APPENDIX- I
INTERVIEW SCHEDULE
PRODUCTION AND MARKETING OF CARDAMOM

I. SOCIO-ECONOMIC BACKGROUND

1.0. Name of the Respondents
1.1. Native place and Address
1.2. Address of cardamom land cultivated by the Respondent:
1.3. Age (in Years):
1.4. Sex
   (a) Male
   (b) Female
1.5. Religion
   (a) Hindu
   (b) Christian
   (c) Muslim
1.6. Community
   (a) OC
   (b) BC
   (c) MBC
   (d) SC / ST
1.7. Marital Status
   (a) Married
   (b) Unmarried
   (c) Widow
   (d) Separated
1.8. Educational Qualification
   : (a) Illiterate
   (b) Primary
   (c) Secondary
   (d) Higher Secondary
   (e) U.G
   (F) P.G
1.9. Occupation
   (a) Primary Occupation (permanent job seekers)
   : (a) Cardamom Planters
(b) Government Employee (c) Business
(b) Secondary Occupation :

1.10. Family Type : (a) Nuclear
(b) Joint-family

1.11. No. of members in the family
1.12. No. of earning members in the family: (a) Male :
(b) Female:

1.13. Annual Family Income : Rs.
(a) Below 25% (b) 25-50% (c) 50-75% (d) 76-100% (e) 100%

1.15. Annual Family Expenditure : Rs.
1.16. Ownership of house : (1) Own 2) Rented 3) Leased
1.17. Housing structure : Hut 1
Cutch 2
Puck 3

1.18. Do you have own farm house / : Yes / No
1.19. Have you provided housing facilities to your labourers: Yes / No
1.19.1. If yes how many houses you have provided: _______

1.20. No. of Acres of Cardamom land owned: ______________ Acres
1.21. Distance between your house in the hill and the farm: ______ Kms
1.22. Distance from your native place to your Cardamom land: ______ kms

1.24. How do you visit your Cardamomland from your native place?
   a) By walk b) By bus
   c) By own vehicle d) by hiring vehicle
   e) By sharing the charges with others

1.25. How often do you visit your cardamom land from your native place in a year times?
II. PRODUCTION OF CARDAMOM:

2.0. Cardamom land under cultivation:  
(a) Own land ———— Acres  
(b) Leased land ———— Acres  
(c) Land Leased out ———— Acres

2.1. No. of acres of cardamom land under your own cultivation: _____ Acres during 2005 - 2006 season

2.2. If you have cultivated any other crops in your cardamom land, please give details:

2.3. For how many years you are cultivating the cardamom:__________ years

2.4. What are the varieties of cardamom that you are cultivating:

2.5. Have you ever changed cardamom cultivation to any other crops?  
Yes / No

2.5.1. If yes please give details mentioning name of the crop and year of cultivation
   (a) crop-------------------
   (b) year------—------------—

2.6. What are the sources of irrigation for your cardamom cultivation:
   6. Farm ponds / Check dam irrigation 7. Dug well

2.6.1. What is the irrigation system followed for cardamom cultivation

2.6.2. What is the power system used for irrigation of your cardamom land?
   1. Oil Motor 2. Electric current 3. Any other specify

2.7. In which month cardamom season starts in your area

2.8. What is the first work you undertake in the beginning of the season?

2.9. How many times you apply manure including both organic and inorganic in a year
   2.9.1. a) Organic__________ Times  
   2.9.2. b) In organic__________ Times

2.10. Do you apply pesticides and fungicides?  
Yes / No

2.10.1. how do you know the dosage of pesticides / fungicides application?
2.10.2. What is the normal interval period of pesticides / fungicides application days?

2.10.3. How many times you have applied Insecticides in 2005-2006 seasons: • times

2.10.4. How many times you have applied pesticides (dust) in the 2004-2005 season times

2.10.5. Where do you purchase manure / pesticides / insecticides?

Name of the agency / Mode of payment

1. Manure
   a) Organic :
   b) Inorganic :
      (Fertilizer)
2. Pesticides
3. Insecticides
4. Others

2.10.6. What is the instrument used for application of pesticides / Insecticides

1. Manually operated hands sprayer (Rocker Ram)
2. Motorized power sprayer
3. Power sprayer
5. Any other (please specify)

2.10.7. What are the instruments owned by you? Yes/ No

2.11. Have you tested the soil of your land? Yes / No

2.11.1. In which year did you tested the soil of your land?

2.12. Are you undertaking gap filling of plantation work every year? Yes / No

2.12.1. If yes, how did you perform this work during the last three years?

1. Separating and planting seedlings from own field
2. Planting the seedlings purchased from others
3. Planting the seedlings purchased from Spices Board or authorized agencies
4. Planting the seedlings purchased from nursery owned by private agencies
5. planting the seedlings from own nursery
6. Any other (specify)
2.13. What is the normal life span of cardamom plant?
__________ years

2.14. How many years old cardamom plant under cultivation in your land
__________ years

2.15. Have you made an attempt for re plantation in your land? Yes / No
2.15.1. If “yes” how do you undertake re plantation in your land
1. Own nursery seedlings 2. Seedlings taken from own land
3. Seedlings purchased from other grower 4. Seedlings taken from other nursery

2.15.2. Have you availed subsidy from Spices Board? Yes / No
2.15.3. If ‘yes’ please specify the amount of subsidy availed
a) Rs_________ per acre b) Total Rs.

2.15.4. If ‘No’ give reasons

2.16. Can you please mention a name of new high yielding variety of cardamom?

2.17. Do you have cordial relationship with your labourers? Yes / No
2.17.1. Do you like the existence of labour union in your place? Yes / No
2.17.2. How many registered labourers are under your control?
2.17.3. How do you hire the services of extra-labourers other than registered labourers
required for cardamom cultivation?
I) Through union II) Hiring the labourers from neighboring places / states
III) Hiring the labourers through the registered labourers IV) Through Kangani / Masteries
V) Any other (specify)

2.17.4. To which political party your registered labourers are members?
party

2.17.5. Do you think that labour union is unnecessarily interfering in cardamom
cultivation?
Yes No

2.17.6. What are the working hours of your labourers

2.17.7. How many hours in a day your labourers are expected to work and actually
working?

Male: ———— hrs Per day
Female: ———— hrs Per day
2.17.8. What is the wage fixed to a labourer?
   Male : Rs.________ per day
   Female : Rs.________ per day -

2.17.9. What is the mode of payment of wages to labourers?
   a) daily payment  b) Weekly payment
   c) Monthly payment  d) annual payment

2.18. Who is looking after your cardamom cultivation?
   a) Self  b) paid staff
   c) Registered labourer  d) any other specify

2.19. How many times you have undertaken picking of cardamom in the last season (2005-2006)__________

2.19.1. What is the interval period of harvesting?__________ days

2.20. Do you have processing unit?
   Yes   No

2.20.1. If ‘yes’ who is managing the processing unit?

2.20.2. What is its capacity? —— *—kgs of green capsules

2.20.3. Are you able to utilize the processing unit fully?
   Yes   No

2.20.4. What is the fuel used for curing cardamom?
   a)Fire wood  b) Electricity  c) kerosene  d)Gas
   e) Any other specify

2.20.5. How many hours are required for curing cardamom?__________ hrs

2.20.6. What is the ratio of dried to green capsules?
   i) 1:1  ii) 1:2  iii) 1:3  iv) 1:4  v)1:5

2.20.7. What is the weight of dried cardamom that you get for one kilogram green capsules?____Gram

2.20.8. Do you have any practice of washing the green capsules before curing?
   (a) Yes  (b) No.

2.20.8.1. If no what are the reasons?
2.20.9. Do you have any equipment for undertaking processing of cardamom? Yes/NO
2.20.9.1. If “Yes” what are the equipments?
   a) Sizing / Grading equipment
   b) Coir mat or wire mesh for Rubbing by hands
   c) Hand operating machine for the above purpose
   d) Electrified machines for rubbing and cleaning

2.21. Do you undertake grading according to the size and colour?
   (a) Yes  (b) No
2.21.1. If “Yes” do you have equipment for undertaking such activities?
   (a) Yes  (b) No
2.21.2. If “Yes” specify the name of the equipment
2.21.3. Do you know the AGMARK grading of cardamom?
   Yes  No
2.21.4. If yes please name an AGMARK grade of cardamom _______
2.21.5. What are the grades of cardamom that you have produced? __________
2.21.6. What is the ratio of high grade to lower grade cardamom that you produce? ______

2.22. What is the total production of cardamom that normally you get from your land? _____kgs per acre
2.22.1. What is the total quantity of cardamom produced from your land during 2004-05 season? _______ Kgs per acre
2.22.2. Was there any improvement in production of cardamom in 2005-06 seasons as compared to previous year season (2004-2005)?
   Yes  No
2.22.3. If ‘yes’ to what extent
   a) +10%  b) +20%  c) +30%  d) +40%  e) +50%
2.22.4. If ‘No’ to what extent
   a) -10%  b) -20%  c) -30%  d) -40%  e) -50%

2.23. How many months that cardamom can be stored without affecting its quality?
2.23.1. For how many days you have stored your cardamom in the 2004-05 and 2005-2006 seasons?
   
   2004-05: ------- days
   2005-06: ------- days

2.23.2. What is the method followed by you for storage of your cardamom?
   
   1.
   2.
   3.

2.23.3. Do you have stock now?
   
   (a) Yes    (b) No

2.23.4. If ‘yes’ what is the total quantity that you have? ________ Kgs

2.23.5. How long you are keeping the stock? _______ days/months

2.23.6. Is, there any facility for pledging cardamom and get advance?
   
   (a) Yes      (b) No

2.23.7. If ‘yes’ where is it?

2.24. Have you ever borrowed loan for the cultivation of cardamom?
   
   (a) Yes    (b) No

2.24.1. If ‘yes’ give details for the last (2005-06) season

2.25. Are you aware of Spices Board?
   
   Yes   No

2.25.1. If ‘yes’ mention an important function of Spices Board

2.25.2. What are the benefits that you have gained from the Spices Board?

2.26. What is your future plan to increase the productivity of cardamom cultivation?

2.27. What are the problems which prevent you to improve productivity in cardamom cultivation?
2.28. What are the production functions for which your personal attention / supervision is essentially required:
   a) Weeding  b) Manuring  c) Pesticides/Insecticides spraying  d) Planting
   e) Forking and mulching  f) Trashing  g) Earthing up  h) Soil and water conservation
   i) Irrigation  j) Harvesting  k) Curing
2.28.1. Is it possible for you to show personal attention / Supervision for performing all the above functions?
   Yes          No
2.28.2. If yes what are the functions that you show personal Attention/Supervision.
2.28.3. If ‘No’ in your absence who is performing the above stated functions?
2.29. Do you consider yourself as an agriculture labourer or land owner?
   a) Agricultural labourer  b) land owner
   c) Both  d) Absentee land lord
2.29.1. Considering yourself as an agriculture labourer, do you go to the land and work joining with other labourers Yes/ No
2.30. Please give details of expenses incurred for all production activities undertaken during the last season (2005-2006) Rs_________ Per Acre
2.30.1. During the 2005-2006 periods please give me the income and expenditure statement
   (a) Average amount of income per kg Rs_________
   (b) Average amount of expenses per kg Rs
2.31. Did you face any problem in cultivation of cardamom in last season?
2.32. Have you insured your cardamom plant?
   (a) Yes  (b) No
2.32.1. If ‘Yes’ give details
2.33. What are the major problems faced by you in cultivation of cardamom
III. Marketing of Cardamom

3.0 What are the circumstances which motivate you to sell your produce?

   a) When the market rate is increasing?
   b) When the market rate is decreasing?
   c) When the compulsion arises for repayment of loans?
   d) Any other reasons (specify)

3.1 When do you normally sell your cardamom?

   a) During festival season b) End of the season c) Beginning of the season
d) During the season e) other cultivation

3.2 To whom do you normally sell the cardamom?

   a) Local merchant (b) Cardamom Producers association (c) outstation merchants
d) exporters (e) others

3.3 Please give details of sales of your cardamom during the last season (2005-2006)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Agencies</th>
<th>Quantity</th>
<th>Price per Kg.</th>
<th>Reason for choosing agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.4 How is the rate of your cardamom fixed by the traders?

I) Colour 2) Size 3) Weight 4) Moisture 5) Funguses Attack 6) others

3.5 Did you get the full payment for your produce in one installment in the 2005-2006 season? a) Yes b) No

3.5.1 If ‘No’ how many days you waited for getting for full payment from the traders? days

3.6 During 2005-2006 did you get advance for cultivation of cardamom?

   a) Yes b) No

3.6.1 Is it compulsory to sell your cardamom only to those traders who have made advance payment to you?

   a) Yes b) No

x
3.6.2. If ‘yes’ do you feel that you have incurred loss?
   a) Yes  b) No
3.7. Are you getting the market information properly? Yes/No
3.8. Do you have the practice of selling the produce immediately after harvesting?
   a) Yes  b) No
3.8.1. If ‘Yes’ Why?
   a) Lack of storage facility, b) Lesser quantity of produce, c) Storage is costly, d) For Repayment of loan, e) Not much variation in prices during the post harvest period,
   f) Fetching better prices in peak season
3.9. Have you registered your cardamom in any marketing agency?
   a) Yes  b) No
3.9.1. If ‘Yes’ mention the name of the agency?
3.9.2. Have you or your representative witnessed the auction conducted for your registered cardamom?
   a) Yes  b) No
3.9.3. If ‘yes’ are you satisfied with the method of sale followed for your registered cardamom in the auction centre?
   a) Highly Satisfied  (b) Satisfied  (c) Dis Satisfied  (d) Highly Dissatisfied.
3.9.4. Did you get the payment immediately?
   a) Yes  b) No
3.9.5. Have you noticed any difference between the prices offered by the local traders and the final price quoted for your cardamom in the auction centre?
   Yes  No
3.9.6. If ‘Yes’ which is beneficial one to your cardamom?
3.10. Which is the best agency to sell your cardamom and why?
3.11. Are you a member of any planter’s association? Yes / No.
3.11.1. If ‘Yes’ specify name of the association
3.11.2. How long you are there as a member? __________ Years
3.11.3. Are you satisfied with the benefits derived from there as compared to non-members?
   Highly Satisfied / Satisfied / Dissatisfied / Highly Dissatisfied
3.12. Do you know the language of “under cover system”? Yes/No
3.12.1. If ‘no’ (i) how do you finalize the price to your produce
   a) Through broker b) Through manager c) Through friends
   d) Any other (specify)
3.13. Have you ever faced any problem of natural calamities during the last ten years? Yes/No
   (i) quality deterioration, (ii) due to fire accident, (iii) wind, (iv) cold, (v) famine, (vi)
   flood, (vii) heat, and (viii) earthquake?
3.13.1.1 If ‘yes’ Give details
3.14. What is the season for fluctuation in the price of cardamom?
   (a) Increasing season Months:
   (b) Decreasing Season Months:
3.15. What are the existing price and the price that you expect for your cardamom?
3.15.1 Existing rate; Rs. _____ per kgs
3.15.2 Expected rate; Rs. _____ per kgs.
3.15.3. What do you expect from government to get expected prices?
3.16. Do you expect that the profit earned over and above cost production should be adequate to meet your family Expenses?
3.16.1. If the production is Rs 200, how much do you expect over and above that cost price
   Rs_____ per kg
3.16.2. Suppose you did not get the expected amount what you do for your family expenses?
3.17. During 2005-2006 how much you spent for the production of one Kg of cardamom?
   Rs________per Kg
3.18. Are you aware about the Cooperative Societies? Yes/No
3.18.1. If yes what are the benefits that you get in the Production of Cardamom from the cooperative Societies?
3.18.2. Are you a member of any Cooperative Society? Yes/No
3.18.3. If yes specify the name of the society.
3.18.4. How long have you been a member?

3.18.5. What are the benefits that you gain as a member of the Cooperative Society?

3.18.6. What are the causes for the Success or Failure of your Society?
   Causes for Success:
   Causes for Failure:

3.18.7. Do you think that the production and selling cost will come down if Efforts are taken by Cardamom Cooperatives? Yes / No

3.18.8. If ‘yes’ will you become member of the society there? Yes/No

3.19. If ‘No’ then suggest an alternative through which the production and selling cost could be reduced?

3.20 Offer your suggestion for improving productivity and marketing efficiency in respect of cardamom
   a) Productivity

   b) Marketing efficiency
APPENDIX - II

List of Spices under the purview of the Spices Board

The following 52 spices are listed in the schedule of the Spices Board Act:

| *1. Cardmom | *2 Pepper | *3. Chilli |
| 31. Horse Radish | 32. Caper | 33. Clove |
| 34. Asafoetida | 35. Cambodge | 36. Hyssop |
| 40. Marjoram | 41. Nutmeg | 42. Mace |
| 43. Basil | 44. Poppy seed | 45. All-spice |
| 46. Rosemary | 47. Sage | 48. Savory |
| 49. Thyme | 50. Oregano | 51. Tarragon |
| 52. Tamarind |

* Major items having substantial exports are indicated with asterisks
## APPENDIX- III

### AGAMARK GRADE DESIGNATION OF TRUE OR SMALL CARDAMOM

<table>
<thead>
<tr>
<th>Quality</th>
<th>Grade designation</th>
<th>Trade name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlleppeGreen Cardamom</td>
<td>AGEB</td>
<td>Cardamom Extra Bold</td>
</tr>
<tr>
<td></td>
<td>AGB</td>
<td>Cardamom Bold</td>
</tr>
<tr>
<td></td>
<td>AGS</td>
<td>Cardamom Superior</td>
</tr>
<tr>
<td></td>
<td>AGS 1 ''</td>
<td>Shipment Green 1</td>
</tr>
<tr>
<td></td>
<td>AGS2</td>
<td>Shipment Green 2</td>
</tr>
<tr>
<td></td>
<td>AGL</td>
<td>Light</td>
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<tr>
<td>Coorg Green Cardamom</td>
<td>CGEB</td>
<td>Extra Bold</td>
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<tr>
<td></td>
<td>CGB</td>
<td>Bold</td>
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<tr>
<td></td>
<td>CGI</td>
<td>Superior</td>
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<tr>
<td></td>
<td>CG2</td>
<td>Coorg Green Motta Green</td>
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<tr>
<td></td>
<td>CG3</td>
<td>Shipment</td>
</tr>
<tr>
<td></td>
<td>CG4</td>
<td>Light</td>
</tr>
<tr>
<td>Bleached and/or Half</td>
<td>BL1</td>
<td>-</td>
</tr>
<tr>
<td>Bleached Cardamom</td>
<td>BL2</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>BL3</td>
<td>-</td>
</tr>
<tr>
<td>Bleachable White Cardamom</td>
<td>BW1</td>
<td>Mysore/Mangalore Bleachable Cardamom Clipped</td>
</tr>
<tr>
<td></td>
<td>BW2</td>
<td>Mysore/Mangalore Bleachable Cardamom Undipped</td>
</tr>
<tr>
<td></td>
<td>BW3</td>
<td>Mysore/Mangalore Bleachable Bulk Cardamom Clipped</td>
</tr>
<tr>
<td></td>
<td>BW4</td>
<td>Mysore/Mangalore Bleachable Bulk Cardamom Undipped</td>
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<tr>
<td>Mixed Cardamom</td>
<td>MEB</td>
<td>Mixed Extra Bold</td>
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<td>MB</td>
<td>Mixed Bold</td>
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<tr>
<td></td>
<td>MS</td>
<td>Mixed Superior</td>
</tr>
<tr>
<td></td>
<td>MSI</td>
<td>Mixed Shipment I</td>
</tr>
<tr>
<td></td>
<td>MS 2</td>
<td>Mixed Shipment 2</td>
</tr>
<tr>
<td></td>
<td>ML</td>
<td>Mixed Light</td>
</tr>
<tr>
<td>Cardamom Seeds</td>
<td>CS 1</td>
<td>Prime</td>
</tr>
<tr>
<td></td>
<td>CS 3</td>
<td>Brokens</td>
</tr>
<tr>
<td></td>
<td>CS 3</td>
<td>Brokens</td>
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### APPENDIX-IV

**Distribution of buyers**

<table>
<thead>
<tr>
<th>SI,NO.</th>
<th>Bidders</th>
<th>No. of lots bought</th>
<th>Average Quantity (in kgs) Per lot</th>
<th>Average Price per kg</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>W.D</td>
<td>13</td>
<td>166.8</td>
<td>332.6</td>
</tr>
<tr>
<td>2.</td>
<td>LS</td>
<td>8</td>
<td>122.7</td>
<td>316.0</td>
</tr>
<tr>
<td>3.</td>
<td>DS</td>
<td>9</td>
<td>95.5</td>
<td>336.4</td>
</tr>
<tr>
<td>4.</td>
<td>SS</td>
<td>2</td>
<td>173.1</td>
<td>308.8</td>
</tr>
<tr>
<td>5.</td>
<td>GA</td>
<td>2</td>
<td>156.9</td>
<td>364.3</td>
</tr>
<tr>
<td>6.</td>
<td>BABA</td>
<td>4</td>
<td>181.4</td>
<td>345.8</td>
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<tr>
<td>7.</td>
<td>KA</td>
<td>3</td>
<td>152.4</td>
<td>358.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>41</strong></td>
<td><strong>142.7</strong></td>
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</tr>
</tbody>
</table>

### Appendix-V

**Size of the lot brought by the Sellers**

<table>
<thead>
<tr>
<th>Size (in KGs)</th>
<th>No. of lots</th>
<th>%to total</th>
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</thead>
<tbody>
<tr>
<td>Blow 50</td>
<td>5</td>
<td>12.2</td>
</tr>
<tr>
<td>51 -100</td>
<td>4</td>
<td>9.8</td>
</tr>
<tr>
<td>101-150</td>
<td>11</td>
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<tr>
<td>151-200</td>
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<td>39.0</td>
</tr>
<tr>
<td>201 - 250</td>
<td>5</td>
<td>12.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
APPENDEX - VI

Representation-given by the Cardamom Growers to Minister of Commerce, Government of India on the Occasion of the Inauguration of the E -Auction System on 23.08.07.

On behalf of the small cardamom growers in the Western Ghats area, we the cardamom Planters Association, having nearly 700 members and functioning effectively for the past 70 years to cater the needs of the Cardamom Growers, place the following before your good selves and solicit your favorable Action

It is a matter of great concern that the cardamom growers in the western ghats have been undergoing a period of unending hard ship and misery for the past 8 years. What once been acclaimed as profitable occupation have now become a thankless job and a fruitless venture. In the first place, proper maintenance of field by cardamom growers has turned out to be an impossible task in terms of labour and cost of cultivation.

It has become common thing for cardamom growers to meet their agricultural expenses by availing loans from banks and private sources. Incidentally, the astronomical fall in the price of cardamom over the past eight years has incapacitated the farmers from remitting at least the bank loan interest on time, not to mention anything about the repayment of the loan itself. In the mean while, low price of cardamom which has remained far below the actual cost of production has made life of a cardamom grower object of ridicule and a commodity for sympathy. Now a days the price of cardamom under the clutches of very few wholesale moneyed traders in north area. Big companies like Reliance, Tata etc., and also Government agencies should also come to this business in support of planters. Fixing a reasonable floor price by the Government is also an important remedy.

In addition to the low price of cardamom, natural calamities have taken a heavy toll of cardamom cultivation resulting in low yield for more than 8 years. The illegal entry of cardamom from GAUTEMALA has also played have both in the market area and in the context of price factor.

Periodical representations in this regard to the successive governments have always remained a voice in the wilderness. It is time that government and the Spices Board take timely and adequate steps to curtail the illegal entry of cardamom. Otherwise our nation will lose an important foreign exchange income.
One of the principal means of improving the quantum of export of cardamom involves the right use of publicity measures to increase and sustain the domestic usage of cardamom in our daily use. Proper identification and increase of the areas of marketing from Kashmir to Kanyakumari will not only improve the sale of cardamom but also improve the quantum of export. The Govt should take all necessary steps to improve the Export. The ultimate beneficiary in this direction is the average cardamom grower for whom a better price and reduction of burden will go a long way in generating new vistas of hope and strength.

In recent times, the cardamom growers have been crippled, to a large extent, by the regular increase in wages. They would like to suggest that a moratorium on the increase in wages could well usher in an era of mutual trust and dialogue both for the planter and the labourer. It can also provide a healing touch to cardamom cultivation.

The phenomenal increase in the price of manure and pesticides has also made cardamom growing an arduous and painful task. It is in this context that the government should seriously think of giving subsidies to cardamom planters through Spices Board and Grower’s associations and initiate necessary measures to contain the menace of rising prices.

We have witnessed the horrendous tragedy of Farmer’s suicide both in Maharashtra and Andhra Pradesh. Failure to repay the bank loans motivated the farmers to commit this reckless act. The government of Tamil Nadu and the coffee Board have waived the bank loans in the larger interest of Agriculturists and coffee growers. The government and the Spices Board could do well to waive the bank loans for the cardamom crop and other developmental loans availed by the cardamom growers from the banks. The most important thing to be considered immediately is the waiver of loans which can give timely and immediate relief to the cardamom planters.

Lastly, the online commodity trading culture, which has come like “a bolt from the blue” to the market trends, has prevented the ordinary cardamom grower from comprehending the actual price and obtaining a benefit out of it.

It is the bounden duty of the government and the Spices Board to regulate the tentacles of the online commodity trading culture and make provisions for a healthy, transparent and authentic system for the sale of cardamom.

Finally, to come out from the burden of Bank & private debts, most of the marginal and small farmers in the Western Ghats have begun to sell their lands. Ironically, there are no effective buyers for these lands. If this situation is allowed to continue, the
enchanting flavour and aroma of cardamom, “The Queen of the Spices” will, remains a ‘relic in the museum. The possible disappearance of cardamom in the virgin lands of the Western Ghats will spell disaster for this area in terms of ecology and preservation of forest.

It is highly gratifying to know that the Department of Economic Affairs (Banking Division) Ministry of finance Government of India has constituted expert group to look into a problems of agricultural indebtedness in its totality and to suggest measures to provide relief to the farmers across the country in general and cardamom growers in particular. For your good selves kind information we have already represented this to Mr. Rathakarishanan Committee and also to our finance Minister Honorable Thriu .P.Chidamaram

Therefore, we sincerely appeal to the commerce Ministry and spice Board to take necessary steps to enhance price of cardamom and to redress the other above mentioned grievances also.

### Appendix-VII

Cost estimation of Drier

<table>
<thead>
<tr>
<th>S.NO</th>
<th><strong>KARDI</strong></th>
<th>500kg green capsule</th>
<th>300 kg green capsule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DRYER</td>
<td>199998.00</td>
<td>163912.00</td>
</tr>
<tr>
<td></td>
<td>COMBRATOR</td>
<td>51000.00</td>
<td>45000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>250998.00</td>
<td>208912.00</td>
</tr>
<tr>
<td></td>
<td>Generator</td>
<td>70000.00</td>
<td>55000.00</td>
</tr>
<tr>
<td></td>
<td>7.5KVA</td>
<td>320998.00</td>
<td>263912.00</td>
</tr>
<tr>
<td></td>
<td>ST ABLISER</td>
<td>10000.00</td>
<td>10000.00</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
<td>330998.00</td>
<td>273912.00</td>
</tr>
<tr>
<td></td>
<td>Subsidy</td>
<td>54973.00</td>
<td>45777.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>276025.00</td>
<td>228135.00</td>
</tr>
<tr>
<td>Sl.No</td>
<td>Details</td>
<td>Conventional Cardamom Drying Store</td>
<td>Diesel Fired Cardamom Drier</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------------</td>
<td>------------------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Fuel</td>
<td>Forest wood</td>
<td>Diesel /LPG gas</td>
</tr>
<tr>
<td>2</td>
<td>Operating System</td>
<td>Manual and Labouries</td>
<td>Semi automatic System and easy operation</td>
</tr>
<tr>
<td>3</td>
<td>Human Safety</td>
<td>The worker has to work near the hottest place for longer period while curing cardamom and hence human health is spoiled</td>
<td>The worker is working at room temperature, while curing cardamom</td>
</tr>
<tr>
<td>4</td>
<td>Consumption of heat energy</td>
<td>Since produced heat, not only dry the cardamom, but also heat the entire store area and other materials in the store room and hence 70 to 80% of produced heat is wasted</td>
<td>Since the entire produced hot air is utilized only to cure the cardamom and there is no loss of heat</td>
</tr>
<tr>
<td>5</td>
<td>Quality of the dried Cardamom</td>
<td>Since the cardamom receives unequal temperature in the traditional store for curing the colour and quality of the dried cardamom is less</td>
<td>Since all the cardamom in the Drier receives equal and controlled temperature for curing and there is no physical disturbance to the cardamom while drying, the quality and colour of the dried cardamom is very good</td>
</tr>
<tr>
<td>6</td>
<td>Cost of the unit</td>
<td>The cost of Civil construction work, store drying equipment cost and erection charge etc. total approx. Rs. 4 to 5 Lacks</td>
<td>Approx Rs. 1.50 to 1.80 Lacks</td>
</tr>
<tr>
<td></td>
<td>Required quantity of fuel to cure 30kgs cardamom</td>
<td>9000 to 1000 kgs of forest wood</td>
<td>45 ltrs of Diesel Diesel</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------</td>
<td>---------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Cardamom curing rate</td>
<td>Rs.3.50 to Rs 4.00</td>
<td>Rs.6.50 to Rs.8.00</td>
</tr>
<tr>
<td>9</td>
<td>Maintenance Cost</td>
<td>All the drying equipment in conventional store are working at very high temperature and hence the iron finance and flu gas pipes damaged in short period and to be replaced once in 3 to 4 years and hence maintenance cost is high</td>
<td>Drier is operating at low temperature and hence all the parts in the Dryer will work in good condition for long period. Less maintenance cost</td>
</tr>
<tr>
<td>10</td>
<td>Price of dried cardamom</td>
<td>Average Price</td>
<td>10 to 15% higher than the average price</td>
</tr>
<tr>
<td>11</td>
<td>Cost effect to the small planter whose annual production is 2000kgs of dried cardamom. Assuming present average price of 1kg cardamom is Rs.200/-</td>
<td>Annual production of Dried cardamom = 2000kgs Annual yield of green cardamom =2000<em>6=12000 kgs Cost for curing12000kgs cardamom +12000</em>4.00= Rs.480000/-selling rate=2000*200 =Rs.40000/-gross income=400000-48000=Rs.352000</td>
<td>Annual production of Dried cardamom = 2000kgs Annual yield of green cardamom =2000<em>6=12000 kgs Cost for curing12000kgs cardamom +12000</em>7.50=Rs.90000/-selling rate= 2000*225=Rs.450000/-Gross income =450000-90000=Rs.360000/-</td>
</tr>
<tr>
<td>12</td>
<td>The planters experience when curing the cardamom from filed</td>
<td>Since the planter can collect and store the wood for curing cardamom for the entire season, the can cure the cardamom without any expense</td>
<td>The planter should keep minimum Rs.2000/- to purchase 45 liters of diesel to cure 300kgs of cardamom from the filed</td>
</tr>
<tr>
<td>13</td>
<td>Fuel required for curing the total production of cardamom in Kerala and Tamilnadu states. The total production of dried cardamom = 12000 Metric Tones. The total production of green cardamom from these files = 12000*6 = 72,000 Tones</td>
<td>Considering 1 Tones of forest wood is required for curing 3000kgs of cardamom. The wood required for curing total production of cardamom = 72000<em>1000</em>1/300 = 2,40,000 Tones of wood. Considering 45lrs of Diesel is required for curing 3000kgs of cardamom. The Diesel required for curing total production of cardamom = 72000<em>1000</em>45/300 = 1,08,00,000 liters of Diesel. Considering 0.180 Tone of Biomass i.e. broken trees, firewood, waste wood, etc. is required for curing 300kgs of cardamom. The wood required for curing total production of cardamom = 72000<em>1000</em>0.180/300 = 43200 Tones of Biomass.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>The result of the total fuel expense for curing entire produced cardamom in Kerala and Tamilnadu. 1. Fuel consumption</td>
<td>If the entire produced cardamom in Kerala and Tamilnadu is cured in conventional cardamom drying store, 2.4 lac Tones of forest wood is required and the above huge volume of wood is collected by cutting trees from the forest, and hence the forest will be devastated slowly. If the entire produced cardamom in Kerala and Tamilnadu is cured in Diesel fired Dryer, 10 million Liters of Diesel is required and hence the National Economy will be affected. If the entire produced cardamom in Kerala and Tamilnadu is cured in our Biomass Dryer, 0.43 lac Tones of Biomass i.e. Broken tree branches, waste wood, coconut shell etc. is required. Since any type of dry biomass material can be used for firing to dry the cardamom in our Biomass firing cardamom dryer and also quantity of wood is less to dry the cardamom, the Forest is saved from cutting large number of trees for drying cardamom when our biomass fired Drier is used for cardamom drying. About 10 million liters of diesel is required if the above total quantity of cardamom is dried in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Pollution control</td>
<td>Nil</td>
<td>Diesel Firing Drier and the above huge quantity of oil is saved when the same quantity cardamom is dried in our wood fired Dryer and thus the National Economy will improved.</td>
</tr>
<tr>
<td>---</td>
<td>----------------------</td>
<td>-----</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>15</td>
<td>When firing 240000 tones of wood for curing cardamom, large volume of smoke will be releases from above firing wood, which contains heavy carbon, mixed with atmospheric air and polluted the atmosphere.</td>
<td></td>
<td>Since 43000 tones waste wood is required to fire for curing entire produce cardamom, which is 18% of wood used in conventional cardamom drying store. When our Biomass fired drier is used for curing the entire produced cardamom, the atmospheric pollution will be reduced to 16 to 20% of pollution created by conventional cardamom drying store.</td>
</tr>
</tbody>
</table>
## APPENDIX-IX

### PRODUCTIVITY, COST AND REVENUE

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Production (in kg per Acre)</th>
<th>Cost</th>
<th>Projected Revenue at the price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rs.200/kg</td>
</tr>
<tr>
<td>1.</td>
<td>100</td>
<td>30,000</td>
<td>20,000 (-10,000)</td>
</tr>
<tr>
<td>2.</td>
<td>150</td>
<td>35,000</td>
<td>30,000 (-5,000)</td>
</tr>
<tr>
<td>3.</td>
<td>200</td>
<td>40,000</td>
<td>40,000 (0)</td>
</tr>
<tr>
<td>4.</td>
<td>250</td>
<td>45,000</td>
<td>50,000 (5,000)</td>
</tr>
<tr>
<td>5.</td>
<td>300</td>
<td>50,000</td>
<td>60,000 (10,000)</td>
</tr>
<tr>
<td>6.</td>
<td>350</td>
<td>55,000</td>
<td>70,000 (15,000)</td>
</tr>
<tr>
<td>7.</td>
<td>400</td>
<td>60,000</td>
<td>80,000 (20,000)</td>
</tr>
<tr>
<td>8.</td>
<td>450</td>
<td>65,000</td>
<td>90,000 (25,000)</td>
</tr>
<tr>
<td>9.</td>
<td>500</td>
<td>70,000</td>
<td>1,00,000 (30,000)</td>
</tr>
<tr>
<td>10.</td>
<td>550</td>
<td>75,000</td>
<td>1,10,000 (35,000)</td>
</tr>
<tr>
<td>11.</td>
<td>600</td>
<td>80,000</td>
<td>1,20,000 (40,000)</td>
</tr>
</tbody>
</table>

*Figures in brackets indicate the net profit*