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Your Fumigation Management Plan is More than the “Magic Beans”

GEAPS EXCHANGE
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Todd Wilhelm

UPL Ltd.

Regional Manager

Your Fumigation Management Plan is More than the “Magic Beans”

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To Access Survey, enter this into your website browser:

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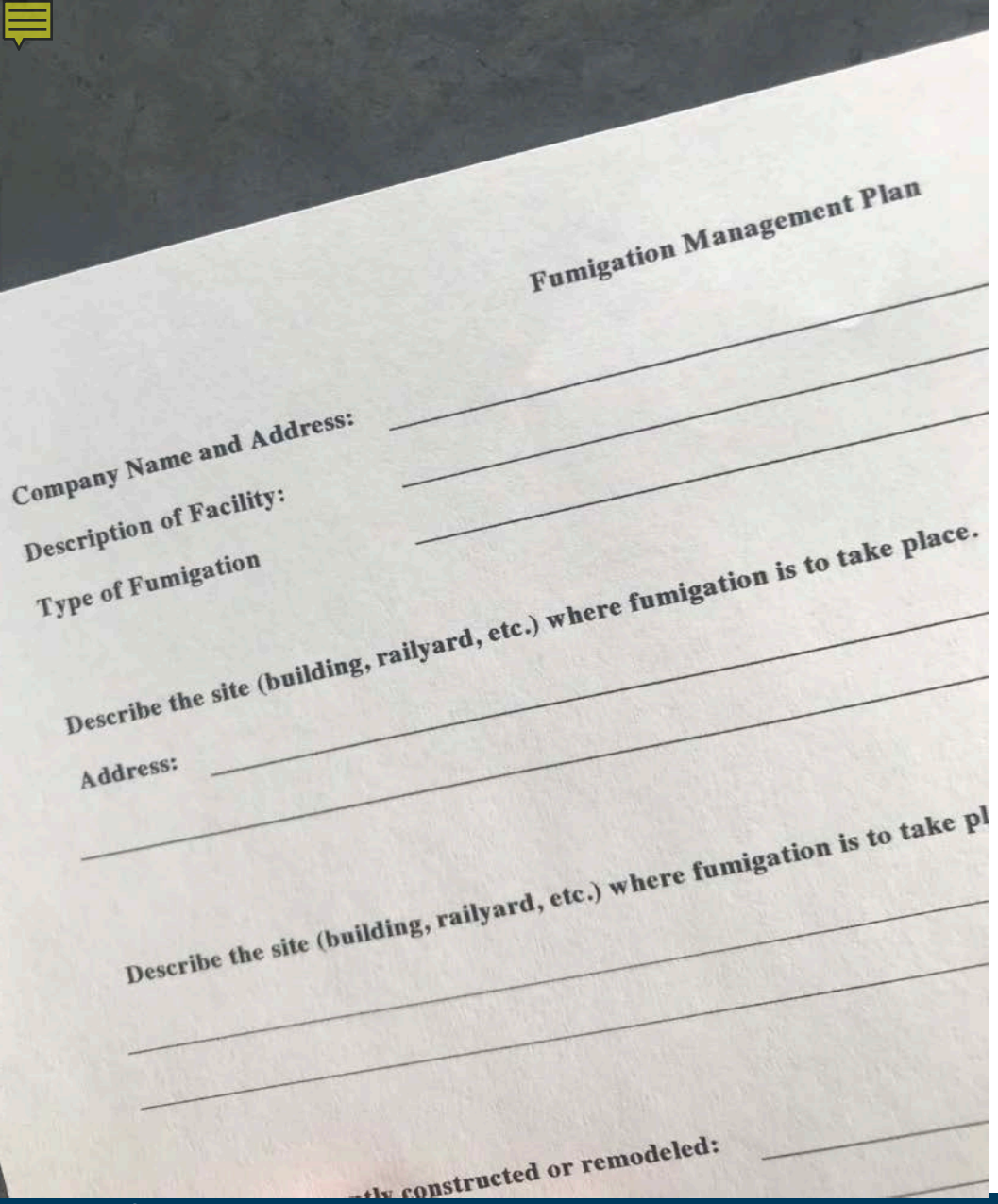
Fumigation Poll Everwhere

0 done

0 underway

Your Fumigation Management Plan is More than the “Magic Beans”

- What is a Fumigation Management Plan?
- What should be included?
- Facility Design, Temperature and Humidity



What is a Fumigation Management Plan?

You're telling a story of the fumigation from beginning to end.

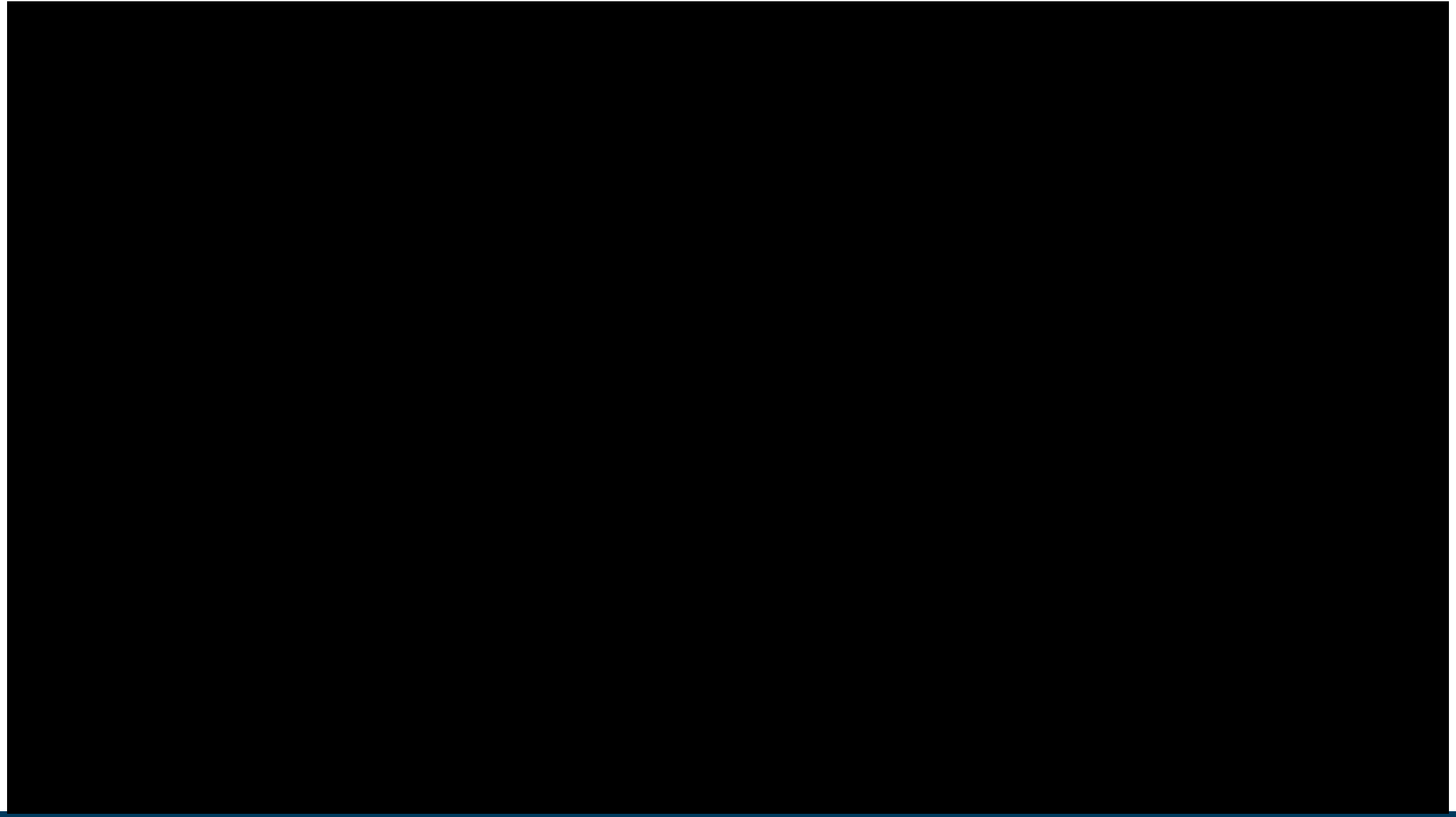
-Todd Wilhelm

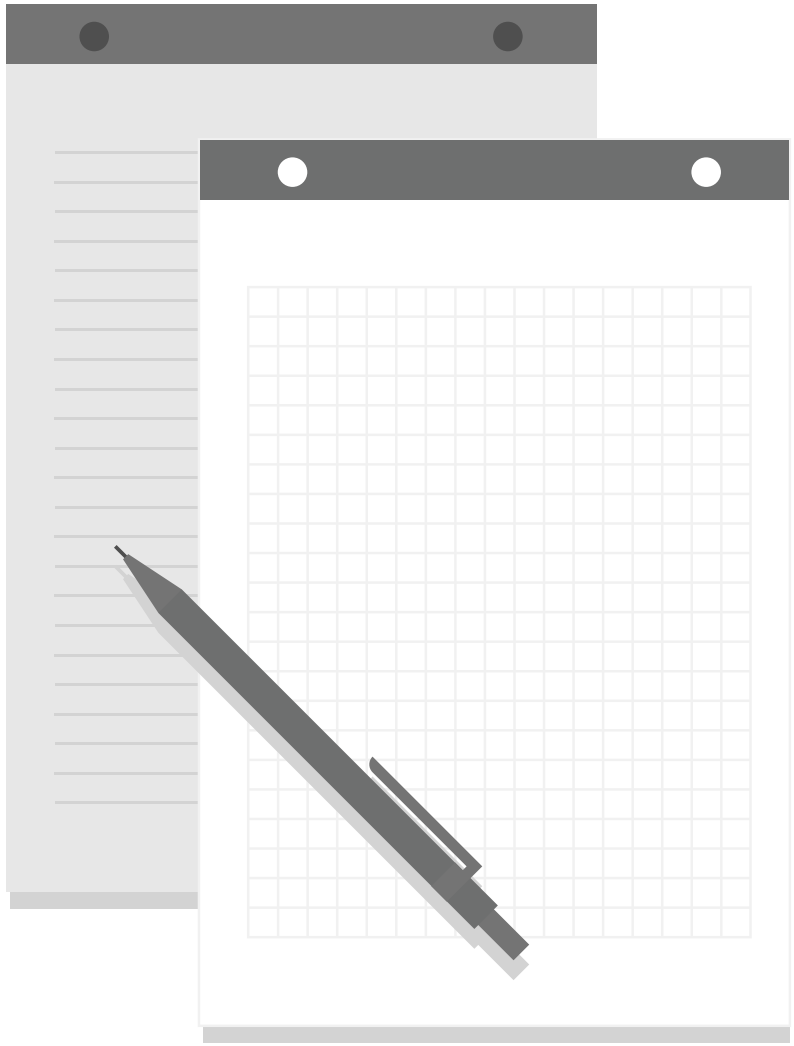
WEEVIL-CIDE® LABEL

SECTION 21

REQUIRED WRITTEN FUMIGATION MANAGEMENT PLAN

The certified applicator is responsible for working with the owners and/or responsible employees of the structure and/or area to be fumigated to develop and follow a Fumigation Management Plan (FMP). State, County, and local authorities may also have specific requirements. The FMP must be written PRIOR TO EVERY treatment including fumigation for burrowing pests. The FMP must address characterization of the site, and include appropriate monitoring and notification requirements, consistent with, but not limited to, the following:





What should be included in a Fumigation Management Plan?

1. Preliminary Planning and Preparation
2. Personnel
3. Monitoring
4. Notification
5. Sealing Procedures
6. Application Procedures and Fumigation Period
7. Post Application Operations

1. Preliminary Planning and Preparation

- Why are you fumigating? – Target Pests
- What are you fumigating? – Commodity Type
- When are you fumigating? – Timeline
- How will you do it safely and effectively?

2. Personnel

- Notify personnel “in writing” about the fumigation
- Make sure fumigation personnel are trained
- Set up emergency procedures

3. Monitoring

- Exterior Monitoring Plan
- Interior Monitoring Plan
- Document ALL Readings

If you are not monitoring, you are not fumigating.

4. Notification

- Notify local police, fire, etc.
- Have written instructions on how and when to contact authorities
- For in-transit fumigations, receivers must be notified ahead of time

5. Sealing Procedures and Preparation Procedures

- Make sure all seals are completed and that they will hold for the duration of the fumigation
- Review past FMP to look for any changes
- Ask facility personnel about any changes (such as construction, facility changes, etc.)

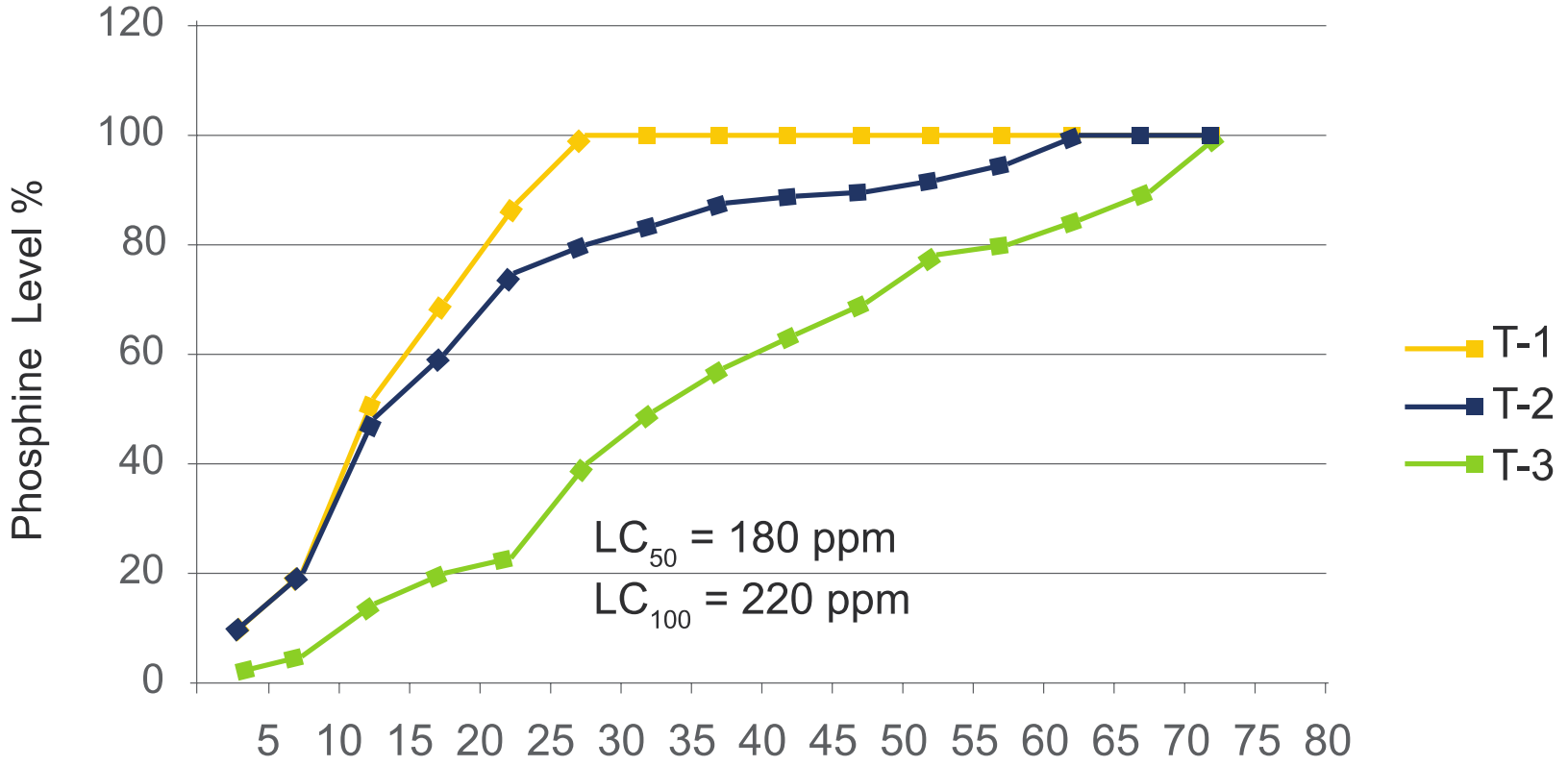
5. Sealing Procedures and Preparation Procedures

- Preparing the structure for fumigation:
  - Cleaning
  - Making sure no spillage of commodity
    - Augers, bins, insects are breeding outside the structure because of spillage

6. Application Procedures and Fumigation Period

- Use the buddy system when entering a facility (At least one must be certified)
- Have a watchperson while entering a facility
- Apply fumigant from outside whenever possible

TYPICAL ALP BREAKDOWN RATE

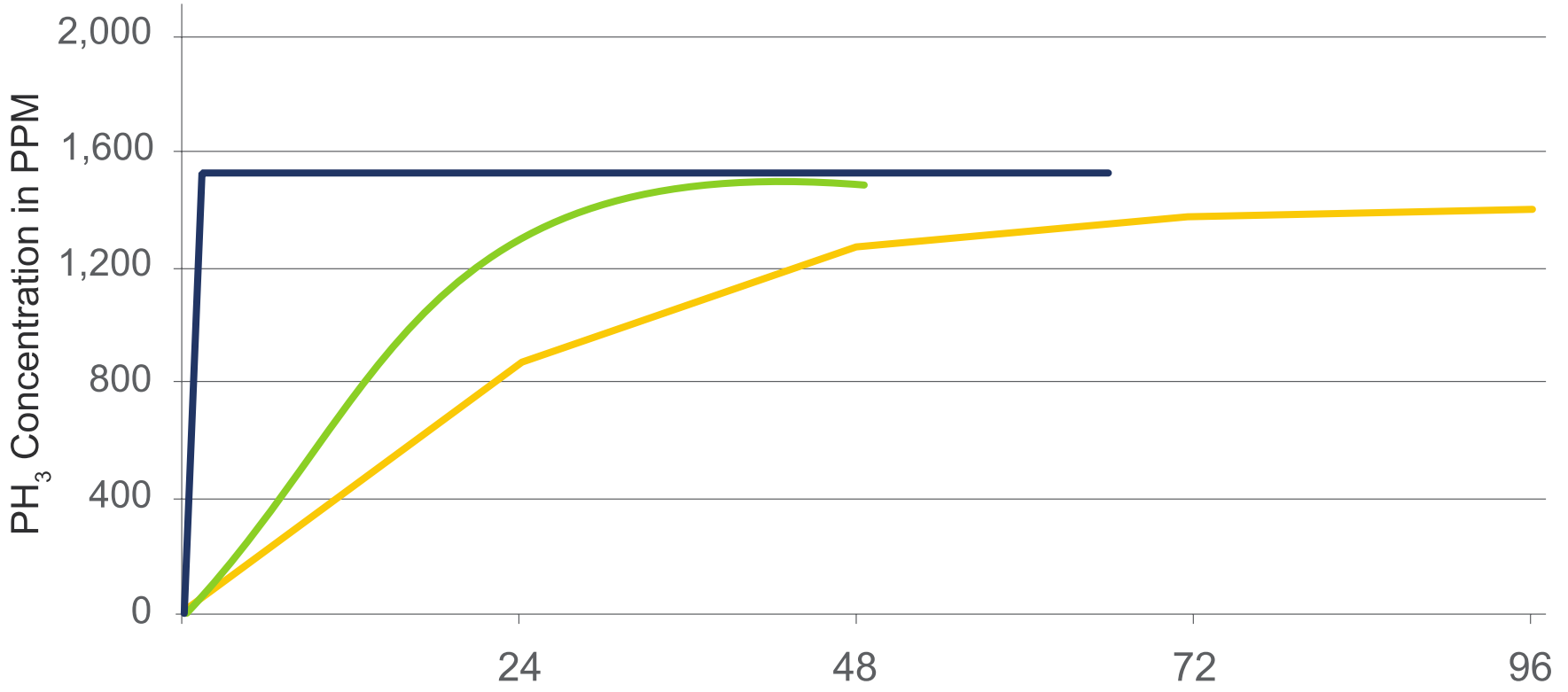


Time in Hours

T-1 = Moderate Temperature & High Humidity
T-2 = High Temperature & Moderate Humidity
T-3 = Moderate Temperature & Low Humidity

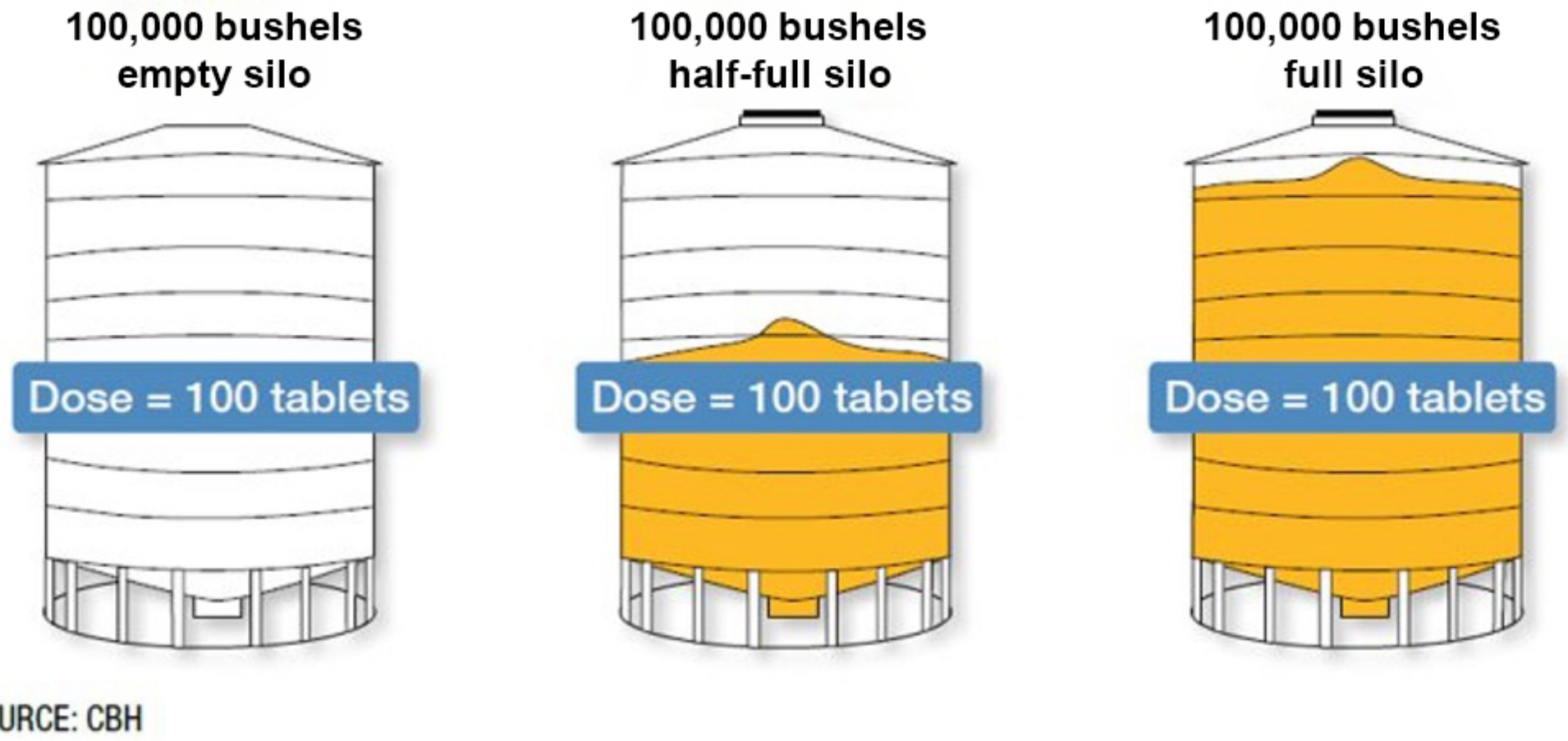
QUICKPHLO-R™
PHOSPHINE GENERATOR

PHOSPHINE GENERATION

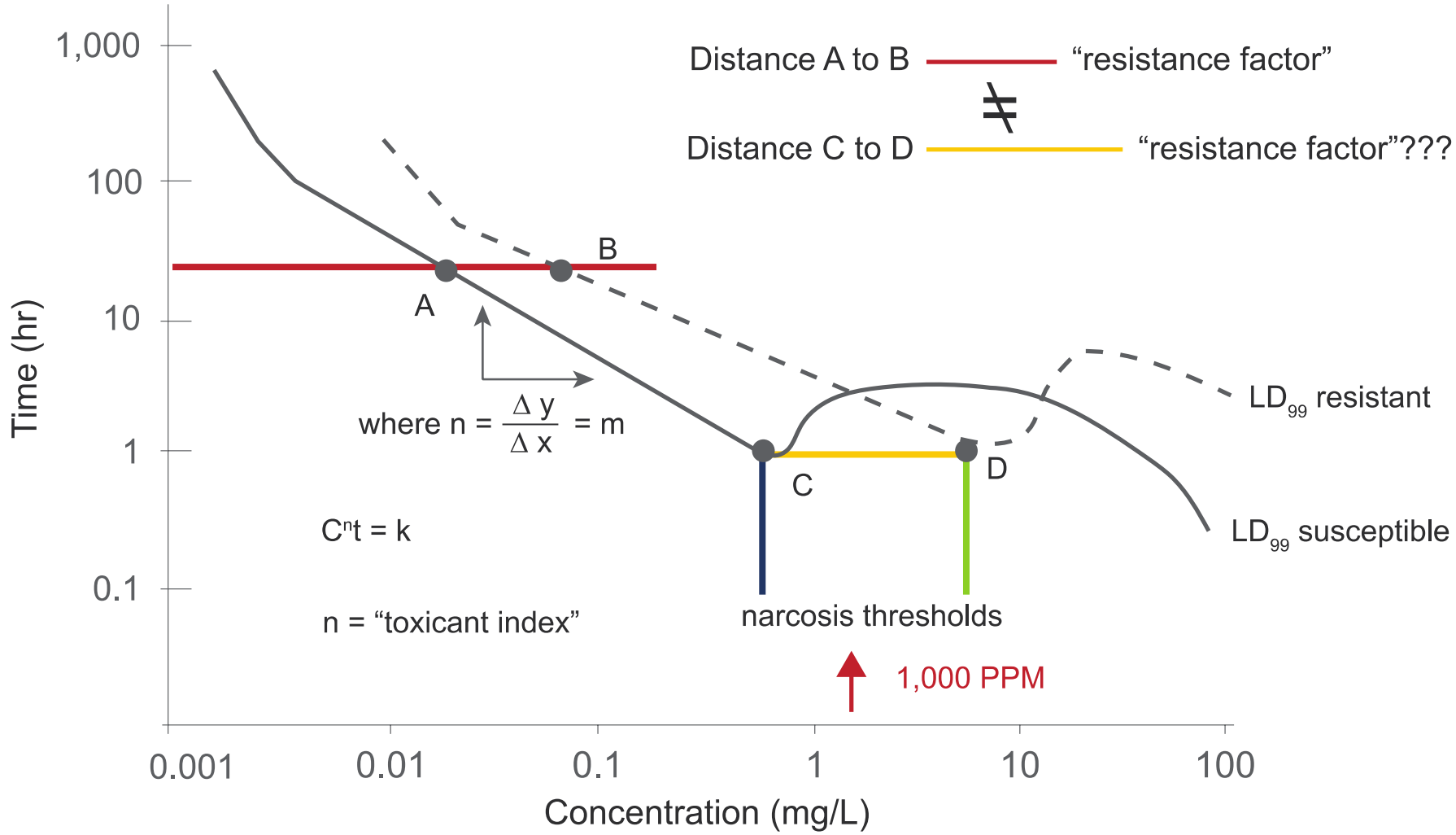


GENERATOR AI <1.0 %
MGP Cont — 2.5 %
AIP Cont — 3.5 %

TREAT THE SILO VOLUME, NOT THE GRAIN

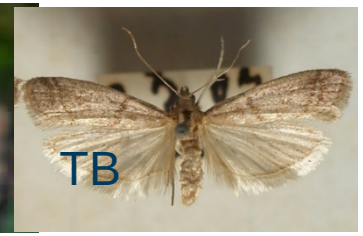


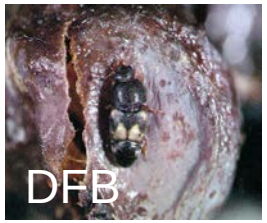
WINKS (CSIRO) SUMMARY CARTOON, ADULT RFB



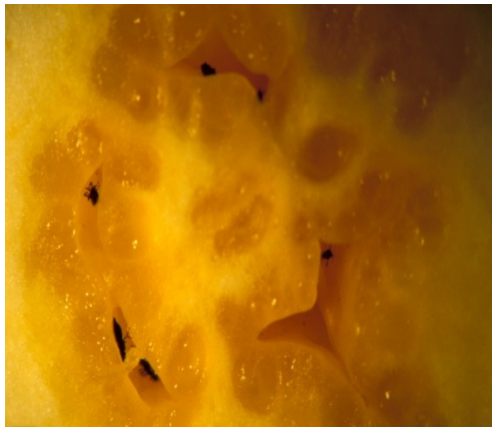
The relationship between the time required for an LD_{99} at each of a range of fixed concentrations of phosphine to which RFB adults of a resistant strain CTC_{476} and a susceptible strain CTC_4 were exposed.

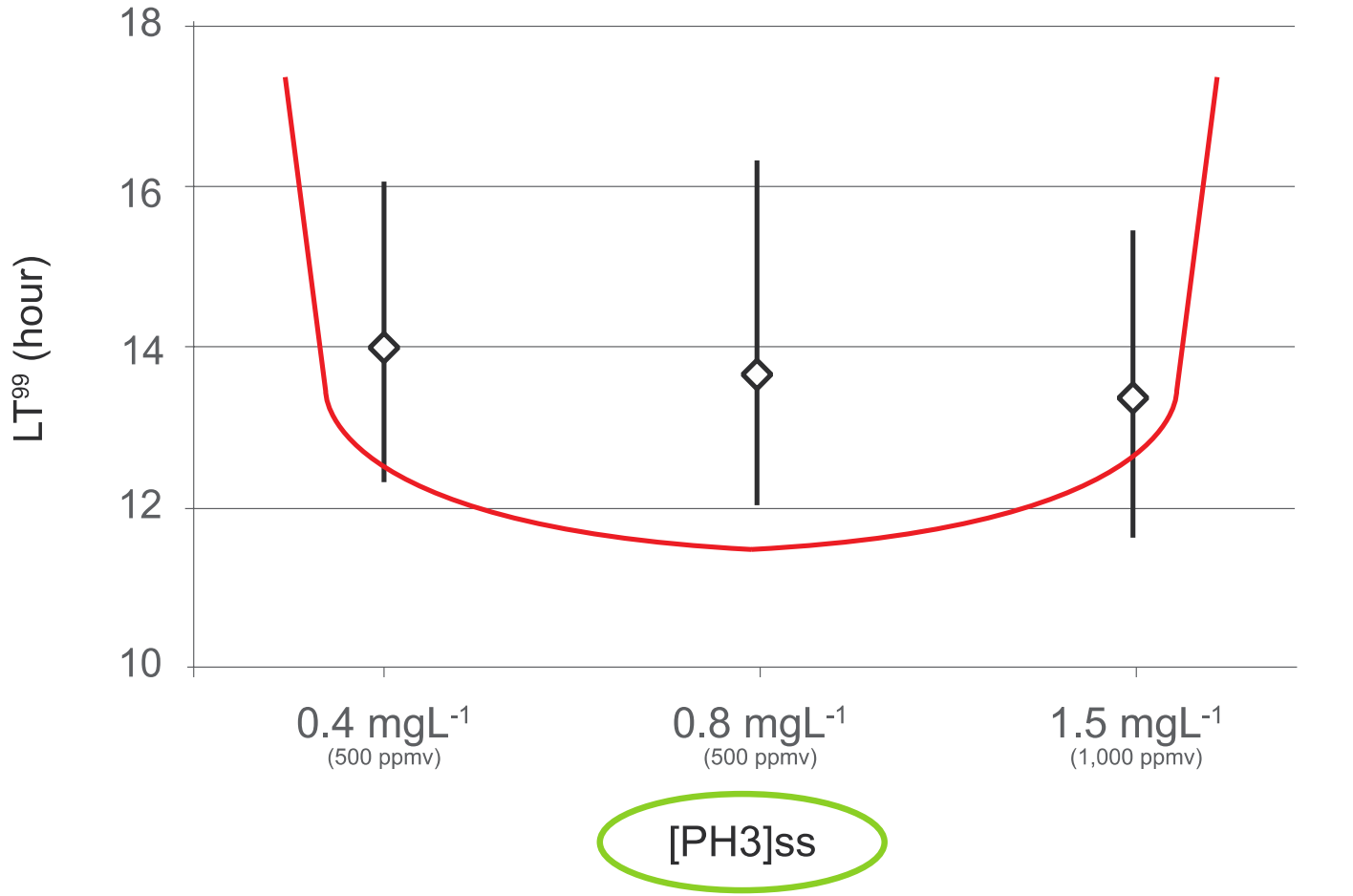
A SIMILAR APPROACH FOR STORED PRODUCTS





EFFICACY “SWEET SPOT”



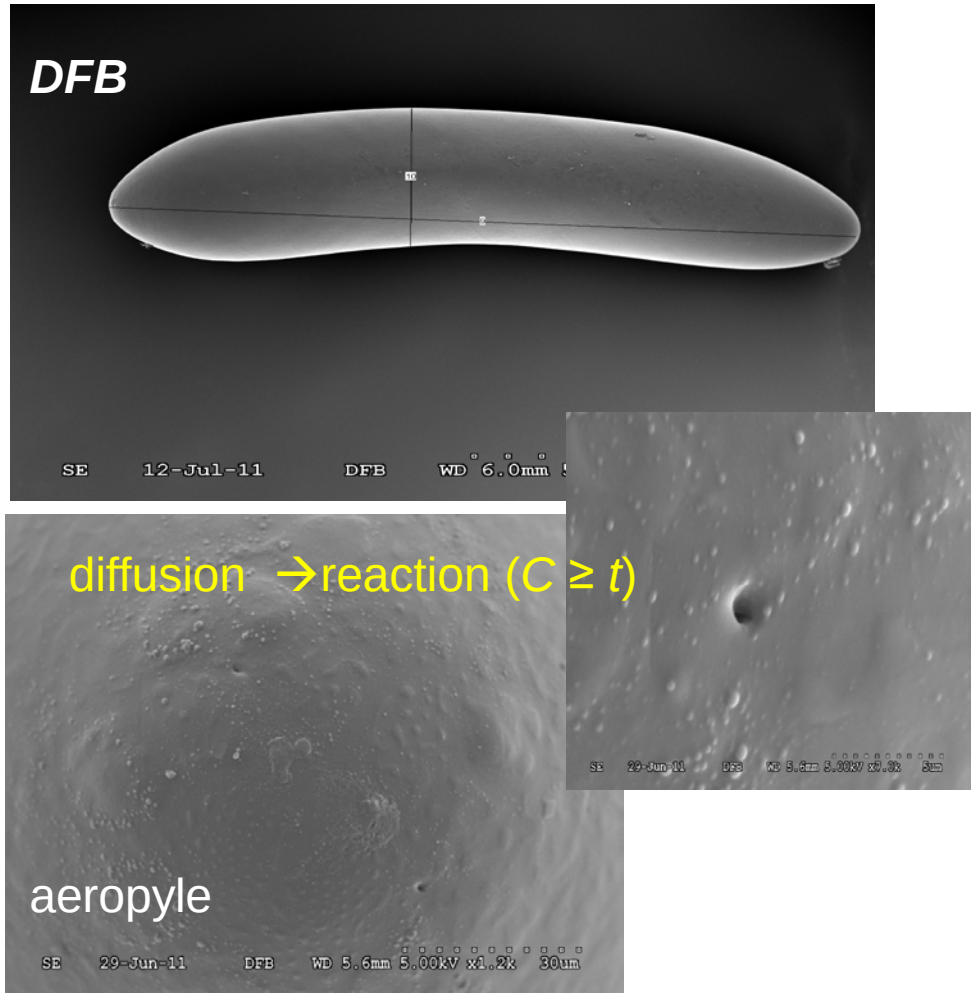


“new” quarantine operational considerations (APHIS, DAWR)

0.4 < [PH3] < 1.5 mg/L **250 < [PH3] < 1000 ppmv**

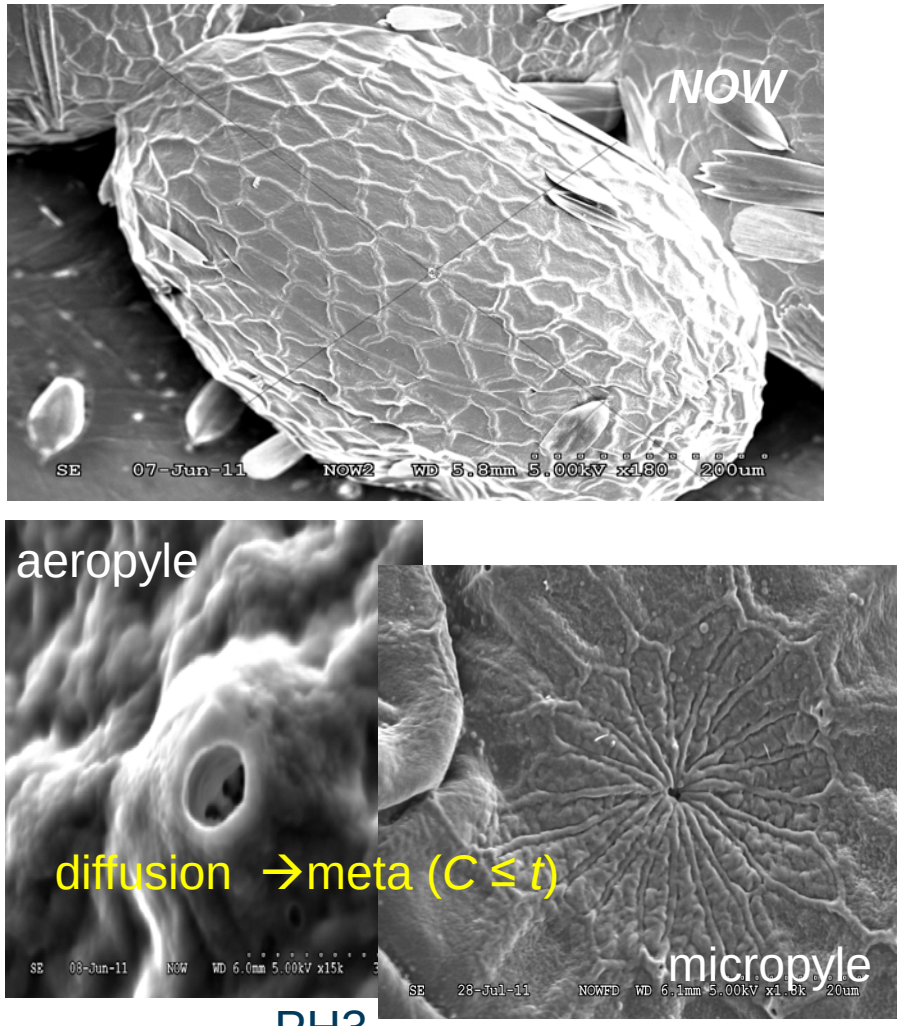
RELATIVE IMPORTANCE

C. hemipterus



MB, SF, PPO, EF

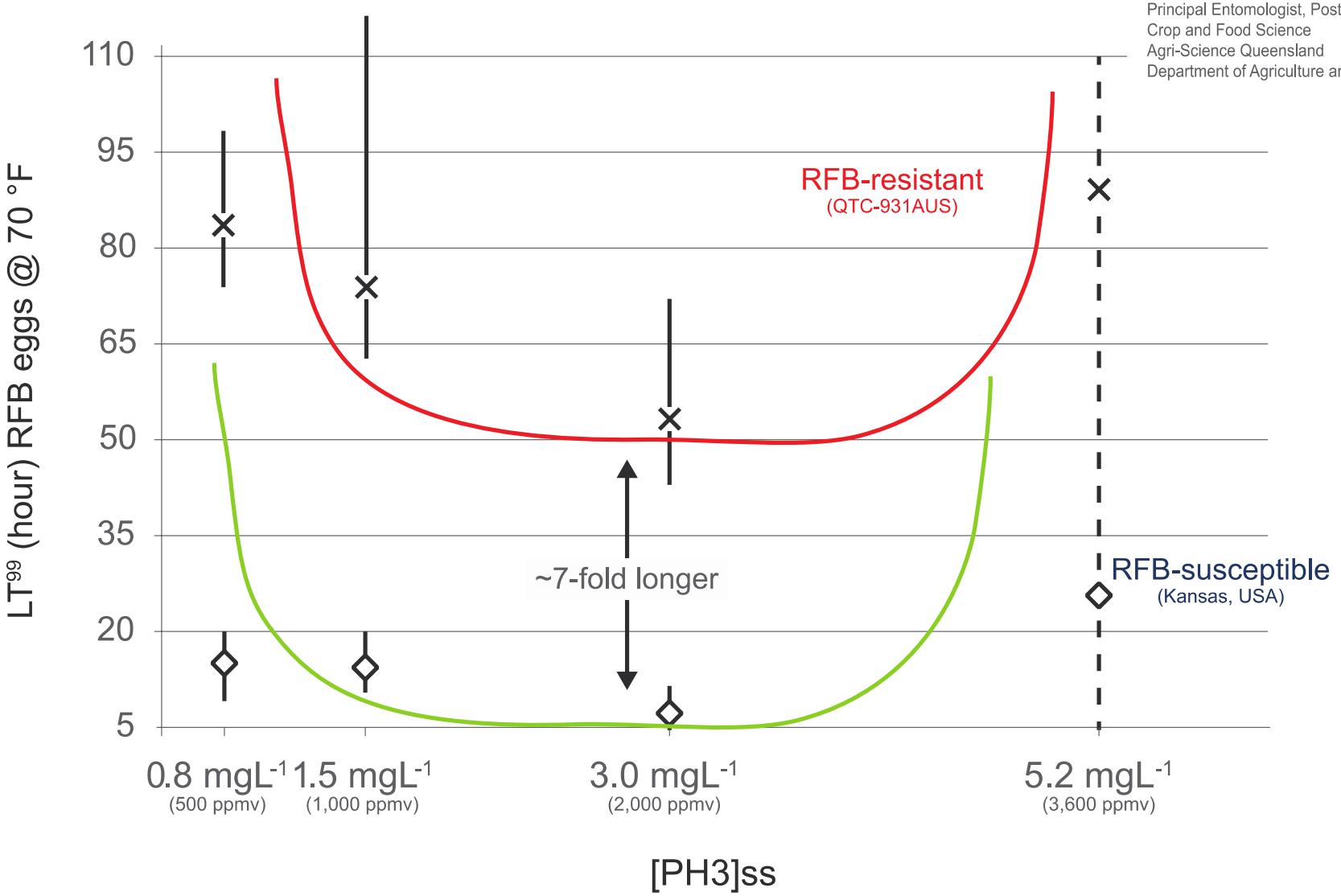
A. transitella



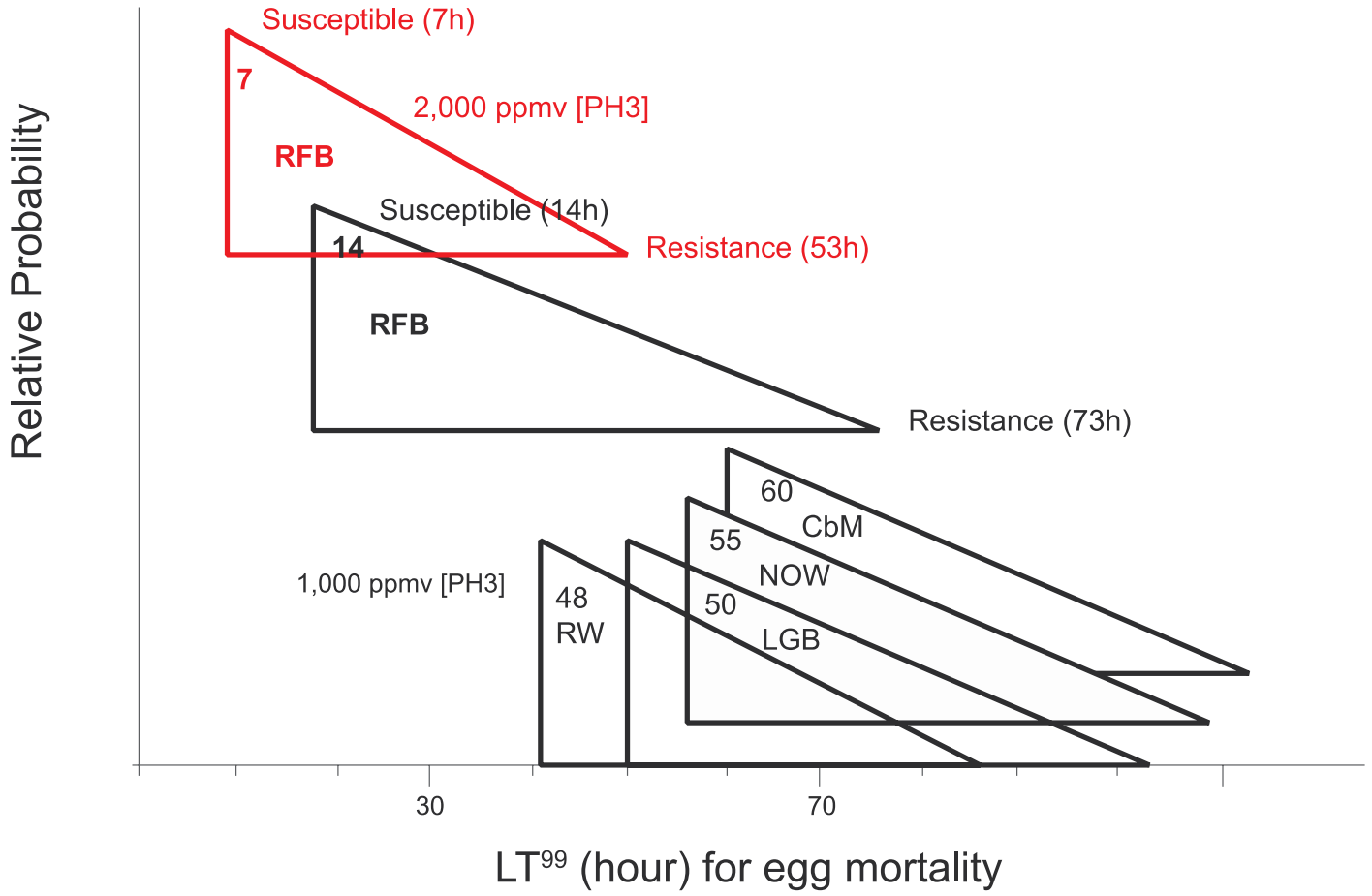
PH3

RESISTANCE αTIME >>>[PH3]

Dr. Patrick J. Collins
Principal Entomologist, Postharvest Grain Protection
Crop and Food Science
Agri-Science Queensland
Department of Agriculture and Fisheries



PRESCRIBING A LABEL



red flour beetle
carob moth
navel orangeworm
lesser grain borer
rice weevil

Need: better fums, monitoring,
data re. lower temps, more pops (define triangle)

7. Post Application Operations

- Aerate the facility. Use fans and vents where possible
- Use monitors to ensure facility is safe for re-entry
- Document readings
- Remove all placards

Facility Design, Temperature and Humidity Considerations

SUMMARY SLIDE

- Importance of planning and preparing
- Importance of sealing
- Understanding how temperature and humidity will affect outcomes
- Importance of monitoring
- Importance of correct dosage

For More Information…

Visit UPL in Booth #1218

UPL Experts On-Site

- Todd Wilhelm
- Angie Reyes
- Mark DelSantro

Q&A

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