



# SABIO

South African Bee Industry Organisation

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Minutes of the emergency meeting arranged by SABIO at the ARC offices (Stellenbosch) at 10am on the 14 April 2009 regarding American Foulbrood outbreak in the Western Cape.

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1. Welcome: John Moodie Chairman of SABIO
2. Apologies: - Peter Greeff - Angus Antony - William Urquart
3. Present:
  - See Attached list of names and addresses.
4. Mike Allsopp's situation report (power point presentation):
  - AFB affects only "apis" larvae
  - Spores are very resistant (-40°C up to 160°C)
  - These spores are active for up to 60 years
  - These spores are everywhere.
5. Impact
  - Less than 48 hour old larvae are affected
  - AFB spores germinate and multiply in the gut of the larvae
  - The spores affect all larvae but especially the worker brood
  - It has no effect on older larvae
  - When clinical symptoms show it is already the disease is at an advanced stage.
  - Dead pupae have up to 100 million spores (did some research)
  - Bees try to clean out the dead larvae and this spreads the spores around

## 6. Symptoms

- Because there are numerous strains of the virus we need to investigate what strain we have.
- Larvae is sealed in cells (mostly), capping change and become concave, black and sticky
- Larvae becomes brown then turns black, becoming slimy and 'ropy'
- Dries and forms a black scale and tongue is stuck to the roof
- Spotty brood pattern
- Foul odour
- Infection can remain sub-clinical for some time
- Outbreak depends on bees' resistance and spore level build-up

## 7. AFB spread

- Bees feeding on honey and drifting bees transmit this disease.
- It is transmitted during swarming and robbing
- Moving of equipment and hives
- Supers – especially 'wet' supers.
- The question of wild colonies?

## 8. Treatment

- In most countries the equipment and bees including all honey is burnt and destroyed
- Regular examinations should be done
- Early detection is critical
- Terramycin doesn't help - it only makes the bees strong for a certain time then the bees become susceptible to the spores again
- The shake method is recommended in some countries: you shake the bees out from the infected hives directly into a new hive with new wax sheets.
- Can salvage equipment by boiling it in paraffin wax, scorching, bleach or irradiation

## 9. AFB situation

- There were positive spores found in honey but none were found in hives up to Dec 2008
- Now 80% of Cape Region is infected (in the Southern tip up to Caledon and Malmesbury – still testing these areas)

## 10. Management strategies

Do nothing – Hope for resistance in bees:

- Wait to see if the bees will outlive the disease
- Wait to see if they are AFB immune

Management –

- Eradication but no standstills
- Kill all infected colonies
- Thus bring under forced control as fast as possible

Containment –

- No standstills
- Shut off area where contamination is identified
- Prevent the disease moving from the area

Eradication –

- All hives are called to a standstill and no beekeeper is allowed to move their hives or any produce
- Get legislation in place to support and help focus research and investigations as well as decisions
- All apiaries be looked at and declared clean or be destroyed
- Labs, investigators, irradiation facilities be brought into existence

N.B. Countries change their strategies and use combinations of techniques.

## 11. Jan Hendrik Venter on the budget and legislation

- There is an investigation being done on the cause of the disease coming into South Africa
- Perhaps from releases of honey into S.A without being irradiated (APIS inspectors may have missed a consignment)
- Need more inspectors to control outbreak.
- The disease is definitely in the Western Cape
- There is no budget for any diseases affecting bees
- The cost to refund/replace 500 hives+ compensation to the beekeepers and the training of 10 inspectors=R1.5 million (calculated by Jan Hendrik)

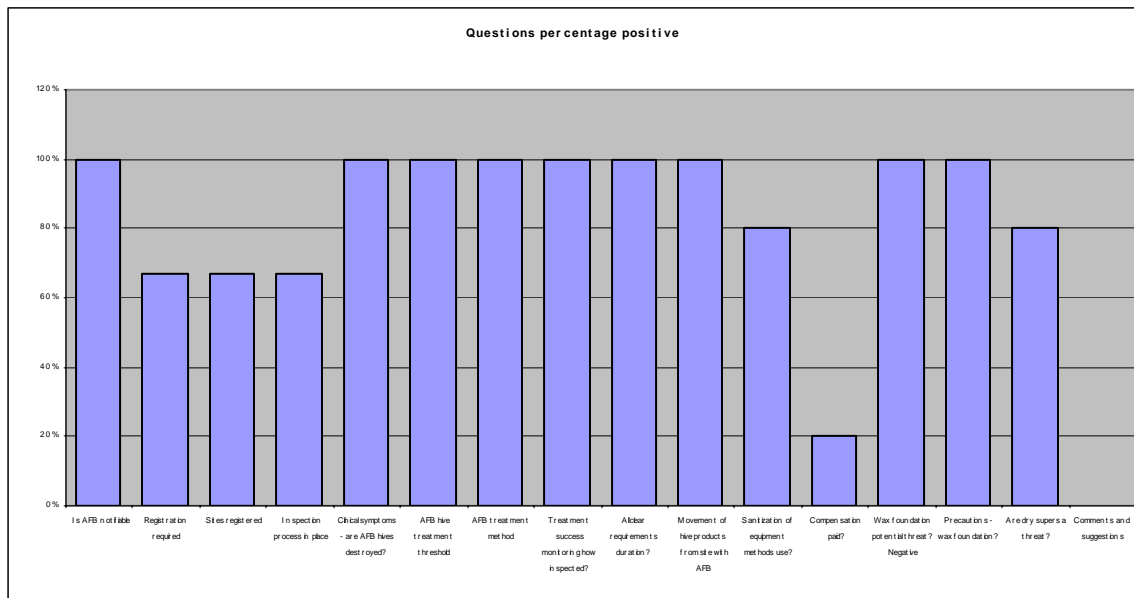
- Recommendations distributed to beekeepers regarding containment measures recommended by the DoA.
- 100% co-operation is needed from the beekeepers or penalties will have to be set to ensure co-operation.

12. Robert Post:

He basically explained the faults and difficulties surrounding some of the suggestions made to control the spread of the disease and questioned the workability of some of these suggestions/ scenarios (see attached notes) A few new (practical) problems arise as a result of the proposed control measures

13. John Moodie industry perspective

CONTROL AND DATA (Power point presentation):



- Report all possible outbreaks or finds of the disease to Mike Allsopp
- Beekeepers should realize the risks of no swift action
- Beekeepers must ensure that they are informed and get the information from good sources

## DECISIONS TO BE MADE REGARDING OUTBREAK ON A CONTINUM FROM EXTREME TO MINIMAL.

### 14. Finance

- Turn to Government for funds
- Or we have to pay a certain amount with the Government.
- All parties can contribute in some way.
- We will have to pay for all that is necessary on our own

### 15. Area control

- There should be a barrier line to prevent further contamination; possibly the line established for the Capensis problem.
- Role players should be identified as well as investigators to be responsible for making plans and take responsibility for actions  
More facilities are necessary to irradiate the honey
- The legislation must not only apply to the Western Cape only but should apply to all of South Africa.
- Nothing is done to limit movement.

### 16. Levels for intervention

- Regulations should be put in place
- Strategies (above mentioned) should be implemented
- Voluntary co-operation relied on.

### 17. Disease identification

- Have a barrier zone
- Do a range of tests
- Decide where we draw the barrier line?
- Allow movement to continue – Pollination?

### 18. Treatment

- Do we go to full extermination?
- Do we use some less drastic method?
- Antibiotics? Shake Method
- Allow beekeepers to decide

19. Some examples from other countries  
UK CONTROL MEASURES:

- Sites are assessed

RED: This is a site that needs urgent attention and has a very high infection

ORANGE: This site is of medium infection and needs to be monitored

GREEN: This site is clear and can continue as normal

USA Control

- Antibiotics
- Get inspected before pollination
- Get a clearance certificate
- If there are too many infected cells (More than 10 cells that are infected the hive should be destroyed)
- If the beekeepers do not comply with the regulations they are given a standstill until cleared for movement.

20. Administrative requirements to achieve sabio proposals (attached)

- Inspectors need to be trained
- Testing agencies should be established.
- Admin assistants should be trained
- Compensation should be thought about and discussed
- Law enforcement agencies should be made aware and part of the disease and help
- Responsibility should be allocated and divided between parties

21. Discussion - Workshop

- We should decide what strategies we to use, evaluate them and find new ones if necessary

- Eradication: all feel they do not want eradicate their swarms completely unless essential to do so.
- We must work within a time context: when to react and get to a threshold level for management /destruction.
- When to destroy: compulsory in most countries as soon as there are clinical symptoms.
- Get corporate plans for:
  1. Strategy
  2. Time management
  3. Workability
  4. Divide tasks between levels
- Get operational boundaries up and running
- Consider all affected industries and conservation

22. Vet (comment from Gary Burmann)

Quarantine -diagnose it and if you can eradicate it go for it.

If not get zones and manage the animals/insects.

Stop movement

Over compensate, then the beekeepers will bring their problems to you

All actions for foreseeable future:

- Honey sent is infected – needs to be checked for spores.
- Urgent monitoring
- Shut down movement and so also infection
- Get a quarantine area
- Process samples (inspectors and analytical instruments)
- Continue sampling outside “safe” area to see if disease has spread
- “Law” enforcement on decided protocol
- All beekeepers and sites are “guilty until proven innocent” thus until sites are tested and confirmed not to be contaminated they should be assumed to be infected

22. Beekeeper’s discussion

- Divide the area up into sections depending on the risk and sample these areas for contamination.
- Want the Breede River as a barrier line
- Compensation – debate about setting a level.
- Quarantine and standstill could not work

- Standstill would lower income
- Irradiation is too expensive and who will pay for the labor?
- Do not want a standstill until July so it can be established who is infected and to treat infected colonies. Voluntarily?
- Elimination is long term - BIG losses and not agreed on this matter Theunis indicated that we had to work with what we know already exists and requested a pragmatic solution based on this information.
- Commercial Beekeepers wanted to offer alternative proposal to Government to complete survey before quarantine measures are put in place – proposal to go to John who would forward it to JanHendrick.

Signed.....

Date .....

Thanks to Johlandi for writing up the minutes.