

**CSBA BEEKEEPER CERTIFICATION PROGRAM**

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A majority of the Board of Directors of the California State Beekeepers' Association and the Nursery, Seed, and Apiary Committee of the California Agricultural Commissioners' and Sealers' Association concur that there is a need to implement a statewide beekeeper accreditation program that would benefit the beekeepers in the following ways:

1. demonstrate to the general public that the beekeepers as individuals and as an industry are knowledgeable of and are applying the best beekeeping management practices known, particularly as they pertain to alleviating problems with Africanized Honey Bees (AHB)

2. convince land owners or supervisors that properly maintained colonies of bees are safe and desirable to have on their properties

3. assure municipal and regional governmental bodies that it is not necessary to pass ordinances strictly limiting or prohibiting the keeping of bees, in areas under their jurisdiction, in order to protect their citizens from undesirable contacts with bees

4. ensure that appropriately managed colonies of bees can be moved within the state and between states without undue delay upon the arrival of AHB in California

5. reduce the personal liability potential of beekeepers who are practicing appropriate beekeeping techniques

6. convince insurance companies that accredited beekeepers pose the least risk possible in beekeeping and thus are deserving of reduced premiums.

The certification program would be overseen by the California State Beekeepers' Association (CSBA). The program probably would consist of:

1. a comprehensive training program on the biology, behavior, and management of European and Africanized honey bees prepared jointly by CSBA and the University of California (proposed course outline attached)

2. examinations covering University and CSBA developed training materials and California bee laws (written or assembled by CSBA in consultation with the University of California)

3. periodic updates on AHB and its management as it approaches California and after its arrival

4. guidelines stating minimum standards of performance to remain accredited (including criteria for acceptable and unacceptable behavior in stocks of bees).

In order that beekeepers, brokers, and cooperating regulatory personnel, statewide, share the same expectations and require the same standards of performance, all persons who will serve in the role of "bee inspectors" will be encouraged to attend the training sessions.

## Details of CSBA Beekeeper Certification Program

### I. Certification Classifications

#### A. (General) "Certified" Beekeeper

1. a 2 year certification based upon fulfilling eligibility requirements and payment of fees
2. certified beekeepers receive:
  - a. certificate
  - b. card
  - c. badge

#### B. "Advanced" Certification

1. a permanent (as long as "Certified" status is maintained) certification, by category, based on fulfilling eligibility requirements and payment of fees
2. awarded to CSBA certified beekeeper in good standing who has successfully completed special course work and examinations based on the CSBA Advanced Beekeeper Certification Program
  - a. CSBA will develop a special Study Manual that provides basic information on the advanced topics
  - b. some supplemental reading may be required
3. advanced beekeepers receive (for each category):
  - a. certificate
  - b. card
  - c. badge

### II. Eligibility

#### A. Must be current dues paid member of CSBA

1. others only by permission of the CSBA Board of Directors

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- B. Must have 3 years experience keeping bees
  - 1. others by passing written comprehensive examination on general beekeeping knowledge
    - a. may be taken locally
- C. Must attend, and pass examination on, 3 specifically structured lectures at CSBA conventions

## III. Maintenance

- A. Must attend, and pass examination on, 2 specifically designated CSBA convention lectures within 2 years following certification and within every 2 years thereafter

## IV. Examinations

- A. Comprehensive examination on general beekeeping knowledge will be based on information in the UC Cooperative Extension booklet, "Beekeeping in California," edited by E.C. Mussen, available at county extension (Farm Advisor) offices
- B. Lecture examinations will be developed by the lecturers and reviewed for appropriateness before being administered

## TOPICS FOR STUDY MANUAL

### I. Social Stinging Insects of California

#### A. Wasps

- 1. yellowjackets
  - a. Vespula pensylvanica
  - b. V. vulgaris
  - c. V. arenaria
  - d. V. maculata

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## 2. paper wasps

a. Polistes fuscatusb. P. apachus

B. Bumble bees

C. Honey bees

D. "Wild" pollinators

E. Mimics

1. drone flies

2. moths

3. beetles

## II. Honey Bee Biology - EHB vs AHB

## A. Nesting Habits

1. size of nests

2. amount of stored honey

3. likelihood to produce exposed combs

## B. Development of immatures

1. egg

2. larva

3. pupa

## C. Adult life expectancy

1. temperate climate bees

a. during flow - 30 to 45 days

b. during dearth - up to 150 days

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## 2. tropical climate bees

- a. during flow - 12 to 18 days
- b. during dearth - 20 to 25 days
- c. begin flying at younger age

## D. Oviposition and brood rearing

## E. Swarming frequency

### 1. temperate bees

- a. 0 to 3.6 swarms per year
- b. 0 to 3 fold increase per year

### 2. tropical bees

- a. 6 to 12 swarms per year
  - (1). average 2 afterswarms per swarm
- b. 16-fold increase per year average
  - (1). documented increase of 60 colonies per year
- c. higher percentage of drone comb earlier

## III. Honey Bee Behavior - EHB vs AHB

### A. Intensity level

### B. Foraging

#### 1. types of flows

- a. temperate - concentrated in time and sugar
  - (1). concentrated nectars
  - (2). concentrated plant communities

- (3). enthusiastic communication
- b. tropical
  - (1). dilute nectar
  - (2). dispersed plants
  - (3). communication lacking
- 2. flight conditions
  - a. time of day
  - b. temperature
  - c. inclement weather
- C. Responses to hive manipulations
  - 1. flight
  - 2. running on combs
  - 3. running off combs
- D. Defensive behavior
  - 1. experimental data
  - 2. stories
  - 3. deaths
- E. Absconding - AHB
  - 1. quick (disturbance induced)
    - a. predators, wax moths, fire nearby, wasps or birds at entrance, rain entering nest, inability to keep nest cool or warm enough
  - 2. slow (resource induced)
    - a. developing shortage of nectar, pollen or water

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## F. Robbing

## IV. Management

### A. Apiaries

1. location
2. arrangement of colonies
3. water

### B. Hive manipulations

1. equipment
2. techniques
3. protecting non-beekeepers
  - a. emergencies

### C. Feeding bees

1. to prevent starvation
2. to prevent absconding
  - a. minimal amount
    - (1). keep bees home
    - (2). prevent brood rearing
3. to induce brood rearing

### D. Swarm control

1. hives fill quickly

### E. Requeening

1. when?

## 2. how?

- a. mated queens or cells
- b. marked queens

## V. Acceptable Stocks (behaviorally)

## 1. inspectors will examine 15% of colonies in an apiary

- a. white or light-colored clothing required
- b. colonies smoked and opened appropriately

## 2. acceptable environmental parameters

- a. between 2 hours after sunrise and 2 hours before sunset
- b. temperature above 60° F
- c. conditions conducive to foraging

(1). not raining, windy, or otherwise "miserable" outside

## d. avoid times of known aggressive behavior

(1). following hive manipulations (after removing honey, etc.)

(2). within 72 hours of a move

(3). after contact with toxic pesticides

(4). at end or rapid cut-off of any honey flow

(5). during a buckwheat or blue curl flow

## 3. unacceptable behavior

a. bees that fly directly from the opened hive into the inspectors face, banging against the veil repeatedly

b. bees that continue to follow the inspector

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## VI. Public Relations (Education)

### A. Perceptions of honey bees

1. non-beekeepers
  - a. industrious (good)
  - b. produce honey (good)
  - c. sting (bad)
  - d. pollinate crops (good)
2. beekeepers
  - a. pets - hobbyists
  - b. livestock - sideliners and commercial beekeepers  
- trying to make money
  - c. experimental subjects - researchers

### B. Perceptions of beekeepers

1. non-beekeepers
  - a. eccentrics (often bearded) who are willing to get stung
2. beekeepers
  - a. hard-working, rugged individualists
  - b. work better without a "boss"

### C. Education of general public

1. proper personal attitude toward general public
2. how to deliver "selective" information
3. venues
  - a. fairs
  - b. displays - libraries, etc.
  - c. newspapers
  - d. radio
  - e. television

### D. Assisting with bee problems

1. removing swarms
2. colony extractions

3. repelling nuisance foraging bees from properties
4. helping with "bee spills"

VII. Disease and Pest Diagnosis and Control

A. Contagious diseases

B. Poisoning

1. natural

2. pesticides

C. Parasitic mites

D. Queenlessness

E. Wax moths

F. Ants

VIII. Inspecting (Examining) Bee Hives

A. Proper weather conditions

B. Proper colony conditions

C. Proper (judicious) use of smoke

1. appropriate disposal of spent smoker fuel

D. Manipulating queen excluders

E. Removing outer combs first

F. Finding queens

IX. Pollination Specifics

A. Specific crop blooming cycles and need for bees

- B. Number of colonies required per acre
- C. When bees should be delivered and taken out
  - 1. placement of hives in and around orchards
- D. Colony strength criteria
- E. Colony management during bloom
  - 1. feeding, etc.

#### X. Advanced First Aid for Anaphylaxis

- A. Physiological "shock"
  - 1. what is it?
  - 2. what does it do to a person?
- B. Routine first aid for shock
- C. Administration of epinephrine (adrenaline)
  - 1. proper techniques
    - a. classical syringe
    - b. Epi-pen ®
  - 2. possible negative side effects
- D. "Good Samaritan" legislation