



Dronningavlerforeningen af 1921

*Visit to the Estonian Beekeepers
Association*

23, july 2011, Padise



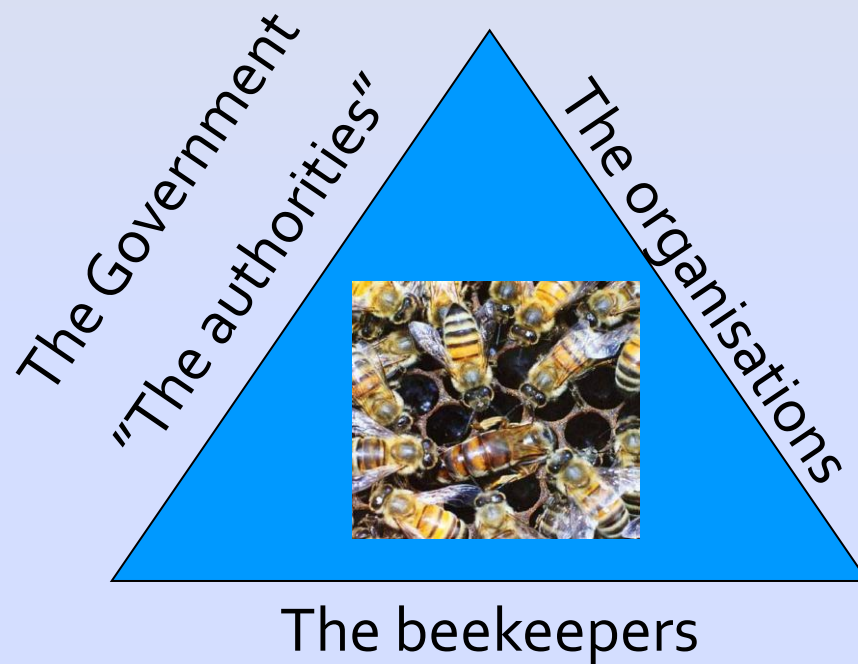
Breeding Beequeens in Denmark



- The structure in Danish beekeeping
- The structure in Bee breeding
- The choice of breeding parameters
- The future



The structure in Danish beekeeping





The organisations

DBF	DBL	EB	SDE	Dronningavlerne
<ul style="list-style-type: none">• local Associations• Information• Magazine / WWW• Consultants• Projects• The legislative• experimental Working• Conferences / courses• Nordic / Baltic cooperation• European Cooperation	<ul style="list-style-type: none">• local Associations• Information• Magazine / WWW• The legislative• Conferences / courses	<ul style="list-style-type: none">• WWW• Projects• The legislative• experimental Working• Conferences / courses	<ul style="list-style-type: none">• Magazine / WWW• Projects• The legislative• experimental Working• Conferences / courses	<ul style="list-style-type: none">• Magazine / WWW• The legislative• Conferences / courses• Nordic / Baltic cooperation• Mating stations <div data-bbox="1420 968 1769 1042">Breeder groups</div> <ul style="list-style-type: none">• Buckfast• Ligustica• Carnica



The Beebreeding Legislation



- State
 - Legislation
 - Administration
 - P. dir / Aarhus University
 - executive Management



The Beebreeding Legislation



- Legislation
 - Approved mating areas for honey bees
 - Directorate of plants and animals
 - Rules for Import and Export of animals
 - Danish Veterinary and Food Administration



Breeding of honey bees



- Organisations
 - Recruitment / Education
 - Organizing
 - Testing of production queens
 - Test Report
 - Publisher breeding performance (Annual Review)
 - Running open mating stations



Breeding of honey bees



- Run on 2 levels
 - Commercial Beekeepers
 - Hobbie and part-time beekeepers



Breeding of honey bees



- Commercial Beekeepers
 - Breeding with their own queenlines
 - Sale of queens for hobby and professional beekeepers
 - Great experience
 - Well documented breeding parameters
 - Own mating stations
 - Pool mating of production queens
 - Import of breeding queens



Breeding of honey bees



- Hobby Beekeepers
 - Less experience
 - Mating in own apiary
 - Pure breeding
 - Depending on the open mating stations



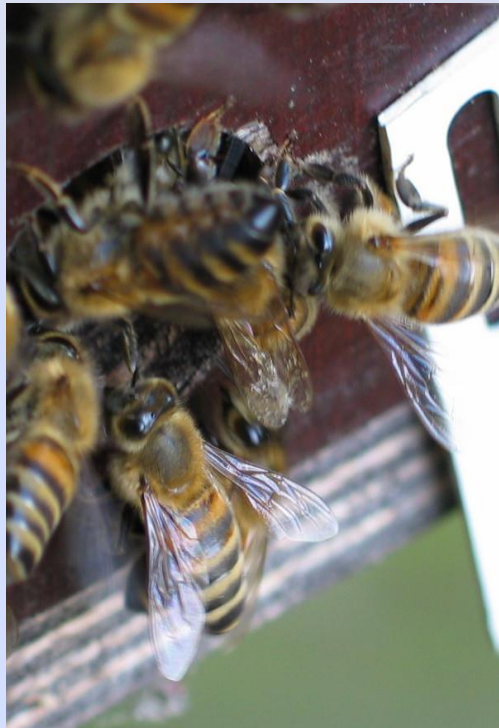
Status on the Danish breeding work

- High quality
 - Gentle bees
 - Satisfactory honey yield
 - Resistant to diseases
 - Well organized
 - Well documented
 - High level of knowledge / experience
 - Open mating stations
 - accessible to all beekeepers





Important breeding parameters



- Gentle bees (Why is that important)
 - Recruitment of new beekeepers
 - Hobby Beekeeping in residential neighborhoods
 - pollination Tasks
 - When working with the bees



Important breeding parameters



- Satisfactory honey yield
 - Recruitment of new beekeeper
 - Pollination of crops
 - Profitability
 - The Danish honey production



Important breeding parameters



- Disease resistans
 - Recruitment of new beekeepers
 - Profitability
 - Reputation
 - Pollination Output



Demands on the Queen breeding organisation

- Well organized
 - Recruitment of new queen breeders
 - Profitable
 - Maintaining the current skill level
 - Export Opportunities





Current Status on the Danish breeding work



- Well documented
 - Common breeding parameters / tests
 - High Quality / Uniformity
 - Better information capabilities
 - Marketing Opportunities



Current Status on the Danish breeding work



- High level of knowledge / experience
 - High quality
 - Retaining level
 - High confidence among beekeepers
 - Stability



Current Status on the Danish breeding work



- Open mating stations
 - Purebreds for all beekeepers
 - All breeds available
 - Known breeding lines
 - High quality / safety
 - Profitable
 - Good "delivery"
 - Availability (Schedule for the open mating stations)



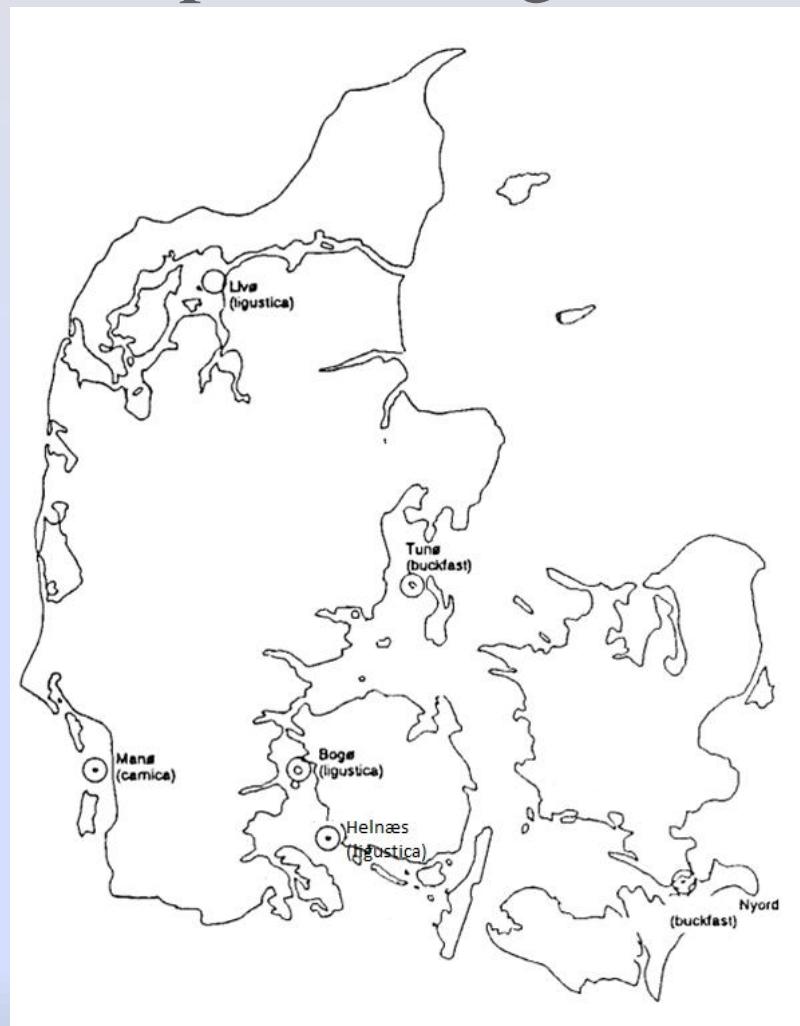
Current Status on the Danish breeding work



- Pure mating
 - 20 islands, peninsulas and spits approved as mating areas
 - 6 of these are operated by The Danish Queen breeders association as “open mating areas”



The open matingstations





The breeding Parameters

- Breeding parameters are accepted by all beekeepers
 - Virtually no problems with nosema or Chalk brood
 - Queen lines with chalk brood or nosema problems are not used for breeding
 - Publication of the breeding results
 - Common standard for pedigrees
 - High availability among beekeepers (option)
 - General supported / volunteer





The breeding Parameters



Swarming tendency (5 – 1)

Gentleness (5 – 1)

Frame behavior (5 – 1)

Honey yield (5 – 1)

Annual grade (5 – 1)

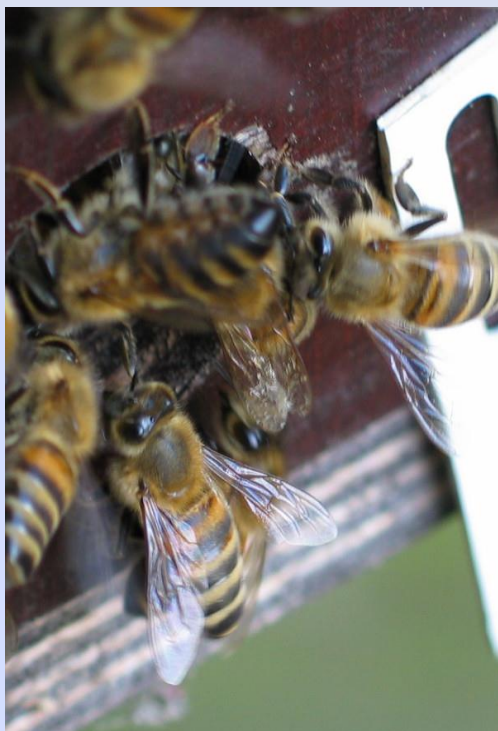
Nosema test (5 – 1)

Cleansing Ability (5 – 1)



The Future

(Threats and Opportunities)



- Legislation
- Breeding Material
- Competence
- Collaboration



The Future

(Threats and Opportunities)



- Legislation (options)
 - Binævnet
 - joint strategy
 - Greater understanding
 - Cooperation with others (agriculture)
- Legislation (threats)
 - Protection of the mating areas
 - Limitations
 - Intensive agriculture



The Future

(Threats and Opportunities)



- Breeding material (opportunities)
 - Nordic / Baltic / EU cooperation
 - Increased collaboration with scientists
 - genetic tests
 - Faster breeding results
- Breeding material (threats)
 - Fewer queen breeders (commercial)
 - New pests / diseases
 - lack of organization
 - climate change



The Future

(Threats and Opportunities)



- Competence (threats)
 - High average age of beekeepers
 - Few commercial queen breeders
 - economy
- Competence (opportunities)
 - Strategy
 - Project Funding
 - Cooperation (other organizations / countries)



The Future

(Threats and Opportunities)



- Cooperation (threats)
 - Economy
- Cooperation (options)
 - Economy
 - Conferences / Exchange of experiences
 - Shared Training plans



Conclusions



- Breeding work has a high quality
- Legislation relating to mating areas should be improved
- Collaboration among organizations is well
- Beebreeding must have a high priority in the future
- Cooperation between Scientists and bee breeders should be expanded (Breeding- and Training Project, sex Alleles, etc.)
- Funding should be secured for continued training, development and research