MANAGING THE COFFEE BERRY BORER
THE INDIAN EXPERIENCE

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THE COFFEE BERRY BORER PROBLEM
• FIRST NOTICED ON AN ESTATE DURING FEBRUARY, 1990
• THEN SPREAD GRADUALLY TO OTHER AREAS
• NOW PRESENT IN MOST OF THE TRADITIONAL COFFEE AREAS

CBB MANAGEMENT PROGRAMME
PHASE I (1990-95) -
SURVEYS, AWARENESS PROGRAMMES, SCHEME TO PROVIDE PESTICIDE AND SPRAY EQUIPMENT AT SUBSIDISED RATE, INITIATION OF VARIOUS STUDIES ON CBB MANAGEMENT

PHASE II (1995-98) -
IMPLEMENTATION OF THE PROJECT - NATIONAL MISSION ON CONTROL AND PREVENTION OF COFFEE BERRY BORER

PHASE III (1998-2001) -
CIFC/ICO/02 – INTEGRATED MANAGEMENT OF COFFEE BERRY BORER

CBB MANAGEMENT PROGRAMME
PHASE I (1990-95) MAJOR ACTIVITIES
• SURVEYS IN ASSOCIATION WITH THE DIRECTORATE OF PLANT PROTECTION, QUARANTINE & STORAGE, STATE DEPARTMENTS OF AGRICULTURE/HORTICULTURE, UPASI AND ASSOCIATIONS
• IMPLEMENTATION OF TWO PLAN PROJECTS
• BIO-CONTROL OF COFFEE BERRY BORER
• IMPORT OF TWO PARASITOIDs FROM MEXICO
• AWARENESS CAMPAIGNS BY EXTENSION NETWORK
• RESEARCH ON BIO-ECOLOGY AND MANAGEMENT
PHASE II (1995-98)
NATIONAL MISSION ON CONTROL AND PREVENTION OF CBB

• DECLARED AS A NATIONAL PEST BY THE MINISTRY OF COMMERCE
• COMPRISING OF RESEARCH AND EXTENSION COMPONENTS
• MANAGE THE PEST IN AFFECTED AREAS AND CONTAIN THE SPREAD
• R & D PROGRAM - EVALUATING AND UPGRADING IPM TECHNOLOGIES
• INTERNATIONAL COLLABORATION
• STUDIES ON THE BIO-ECOLOGY OF THE PEST
• TRIALS ON CHEMICAL AND CULTURAL COMPONENTS OF MANAGEMENT
• BIO-CONTROL USING FUNGAL PATHOGEN AND EXOTIC PARASITOIDS

PHASE II (1995-98)
NATIONAL MISSION ON CONTROL AND PREVENTION OF CBB
EXTENSION ACTIVITIES

• MASS AWARENESS PROGRAMMES THROUGH -
• DOOR TO DOOR CAMPAIGNS
• GROUP GATHERINGS / MEETINGS AT VILLAGE LEVEL
• ESTABLISHMENT OF IPM PLOTS
• PUBLICITY THROUGH MASS MEDIA LIKE NEWS PAPER, RADIO AND TELEVISION
• MATERIAL ASSISTANCE TO THE SMALL GROWER BY WAY OF SUPPLY OF PESTICIDES, SPRAYERS AND PICKING MATS AT SUBSIDISED RATES

SIGNIFICANT LEADS

- THE BIO-ECOLOGY OF CBB UNDER INDIAN CONDITIONS STUDIED
- IMPORTANCE OF CULTURAL OPERATIONS ON MANAGEMENT OF CBB

- BEAUVERIA BASSIANA, THE INDIGENOUS FUNGAL PATHOGEN WAS FOUND TO BE A PROMISING BIO-CONTROL AGENT
- TWO EXOTIC PARASITOIDS, CEPHALONOMIA STEPHANODERIS AND PROROPS NASUTA INTRODUCED FROM MEXICO
- PARASITOIDS REARED AND RELEASED. ONLY C. STEPHANODERIS ESTABLISHED IN THE FIELD

SIGNIFICANT ACHIEVEMENTS

- CREATED AWARENESS AMONG COFFEE GROWERS IN THE INFESTED AND NON-INFESTED AREAS
- GROWERS CONVINCED ABOUT EFFECTIVENESS OF CONTROL MEASURES THROUGH DEMONSTRATION PLOTS ALL OVER THE INFESTED AREAS
- SUPPLY OF PESTICIDE AND SPRAYERS TO THE SMALL GROWERS RESULTED IN EFFECTIVE MANAGEMENT OF THE PEST IN THIS SECTOR
- THE USE OF PICKING MAT WHILE HARVESTING WAS POPULARISED THROUGH SUPPLY AT SUBSIDISED RATE

PHASE III (JANUARY – 1998 TO – DECEMBER -2001)
CFC/ICO/02- INTEGRATED MANAGEMENT OF COFFEE BERRY BORER

- FIVE ENTOMOLOGISTS TRAINED ON MASS BREEDING OF PARASITOIDS AT THE CENICAFE, COLOMBIA
- RECEIVED CULTURES OF PHYMASTICHUS COFFEA AND PROROPS NASUTA FROM CENICAFE, COLOMBIA
- THREE SCIENTISTS TRAINED ON FPM APPROACHES AT CATIE, NICARAGUA
- INTRODUCED FPM IN CBB MANAGEMENT, LATER ADOPTED AS A PART OF THE REGULAR EXTENSION PROGRAMME OF THE ICB
- INTRODUCED PROGRAMME ON WOMEN EMPOWERMENT IN COFFEE CULTIVATION
- DEVELOPED MASS TRAPPING TECHNIQUE AND POPULARISED

BEAUVERIA BASSIANA - COFFEE BERRY BORER STRAIN

PAR BOILED RICE
FUNGUS DEVELOPING ON RICE
PURE SPORE - CAN BE STORED UP TO FOUR YEARS WITHOUT LOSS OF VIABILITY
80% SUPPRESSION IF APPLIED AT THE CORRECT TIME

B. BASSIANA - FIELD INFECTION
FUNGUS ON CBB
USING PICKING MATS WHILE HARVESTING

INCREASE IN GLEANINGS INCREASES INCIDENCE IN THE NEW CROP

USE OF PICKING MATS REDUCES GLEANINGS BY 72%

RESULTS IN 71% REDUCTION OF INFESTATION IN THE NEW CROP

INCREASES PICKING EFFICIENCY BY 48%

MANPOWER REQUIRED FOR GLEANING COLLECTION REDUCED BY 43%

THE NEW 'BROCA' TRAP

MADE OUT OF HIGH DENSITY POLYPROPELENE

USER FRIENDLY AND DURABLE

EASILY TRANSPORTABLE

RECOMMENDED AT 40 FEET SPACING – 67 TRAPS PER HECTARE

COST OF TRAPS = INR 12/- (GBP 0.17; US $ 0.24)

COST PER HECTARE = INR 804 (GBP 11.5; US $ 16)

COST OF LURE = INR 100/LITRE (GBP 1.4; US $ 2)

RECOMMENDED MANAGEMENT PRACTICES

• Prune/handle bushes
• Regulate shade
• Timely harvest
• Clean and thorough harvest
• Spread picking mats while harvesting
• Remove left over fruits and gleanings
• Dry coffee to the specified moisture level
• Install traps around drying yard to trap escaping beetles
• Do not mix partially dried gleanings and fresh fruits while drying
• Get the coffee bags properly fumigated

THANK YOU