

Collecting and Sharing Data on **bee health**Towards a European Bee Partnership

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# Beekeepers' involvement and needs

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### DOMAINS OF BEE RELATED DATA

- colonies / beekeepers / operations / hive tracking systems
- biodiversity of bees and breeding
- bee diseases / pathogens / strains / treatments
- environmental data / contaminants and residues in bee products
- modelling data as well as calibration data (MUST-B)
- data on authenticity of bee products (NMR method etc.)
- market data for bee products (prices, trade flows)





#### DATA AVAILABLE TO SHARE

- Beekeepers need to track their hives:
  - location, health status, age of queen, honey production etc.
- Beekeepers need to track their hive products:
  - honey productions, inventory, sales, lot numbers, customers etc.
- Beekeepers track their breeding activities
  - race, breeding line etc.
- Beekeepers get their bee products analysed
  - pollen profile, residues etc.





### **INCENTIVES TO SHARE DATA**

- Participation as condition for receiving government support.
  - Money actually received by beekeepers is too insignificant to be a factor.
- Participation as condition for placing products on the market.
  - Does not work for the many hobby beekeepers.
- Participation may result in valuable expert assistance from government agencies.
  - Not enough practical beekeeping expertise at government agencies to be perceived as valuable assistance.





### **DISINCENTIVES TO SHARE DATA**

- Producers in other farming sectors like dairy, pigs, poultry are fully transparent, dependent on government handouts and in terrible financial shape.
  - No desire of the beekeeping sector to follow this example.
- Participation may lead to loss of privacy and independence.
- Tax consequences with arbitrary thresholds.
- Beekeepers forced into farmer's insurance system to compensate for declining number of farmers paying into the pool.
- Draconian measures without sufficient compensation in the case of SHB eradication efforts have reduced trust that authorities will act in beekeepers best interest.
- Governments need data to act. No data is perceived as a good way to keep government out of the sector.



## DATA NEEDS

- Beekeeper is major source of detailed records in his operation but could benefit from "big picture" data.
- Data entry more likely, if system also may help beekeeper with own needs for record keeping and hive management.
  - Focus on the practical needs of beekeepers first.
- Beekeepers need to coordinate certain activities with other beekeepers.
  - varroa treatment, AFB outbreaks, SHB control.



## DATA NEEDS

- Useful data could be provided back to the beekeeper:
  - "varroa weather" (overall varroa pressure and best time to treat in region)
  - environmental data to protect health of bees and avoid contamination of bee products.
  - data on honey flow (prediction of honey dew)
  - data on disease resistance of breeding lines





#### RECOMMENDATIONS

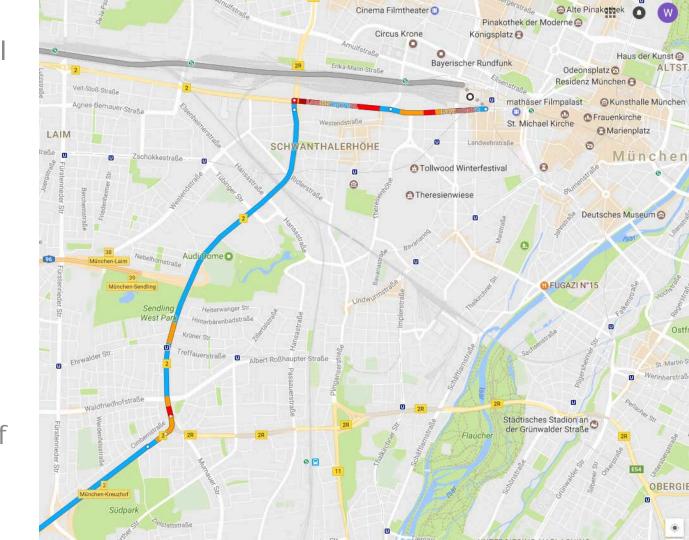
- Beekeepers need privacy built into the system.
- Strong encryption with the beekeeper holding the key.
- Clearly define limited needs for data at the government and research level.
- Good aggregate data may be sufficient for many functions.
- Anonymized data may also be sufficient for many purposes.
- Alerts and notifications can be transmitted to the beekeepers without need to know any personal data.

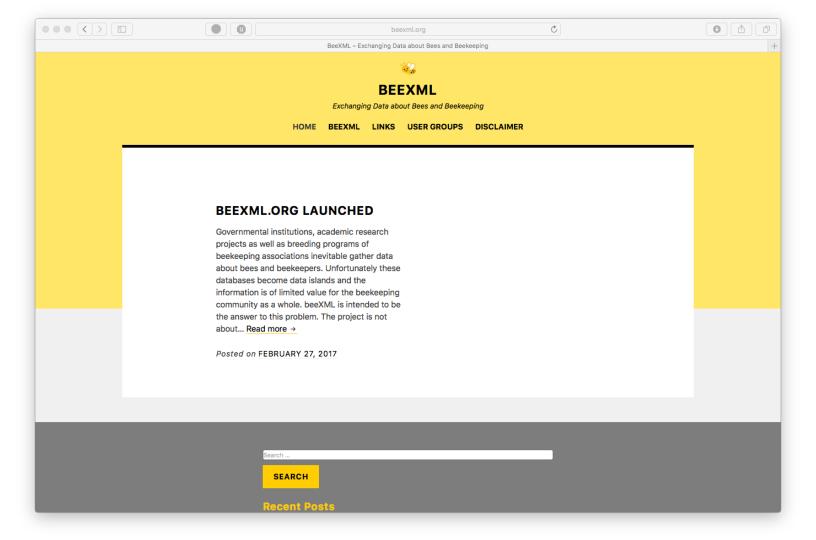


Example for useful data without privacy invasion:

### Car Navigation systems

Aggregate data from mobile phones provide real time traffic flow without need to know identity of user.







### Thank you for your kind attention!

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