Fachs Pvt Ltd on behalf of Canhem Pvt Ltd

Organic CBD Hemp and other crops Integrated Pest Control Management (IPM) Plan for your operation in Zimbabwe

1. Location: Harare, Zimbabwe
2. Farm size: 1 hectare (field) + 300 square meters (greenhouse)
3. Crop type: CBD hemp (field and greenhouse)
4. Soil type: Black to Red soils
5. Irrigation system: Drip irrigation (field) and Bucket irrigation (greenhouse)
6. Pot size: 10 litres (greenhouse)
7. CBD hemp cultivar: High oil content varieties
8. Onions-different varieties
9. Sweet potatoes seed beds
10. Maize, beans, cabbages, lettuce and water melons

Climate Considerations (Harare, Zimbabwe)
1. Subtropical climate with mild winters and hot summers
2. Average temperature range: 12°C - 28°C (54°F - 82°F)
3. Annual rainfall: Approximately 850 mm (33.5 in)

Pest and Disease Management_
1. Common pests in Zimbabwe:
   - Aphids
   - Whiteflies
   - Spider mites
   - Caterpillars (e.g., Helicoverpa armigera)
2. Common diseases:
   - Powdery mildew
   - Downy mildew
   - Botrytis
   - Root rot

1. Compliance with International (Soil Association. USD) organic standards
2. Use of natural and organic inputs
3. Avoidance of synthetic pesticides, herbicides, and fertilizers

Organic Pest Management
1. Encourage beneficial insects:
   - Lady beetles
   - Lacewings
   - Parasitic wasps
2. Use organic pesticides:
   - Pyrethrin
   - Neem oil
   - Diatomaceous earth

- Insecticidal soap
3. Cultural controls:
   - Crop rotation
   - Sanitation
   - Pruning
   - Irrigation management

Organic Disease Management

1. Use organic fungicides:
   - Copper-based products
   - Sulfur
   - Bicarbonate-based products
2. Biological controls:
   - Trichoderma
   - Bacillus subtilis

e.g.
BioCatch BioPowder and BioMagic which are beneficial microorganisms that enhance Integrated Pest Management (IPM) in hemp and sweet potato cultivation.

BioCatch and BioPowder
1. Beneficial fungi (Trichoderma harzianum)
2. Promotes plant growth, yield, and resistance
3. Suppresses fungal diseases (powdery mildew, root rot)

BioMagic
1. Beneficial bacteria (Bacillus subtilis)
2. Stimulates plant defense mechanisms
3. Controls pests (aphids, whiteflies, spider mites)

3. Cultural controls:
   - Sanitation
   - Pruning
   - Irrigation management
   - Air circulation

Additional Traditional Approaches
1. Use a blended mixture of merry gold flowers and chilli
2. Grow merry gold flowers round the fields

Organic Nutrient Management
1. Use organic fertilizers:
   - Compost
   - Manure tea
   - Fish bone meal
   - Alfalfa meal

-Guano etc
2. Soil testing: Regularly test soil nutrient levels
3. Crop rotation: Rotate crops to maintain soil fertility

Organic Pruning and Training

1. Prune plants to promote healthy growth and maximize CBD yield
2. Train plants to optimize spacing and air circulation

Monitoring and Record-Keeping

1. Regular scouting (every 7-10 days)
2. Monitor for pests, diseases, and beneficial insects
3. Maintain detailed records of:
   - Pest and disease management
   - Nutrient application
   - Pruning and training

Greenhouse (300 square meters)

1. Monitoring: Regular scouting (every 3-5 days)
2. Cultural controls:
   - Temperature management
   - Humidity control
   - Pruning
   - Irrigation management
3. Biological controls:
   - Beneficial insects (e.g., Encarsia formosa)
   - Microbial biocontrol agents (e.g., Bacillus subtilis)
4. Chemical controls (if necessary):
   - Organic pesticides (e.g., pyrethrin, neem oil)

Budget Allocation

1. Personnel training and equipment: $4,000
2. Organic pest management: $4,000
3. Organic disease management: $3,000
4. Organic nutrient management: $4,000
5. Monitoring and record-keeping tools: $2,000

Global Organic Certification Bodies

1. USDA Organic (USA)
2. EU Organic (EU)
3. IFOAM Organic Guarantee System (IOGS)
4. Organic Crop Improvement Association (OCIA)
5. Soil Association (UK)
6. Ecocert (France)
7. Control Union Certifications (Netherlands)

Monitoring Templates

1. Pest Monitoring Form:

| Date | Location | Pest | Severity (1-5) | Control Measures |



Control Measures:

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1. Disease Monitoring Form:

| Date | Location | Disease | Severity (1-5) | Control Measures |



Control Measures:

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1. Beneficial Insect Monitoring Form:

| Date | Location | Beneficial Insect | Count |



Control Measures:

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1. Weather Monitoring Form:

| Date | Temperature | Humidity | Precipitation |

Record-Keeping Templates

Control Measures:

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1. IPM Activity Log:

| Date | Activity | Location | Materials Used | Notes |

Control Measures:

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1. Pest Management Record:

| Date | Pest | Control Measure | Effectiveness |

Control Measures:

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1. Disease Management Record:

| Date | Disease | Control Measure | Effectiveness |

Control Measures:

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1. Crop Health Record:

| Date | Crop Stage | Health Status | Notes |

Control Measures:

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Updated implementation plan incorporating operation's specifics

Phase 1: Preparation (Weeks 1-4)
- Conduct soil tests for nutrient levels and pH.
- Review crop rotation history.
- Train personnel on IPM principles and practices.
- Establish monitoring and record-keeping systems.
- Apply BioMagic (2-5 mL/1000 seeds) as a seed treatment

Phase 2: Planting and Establishment (Weeks 5-8)
- Mix BioCatch, BioPowder (1-2% of soil volume) into soil before planting
-Apply BioMagic (5-10ml)/acre) as a soil drench
-Plant [Hemp Variety] in well-prepared soil.
- Apply biological controls (e.g., beneficial insects).
- Initiate monitoring program.

Phase 3: Growth and Development (Weeks 9-14)
- Continue monitoring for pests and diseases.
- Apply chemical controls (if necessary).
- Maintain records.
-Foliar spray BioMagic (5-10 mL/acre) every 7-10 days
-Apply BioCatch BioPowder (1-2 g/L) as a foliar spray every 14 days

Phase 4: Flowering and Harvest (Weeks 15-20)
- Monitor for pests and diseases during flowering.
- Implement post-harvest sanitation practices.
-Foliar spray BioMagic (5-10 mL/acre) every 7-10 days
-Apply BioCatch BioPowder (1-2 g/L) as a foliar spray every 14 days

Key Performance Indicators (KPIs)
1. Pest and disease incidence
2. Yield and quality
3. Chemical use reduction
4. Beneficial insect population

Responsibilities
1. Farm Manager: Oversee IPM plan implementation
2. Field Scouts: Conduct regular monitoring
3. Pest Management Specialist: Advise on chemical controls
4. Record Keeper: Maintain accurate records