Managing Bees for Honey Production

When do honey flows occur in an area

- Record blooming dates for nectar and pollen sources
- Maintain a scale hive
- Ask other beekeepers
- Study cropping system

Build colony populations to peak at the start of the main honey flow

- Select apiary sites carefully
- Keep young queens in all colonies
- Minimize drifting
- Feed bees to stimulate expansion
- Manage diseases and pests
- Control swarming
- Divide strong colonies
- Equalize populations
Factors that affect queen acceptance

- Colony strength
- Age of bees
- Status of flow
- Disturbances
- Colony odor
- Amount of queen pheromone

Techniques for requeening colonies

- **Fair** - Remove old queen, place new caged queen in hive, let bees eat through candy to release her

- **Good** - Remove old queen, place new caged queen in hive, release in 4 days or when bees are no longer showing signs of aggression to her

- **Best** - Make a nuc above a double screen with 3-4 frames of brood and bees, introduce queen to nuc, after a month find and kill old queen, then remove double screen

- Marked queens are easier to find
- Clipping is used to indicate age and to delay swarming
- Why clipping is not a good idea
- How to handle and mark queens
- Color coding queens
Feeding bees sugar
- Why feed bees sugar?
- Add food reserves
- Stimulate queen to lay
- Stimulate nest cleaning
- Draw foundation
- Stimulate bees to lavishly feed newly grafted queen larvae

What type of sugar to feed
- 😊 Honey
- 😊 Beet or cane sugar (sucrose)
  - 1:1 to stimulate
  - 2:1 to add weight
- 😊 High fructose corn syrup
  - 42 and 55

Do not feed bees
- 😊 Karo syrup
- 😊 Brown sugar
- 😊 Powdered sugar
- 😊 Molasses
- 😊 Honey from store
- 😊 Any other sweetener

Types of feeders
- Boardman or entrance
- Division board
- Inverted pails or cans
- Nipple jars
- Spray syrup into combs
- Do not open feed bees
Bordman or entrance feeder

Division board feeder

Spring feeding to stimulate nest expansion

Nipple jar feeder

Fall feeding to add weight

Only feed honey from your own disease free hives!
Control the swarming impulse

Factors that contribute to the swarming impulse
• Colony size
• Forage abundance
• Brood nest congestion
• Worker age distribution
• Reduced transmission of queen substance
• Age of queen

Swarm control measures
• Adequate room
• Requeening
• Equalizing
• Reversing
• Dividing
• Demaree method

The best swarm control measures are preemptive action rather than reaction
Dividing and equalizing colonies

- Any colony will accept brood from any other colonies
- You can exchange positions of strong and weak colonies at mid-day during a honey flow to trade field forces
- You can exchange the position of a nuc and a hive preparing to swarm

Moving brood and bees among colonies in an apiary

- Strive to have 10-14 frames of brood in the hives at the start of the main flow
- In southeast Nebraska, the main flow typically begins around June 10
- Frames of brood and bees needed to achieve maximum populations for the main flow
  - April 15 ...... 3
  - April 22 ...... 4
  - May 1 ........... 5
  - May 10 .......... 6

Techniques for dividing colonies

- Find queen, divide brood and bees equally, move hive without queen to a new apiary, introduce queen to new hive
- Shake bees from 3-4 frames of brood, place in hive body and position above queen excluder on parent colony, set on new bottom early next day, move to new apiary, introduce new queen
- Make up nuc above double screen, introduce queen, just before honey flow move nuc to location of strong colony and reposition the colony in the apiary

Letting divides raise their own queen often results in an inferior queen

"Poorly reared queen of productive stock will be inferior to well-reared queens from less productive stock."

C.L. Farrar
**Manage Bee Diseases, Pests and Parasites**

**Supering bees**
- Signs of a flow
- Supering too early
- Supering too late
- Excluders
- Top vs. bottom supering
Drawing foundation

- Place above emerging brood
- Draw during a honey flow
- Foundation and swarming
- Drawing foundation in the fall

Removing surplus honey

- Bee brush
- Bee escape
- Bee blower
- Bee repellant
Bee escape boards

Bee escape board

Bee blowers

Bee repellents
Secure hives with staples or straps
Use screen wire to close entrance
Move at least 3 miles
Move in early morning or when cool

Wintering bees - beekeeper's year begins in the fall
- Adequate stores
- Mouse protection
- Disease free bees
- Top ventilation
- Upper entrance
- Windbreak
- Winter cartons

- Bees need 50-60 lbs. of honey to overwinter
- Honey serves as food and as solar collector
- Beekeeper's year begins in the fall
The basics of good management

1. Standard equipment
2. Productive queens
3. Disease free bees
4. Adequate stores
5. Good location