



Overview of X Sterile Insect Technique



Sampie Groenewald
General manager



CGA CITRUS SUMMIT
Research

Background

- FCM SIT fast-tracked and commercialised in October 2006, with first commercial release of sterile FCM in October 2007 in Western Cape
- Current shareholding structure:
 - 51% - River Bioscience
 - 49% - Technology Innovation Agency
 - Currently negotiating a buy-out of TIA to ensure full ownership by SA citrus growers
- Xsit: a commercial company with the goal of re-investing profits into the citrus industry for the benefit of its shareholders, the citrus growers.

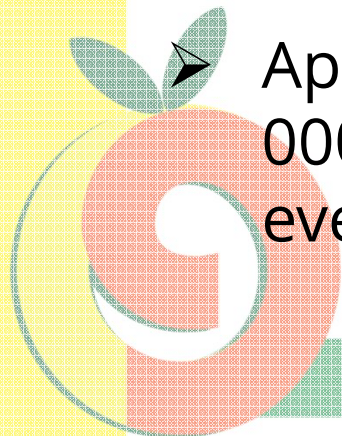


Research

Product Range

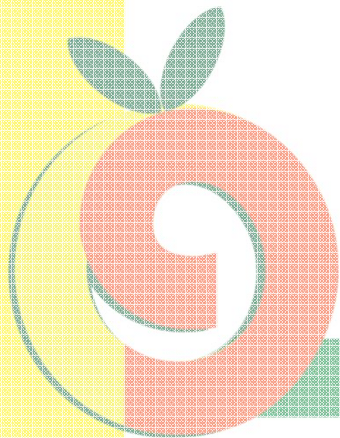
FCM-SIT

- Production, sterilisation and distribution of (currently) 5 million FCmoths per day over 12 700 hectares of contracted citrus orchards.
 - Monitoring and analysis of data, as well as providing excellent technical guidance in support of FCM management as a whole (centre of excellence).
 - Goal of obtaining consistently high ratio of sterile to wild moths to lower probability of successful wild mating, reducing population of wild FCM over time.
- Application is done by Gyrocopter, delivering roughly 1 000 moths, twice per week over a 10 month period on every contracted hectare.



Research

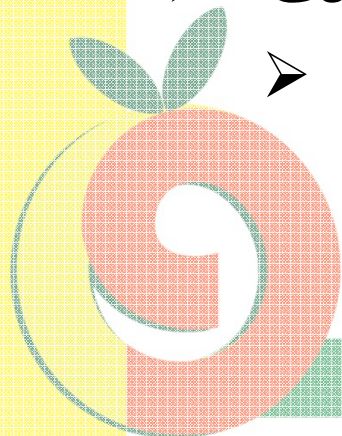
Moth Release



Research

Areas of Application

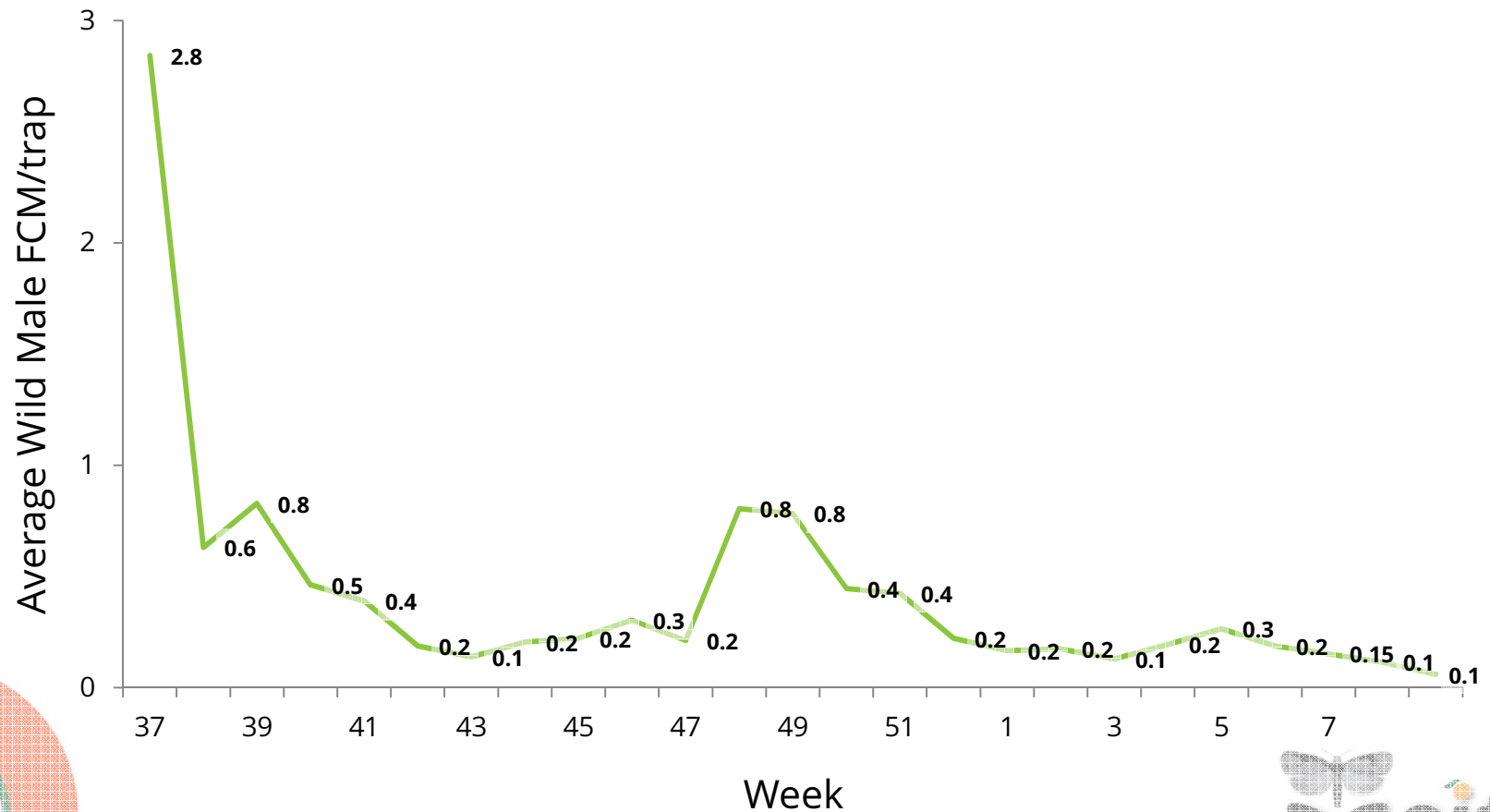
- Western Cape in the Olifants River Valley (ORV):
 - From 1 500 hectares in October 2007 to 4500 hectares
 - 90% of citrus orchards in the area
- Sundays River Valley (SRV)
 - From 1 500 hectares in 2011 to 6500 hectares
 - 80% of available area
- Gamtoos River Valley (GRV)
 - 2014 start-up on 1 700 hectares



Research

Results: GRV 2014/15 Season

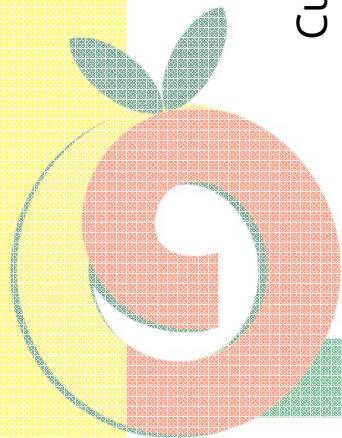
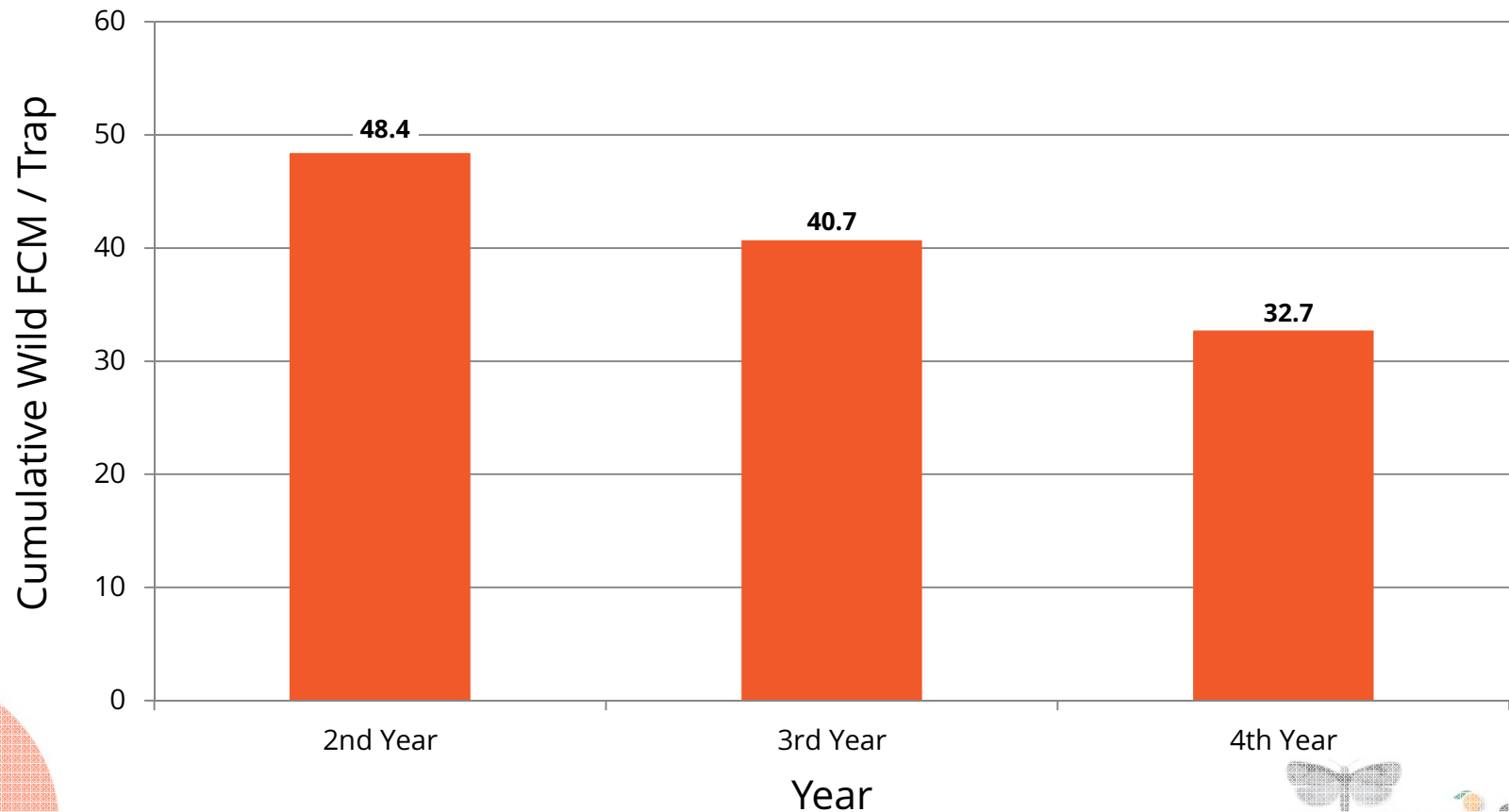
- Fantastic start-up, suppressing wild FCM population from the word 'GO'



Research

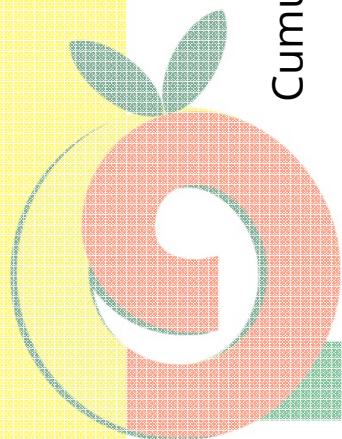
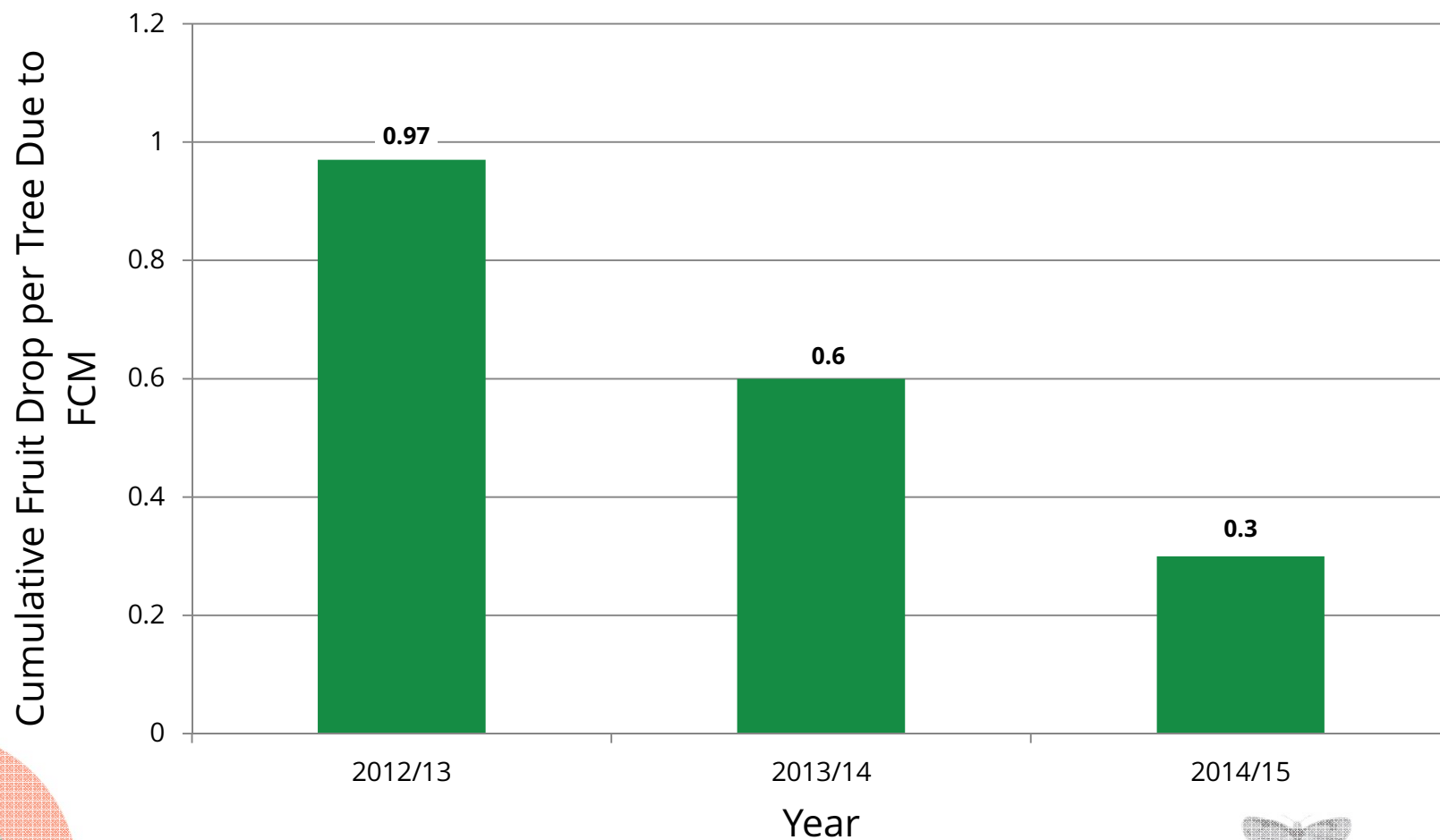
Results: SRV 2010/11 to 2014/15

- Steadily decreasing the population the longer the program is applied.



Research

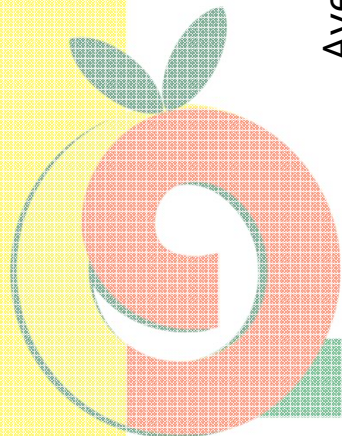
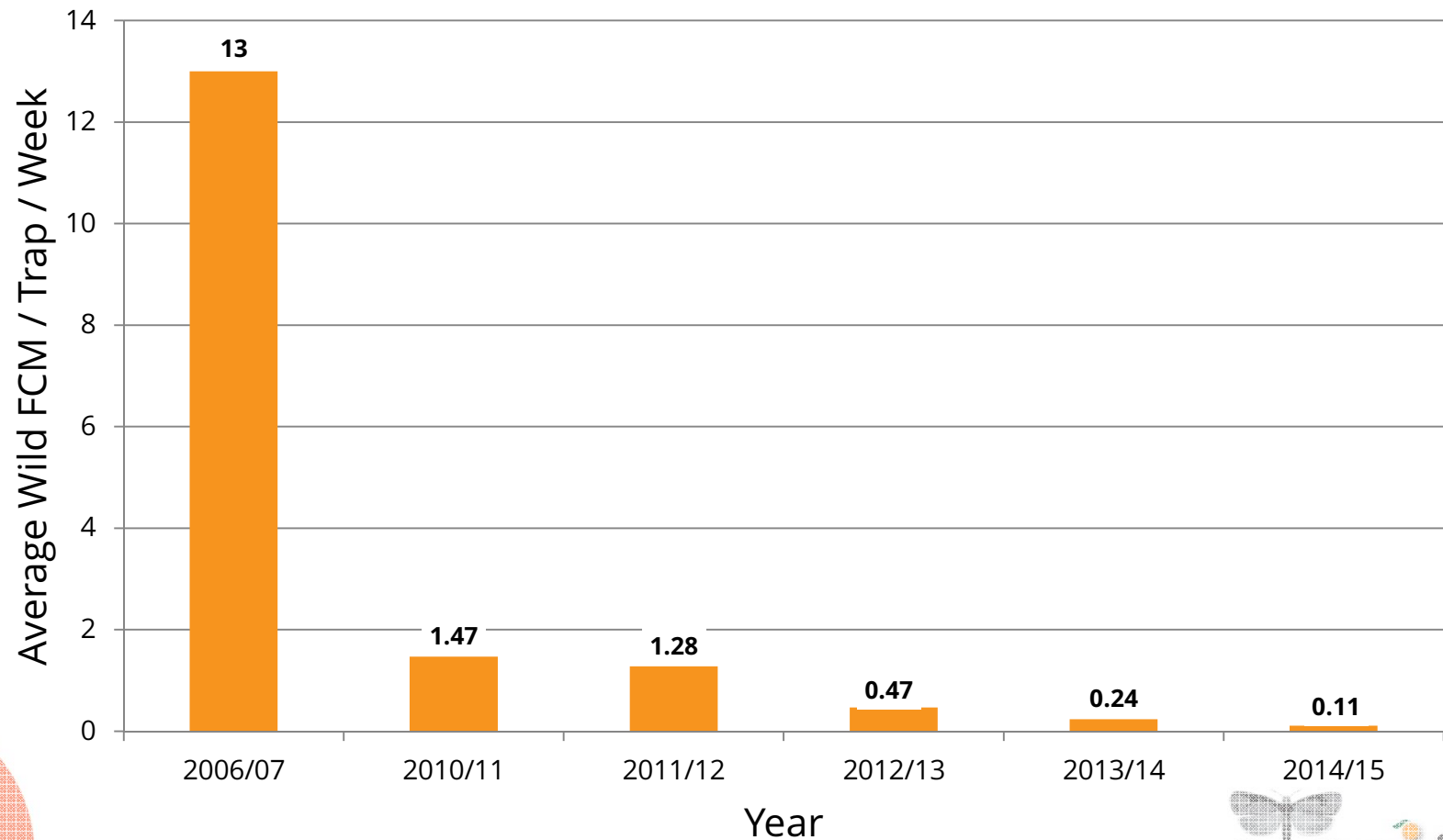
Results: SRV 2010/11 to 2014/15



Research

Results: WC 2007/08 to 2014/15

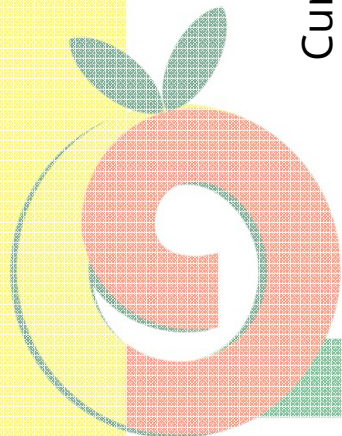
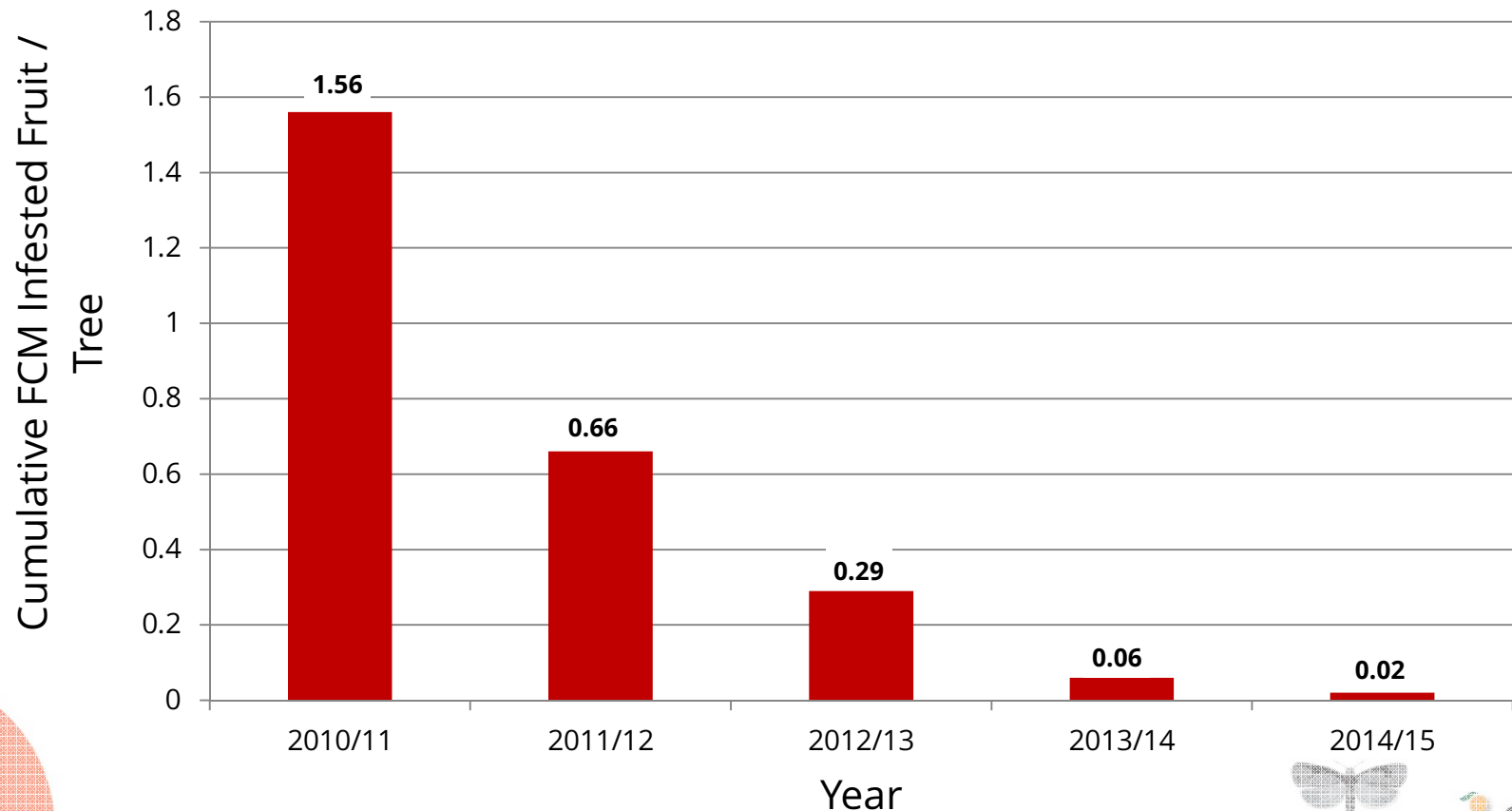
- Reduction in wild FCM population by 12000%



Research

Results: WC 2007/08 to 2014/15

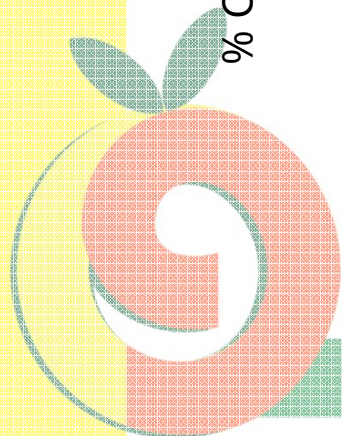
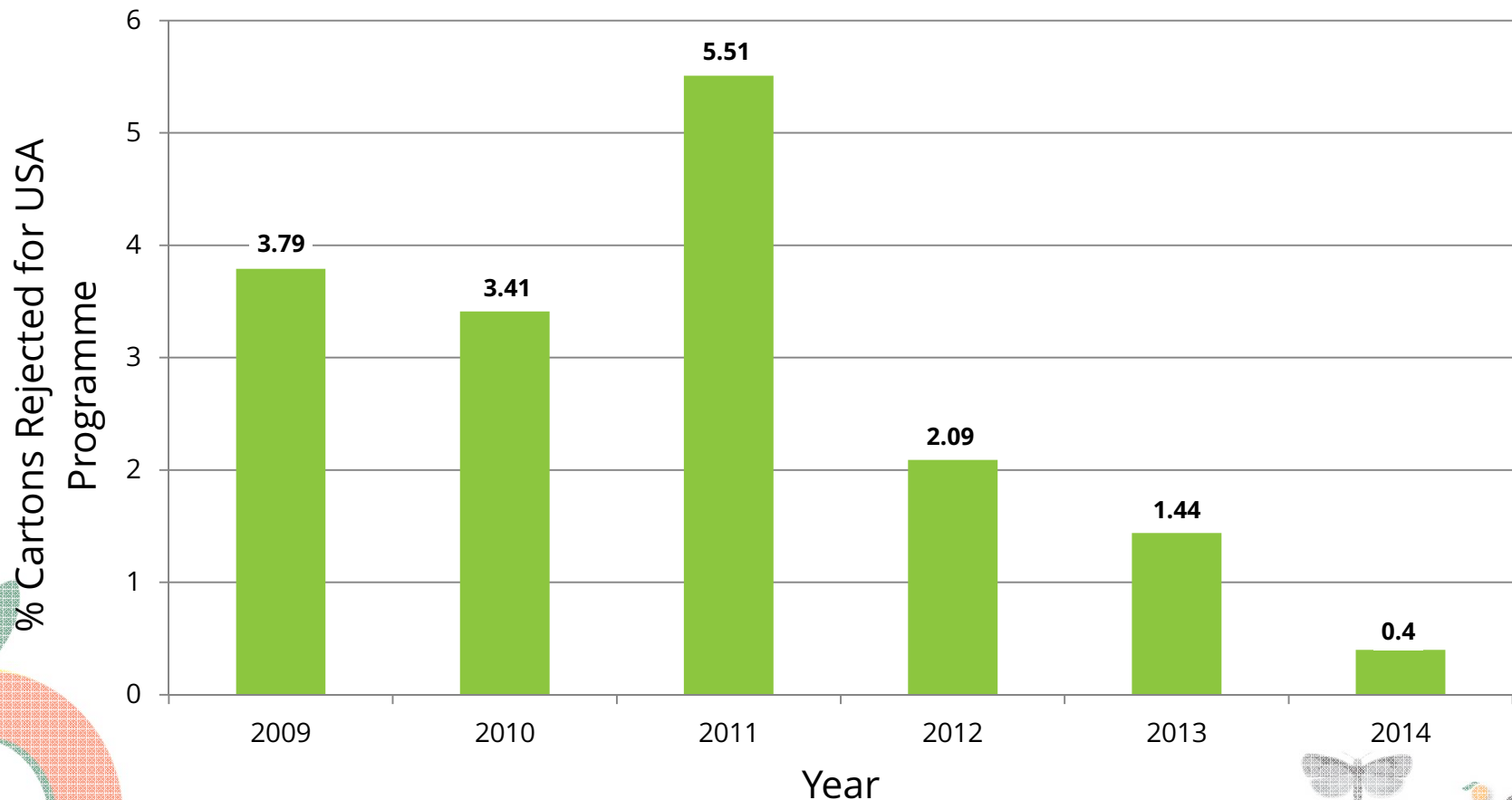
- Only 10 FCM infested fruit on average per week in 3860 data trees in current season.



Research

Results: WC 2007/08 to 2014/15

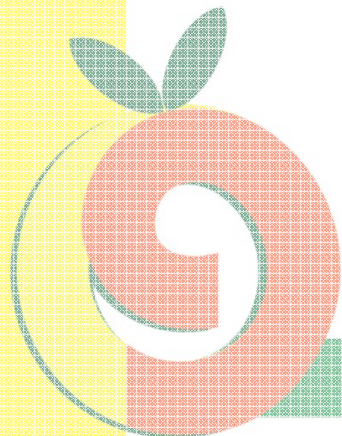
- Reducing risk of FCM interceptions, associated waste, protecting and increasing market-share.



Research

Future Rollout

- Eastern Cape:
 - 5 500 hectares
- Northern areas:
 - Sufficient buy-in necessary to ensure further rollout, with an ultimate goal of building another facility in the north
- Spare capacity to be utilised on other susceptible crops, i.e. table grapes, stone fruit, peppers, etc.



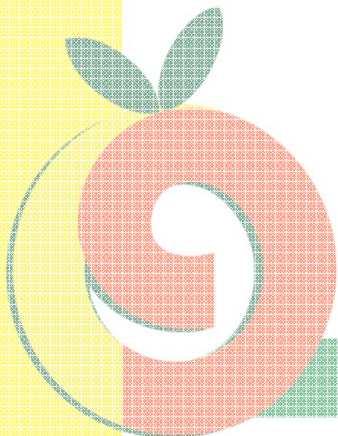
Research

Aerial Fruit Fly Baiting

- Application of fruit fly control measures using gyrocopters
- Goal of using existing capital and operational structures to generate additional income and keep SIT as affordable as possible.



Research





Thank you

Sampie Groenewald

sg@xsit.co.za | (022) 921-2993



CGA CITRUS SUMMIT

Research