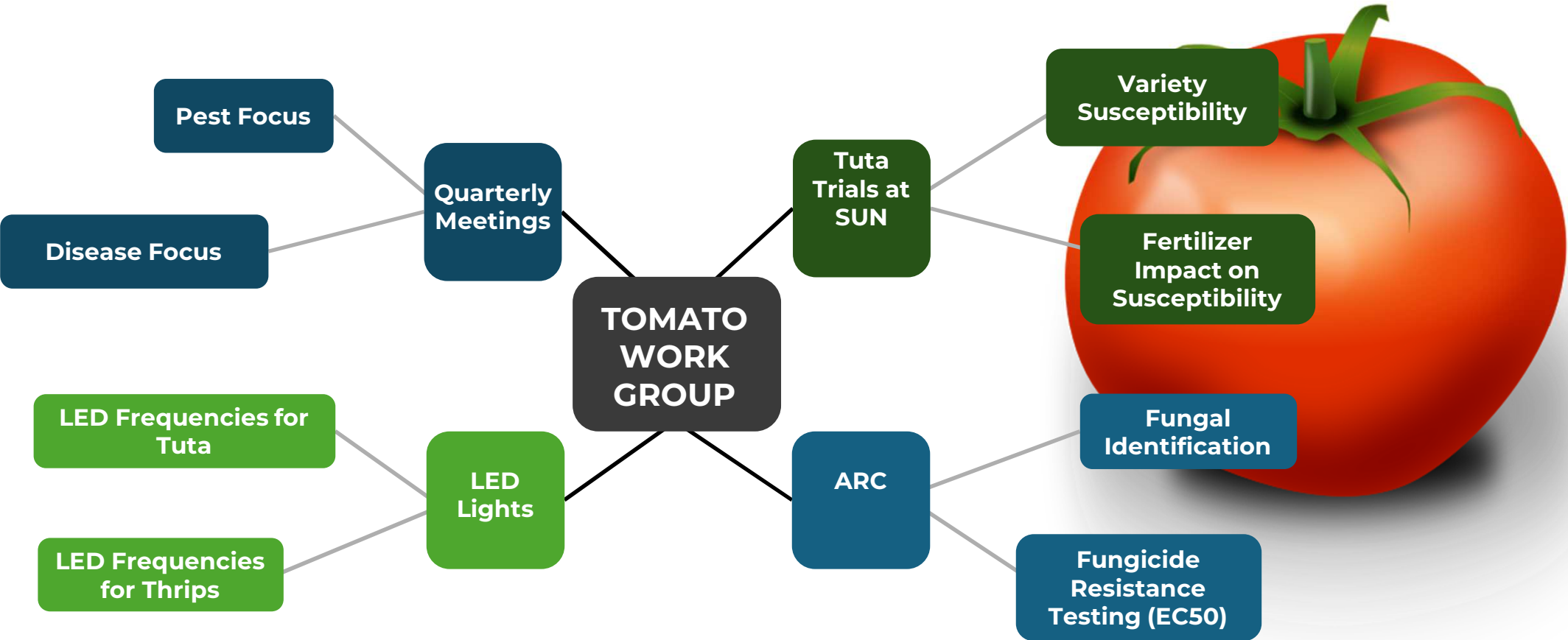
WOOLWORTHS APPROACH



- **TOP 3 FOCUS: TOMATO, PEPPER & KALE**
- **BASED ON NUMBER OF ACTIVES FOUND PER SAMPLE AND THE TYPE OF ACTIVES BEING USED**



WOOLWORTHS APPROACH



- INITIAL CROP FOCUS: **TOMATO**
- MULTI-STAKEHOLDER INITIATIVE, WITH INPUT FROM GROWERS, INDUSTRY & WOOLWORTHS
- EACH PROJECT OWNED BY ONE WW TECHNOLOGIST AND SUPPLIERS



STAKEHOLDER PROJECTS

STELLENBOSCH UNIVERSITY (SUN)

PROJECT OBJECTIVES

VARIETAL SEMIOCHEMICAL EFFECT ON TUTA BEHAVIOUR ON TOMATO

EFFECT OF NITROGEN RATES ON PLANT HEALTH

TUNED LED LIGHTS TUTA ATTRACT & KILL

AGRICULTURAL RESEARCH COUNCIL (ARC)

PROJECT OBJECTIVES:

IDENTIFICATION OF COMMON FUNGAL PROBLEMS LEADING TO ROT OF TOMATOES & PEPPERS

FUNGICIDE RESISTANCE TESTING (EC50)

DROPSIGHT

PROJECT OBJECTIVES

SPRAYER EFFICIENCY TESTING ACROSS ALL WORKGROUP GROWERS



Stellenbosch
UNIVERSITY
IYUNIVESITHI
UNIVERSITEIT



STAKEHOLDER PROJECTS

SOILTECH

PROJECT OBJECTIVES

DNA/ PCR IDENTIFICATION OF FUNGAL ISOLATES UP TO SPECIE LEVEL

CONDUCT LAB, FIELD & POST HARVEST TRIALS USING SOILTECH BIOLOGICAL PRODUCTS

DEVELOP IPM AND BIOLOGICAL TREATMENT PLANS



LABSERVE

PROJECT OBJECTIVES

DEVELOPMENT OF PESTICIDE RESIDUE DASHBOARD ALLOWING ALL GROWERS TO COMPARE THEIR RESULTS DOWN TO PRODUCT LEVEL



OASYS IPM LIGHTING SOLUTIONS

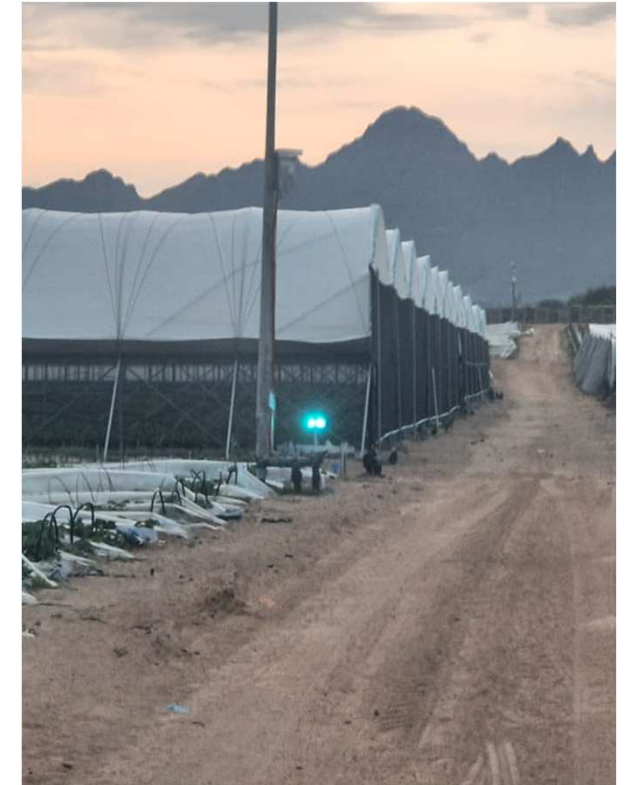
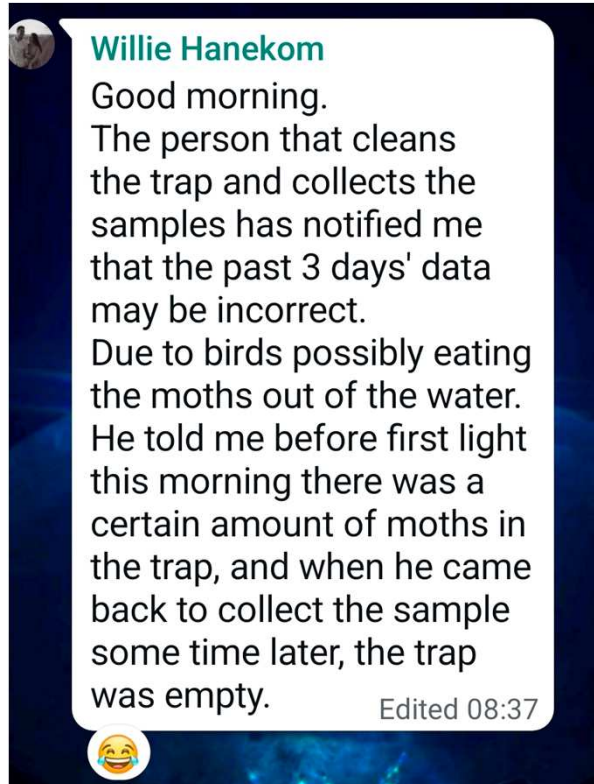
PROJECT OBJECTIVES

DEVELOP TUNED LED LIGHTING AS AN ALTERNATIVE TO INSECT TRAPS

TESTING DIFFERENT LIGHT FREQUENCIES ON PEST SPECIES (STORAGE PESTS, MOTHS, STINKBUGS, THRIPS)



OUR PROGRESS

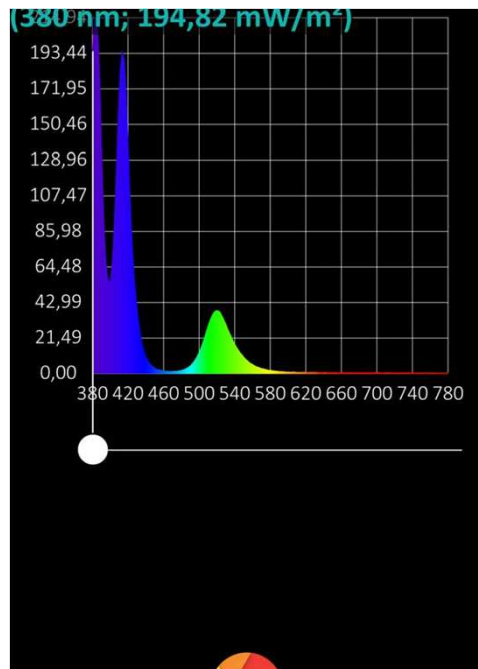


LED LIGHTS:

6 X LED PAN LIGHTS (8 FREQUENCIES), 4 X INDOOR FAN LIGHTS (2 FREQUENCIES) & 1 X LED THRIPS LIGHT (2 FREQUENCIES)



OUR PROGRESS



LED LIGHTS:

TUNED FOR MOTH PEST SPECIES (TUTA, BOLLWORM, POTATO TUBER MOTH, DIAMOND BACK MOTH, FALL ARMY WORM)



OUR PROGRESS



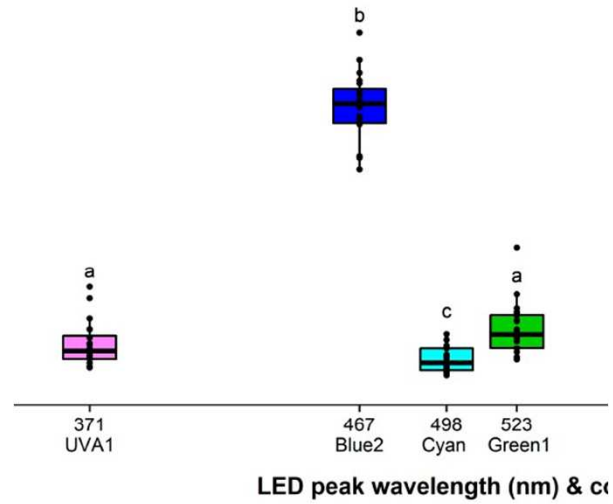
OUR PROGRESS



**LED Lights:
Tuned for stinkbug (and moth pest species)**



OUR PROGRESS



Length preferences of *Frankliniella occidentalis* in response to different LED colors (LEDs) in the complete spectral range of ultraviolet light. Significant difference model, Tukey test, $p < 0.05$, $n = 20$).



**Indoor LED Lights:
Tuned for thrips and moths**



OUR PROGRESS



Tom Murray

Woolworths Produce & Horticulture
Technical Manager: Fruit, Cut Fruit, Fresh
Juice & Horticulture

tommurray@woolworths.co.za



Tom Murray

WhatsApp contact

