

AFB Pest Management Plan Challenges & Constraints

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Principles of Disease Elimination



- **Susceptible**
 - Over 900,000 colonies
- **Infected**
 - The number of colonies infected with AFB in a given time period
- **Removed**
 - The number of AFB infected colonies removed in a given time period
- Elimination will occur if **Infected** colonies are **Removed** from the population at a faster rate than **Susceptible** colonies become **Infected**
 - for a sustained period of time

Options to increase the Removal of AFB from the population



- Increased Inspection for AFB
 - Increased frequency of inspection
 - Increased efficacy of inspection
 - Training
 - Inspection procedure
 - New diagnostic methods
- Improved Traceability
 - Enables gear associated with infected colonies to be traced and destroyed/sterilised
- Improved Destruction and Sterilisation
 - Destroy AFB hives by burning within 7 days
 - Paraffin dip boxes @ 160 degC for 10 minutes
 - Ensure bee proof storage if not paraffin dipped immediately

Options to reduce the rate of new Infections in Susceptible colonies



- Reduce transfer of hive parts and products between colonies, especially:
 - Brood
 - Supers and frames
 - Pollen
 - Honey
- Apiary Quarantine
- Hive Quarantine
- Prevent weak colonies from being robbed
- Prevent gear from being robbed

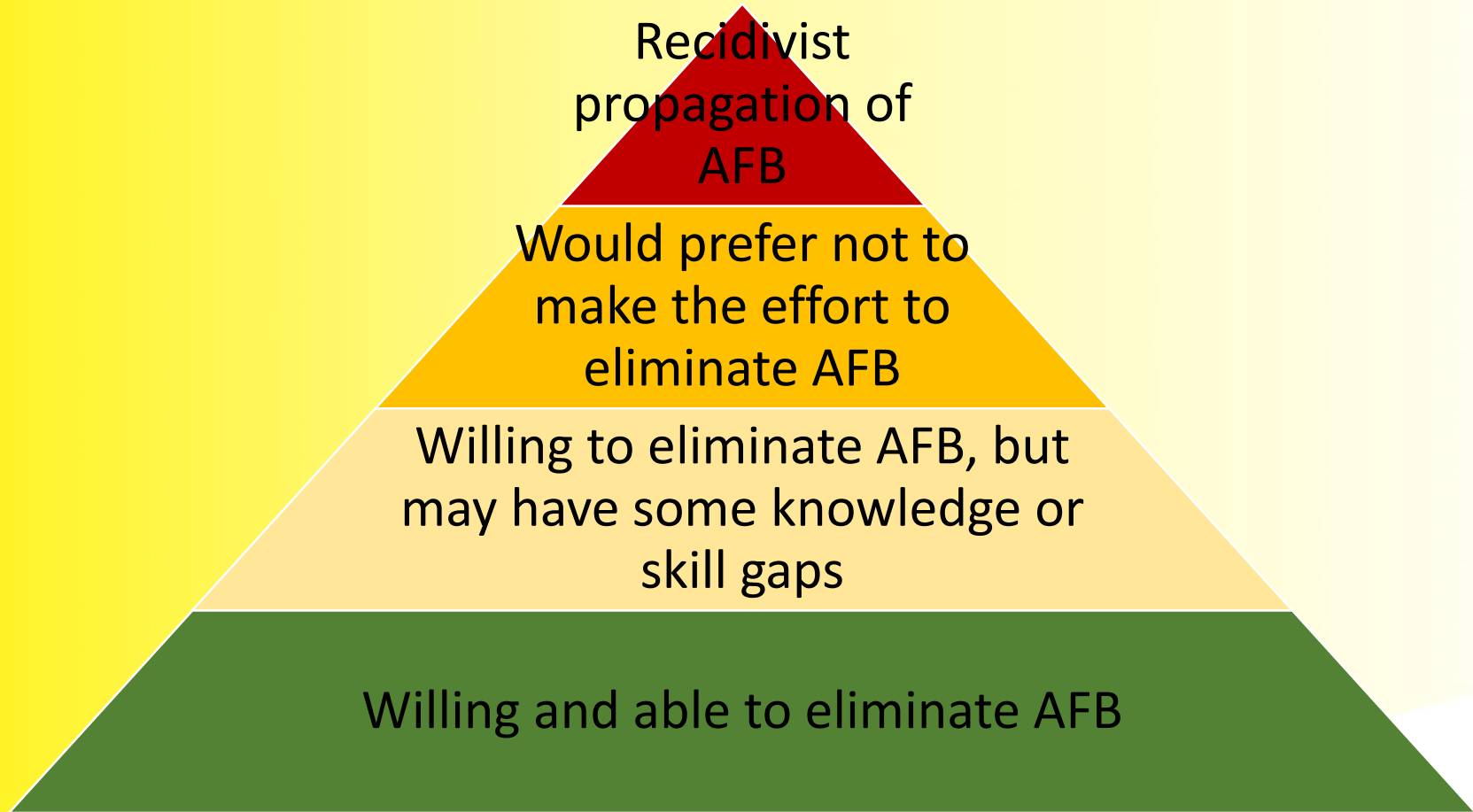
In theory eliminating AFB from managed colonies is simple!



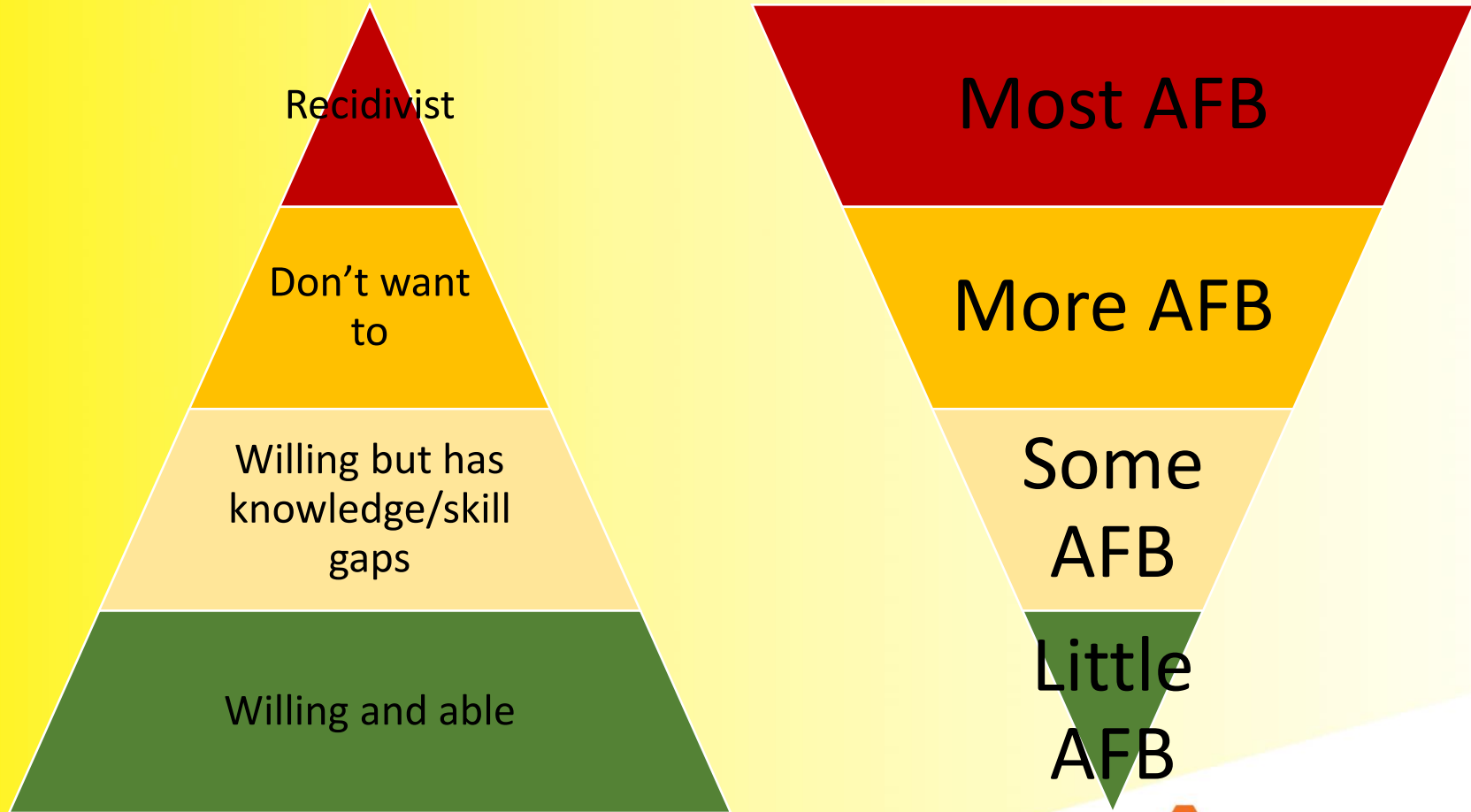
All we need is for **9,300** beekeepers to take the following actions across their **924,000** hives located in **59,000** apiaries:

- Increase the frequency and efficacy of their inspections
- Improve traceability
- Improve destruction and sterilisation, and
- Improve their management practices to reduce the potential for AFB to spread from colony to colony

Beekeeper AFB Elimination Behaviour



Beekeeper AFB Elimination Behaviour and Level of AFB



How should the Management Agency respond to the different beekeeper AFB elimination behaviours?

