Southern Africa Regional Training- Lilongwe, Malawi

Professional Beekeeping in Africa - Challenges and Opportunities

By
Jaco Wolfaardt
uBusi Beekeeping Pty.Ltd.
South Africa
Concepts & themes

- Professional vs Commercial vs Small-scale
  - Professional – beekeeping is your business – full-time or close to full-time
  - Small-scale – bees make up < 50% of your income

- Extensive vs Intensive beekeeping

- Sustainable: self-sustainable & profitable

- Colony absconding / Improved production

- Commercial pollination
Traditional African Beekeeping

• Much of it is small-scale
• Often in traditional hives
  – Not movable frames
  – Honey cannot be extracted
• Often extensive
  – No migration or movement of colonies
  – No feeding of bees
  – Colonies are relatively small
  – Bee population is at a natural level
Traditional Beekeeping: Advantages

• Lower level of disease & pests because of smaller colonies – bees manage better / easier to handle
• Lower capital investment
Traditional Beekeeping:
Advantages

• Lower level of disease & pest infection because colonies are dispersed
Traditional Beekeeping: Advantages

• Lower ‘stress’ levels on colonies as they are not moved
• Not exposed to pesticides and pollutants
Traditional Beekeeping: Advantages

• Colonies and their products are generally natural or pure or organic
• Can develop niche and boutique markets for these products
Traditional Beekeeping: Advantages

• Large amounts of wax and propolis can be produced
Traditional Beekeeping: Disadvantages

- Pest and disease management is more difficult, both for diagnosis and for treatment
Traditional Beekeeping: Disadvantages

- Hive management (replacement of old combs, swarm control, adding of honey chambers) is largely impossible, so it is difficult to get very productive colonies or very high production.
Traditional Beekeeping: Disadvantages

- Very difficult to use colonies for commercial pollination
Traditional Beekeeping: Disadvantages

• Cannot utilise multiple honey flows because the bees are not moved
Traditional Beekeeping: Disadvantages

- Often high levels of absconding in bad years, or at certain times of the year
- Naturally migratory bees
- No feeding of bees
Traditional Beekeeping: Disadvantages

• Difficult to protect hives from theft and vandalism
Traditional Beekeeping: Disadvantages

- Honey is often not of the best quality
Professional Beekeeping

• Beekeeping become organize and commercialize around the world

• Countries produce large volume of honey
  
  * China 450 300 ton
  * Turkey 94 694 ton
  * Argentina 80 000 ton
  * Ukraine 73 713 ton
  * Russia 68 466 ton
  
  * South-Africa 1 500 ton
Clear Business Plan

- Most beekeeping businesses lose money – and most fail
- Most development initiatives fail to be sustainable
- Must have a profit-making business plan that fits the realities of your situation. Easiest time to make a profit for a beekeeper is one or a few hives. Then it gets harder. Must scale your business plan correctly.
Clear Business Plan

- Experience is most important.
- Start small and make a success of quality honey before expanding into other products and services.
Big operations are fully diversified

• Either will specialise on honey or pollination services, or both
• But almost all big commercial operations do everything: honey production, other bee products, pollination services, equipment production, bee removals
• The best operations keep the various components of the business separate
Professional Beekeeping

- Higher honey production
- Better organize and control operations
Transport & equipment are crucial

- Successful commercial beekeeping means the movement of colonies for forage and for pollination
- And the production of high quality products
Professional Beekeeping

- Movable frames to inspect for disease
- Easy to work with the bees
- Swarm multiplication is easier
Disease Management and Quality Control are crucial

• The stress on colonies in commercial operations means that disease and epidemics are a real concern
• Vigilant management is crucial
• Staff skills development is very important
Good bee boxes and good beekeeping

• All good operations have really good equipment
• You cannot manage bees properly in bad equipment
• Good beekeeping practices (such as comb replacement) must be practiced
Professional Beekeeping

- Honey extraction, re-use of frames, and addition of honey chambers to increase production
Professional Beekeeping

• Colonies of bees are moved to exploit multiple forage resources, which increases production
Professional Beekeeping

- Less absconding and starving colonies because they are fed when they need to be
- Easier to feed colonies
Professional Beekeeping

• Better quality honey
• Better quality control
• Honey room hygiene regulations
Marketing is key

- Must sell your products and/or services
- Many very successful beekeepers do NOT do this – and sell all their products and their services to other beekeepers or companies that market them
- But someone must sell the products & services to be profitable
Professional Beekeeping

- Colonies may be used for commercial pollination which is now the majority income of most professional beekeepers.
- Big demand for the pollination of 52 different fruit and crop pollination in SA.
Commercial Pollination
Crops Pollinated
Crop Production that does not require insect pollination
No other commercial pollinators

For commercial crop pollination, none of the other pollinators available in Africa
Commercial Pollination

- Rental colonies for crop production very well developed in South Africa
- Now about >80% of income of many beekeepers, especially in the Cape Region
- 87% of colonies in the Western Cape used for commercial pollination (some 60 000 units)
- About 80 crops use paid pollination (vegetable seeds, deciduous fruit, sub-tropical fruit, melons, berries, oilseed crops, nuts, cucurbits, beans)
- Value added to the country by honeybee pollination approximately R12 -15 Billion per annum
- Crucial for thousands of jobs and food security
Commercial Pollination

• Demand bigger than what beekeepers can provide
• Bee colonies increase with 45% over the last 50 years, but pollination demand increase with 300%
• Growing with 20%-30% p/year
• Standards for pollination units / good service
• Fruit producers paying +/- $40-45 in SA
• American pollination price p/unit is +/- $150-& $200
Ecosystem service

- Wild bee population (and managed bees) perform a crucial ecosystem service
- The dominant pollinator in South Africa – honey bees, pollinate approximately 80% of indigenous flowering plants
- Crucial ‘Ecosystem Service’
- Developing recognition of how important bees are – and beekeepers, as custodians of the bees

Very strong movement not to kill bees, even ‘problem’ colonies
But there are costs!

- Epidemic disease levels
- Requiring regular medication
- Increasing pollination and pollutant stresses
- Increasing losses of colonies
- Less honey production due to pollination services
And concern about a global bee crisis
Should we promote professional beekeeping in Africa?

• A cautious ‘Yes’
• Yes – because movable frames & movable colonies & extracted honey & better quality honey are necessary to generate profitable and sustainable beekeeper industries
• Yes – because the new pests and diseases in Africa will need management to deal with them
• Yes – because countries will need commercial pollination to grow their agriculture
• Yes – because beekeepers have to provide that pollination service
• Yes – because the best way to develop small-scale beekeeping is to develop professional beekeeping
But should learn from the current problems

• Keep the beekeeping as natural and extensive as possible
• Should feed bees only when absolutely necessary
• Should stay away from medication if at all possible
• Should keep apiaries small (pick-up size) and not dump colonies together
• Should make sure all colonies have extensive resting and natural phases, away from honey production and commercial pollination
• Should maintain the pure & organic advantage that African beekeepers presently have
A challenge and an opportunity for Africa

• To grow beekeeping in Africa by making it more modern and more professional
• Retaining the advantages of traditional African beekeeping
THANK YOU