## CONTENT

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgement</td>
<td>ii-iii</td>
</tr>
<tr>
<td>Preface</td>
<td>iv-vi</td>
</tr>
<tr>
<td>List of Tables</td>
<td>vii-ix</td>
</tr>
<tr>
<td>List of Appendix Table</td>
<td>x</td>
</tr>
<tr>
<td>List of Figures</td>
<td>xi-xii</td>
</tr>
<tr>
<td>Abbreviations</td>
<td>xiii-xiv</td>
</tr>
<tr>
<td>1. Introduction</td>
<td>1-21</td>
</tr>
<tr>
<td>1.1  Background</td>
<td>1</td>
</tr>
<tr>
<td>1.2  Significance of Research</td>
<td>4</td>
</tr>
<tr>
<td>1.3  Objectives of the study</td>
<td>5</td>
</tr>
<tr>
<td>1.4  Review of Literature</td>
<td>6</td>
</tr>
<tr>
<td>1.5  Research gap</td>
<td>13</td>
</tr>
<tr>
<td>1.6  Data and Methodology</td>
<td>13</td>
</tr>
<tr>
<td>1.6.1 Data</td>
<td>13</td>
</tr>
<tr>
<td>1.6.2 Analytical tools</td>
<td>14</td>
</tr>
<tr>
<td>1.6.2.1 Lorenz curves</td>
<td>14</td>
</tr>
<tr>
<td>1.6.2.2 Gini-coefficient ratios</td>
<td>14</td>
</tr>
<tr>
<td>1.6.2.3 Simpson index of diversity</td>
<td>15</td>
</tr>
<tr>
<td>1.6.2.4 Total livestock</td>
<td>15</td>
</tr>
<tr>
<td>1.6.2.5 Step wise regression</td>
<td>15</td>
</tr>
<tr>
<td>1.6.3 Justification of model variables</td>
<td>16</td>
</tr>
<tr>
<td>1.6.4 Justification of time duration taken in model</td>
<td>18</td>
</tr>
<tr>
<td>1.6.5 Research Hypotheses</td>
<td>21</td>
</tr>
</tbody>
</table>
2. Global Livestock Revolution and India

2.1 Regions and countries and witnessing Livestock Revolution
   2.1.1 Livestock production
   2.1.2 Livestock consumption
   2.1.3 Protein intake from milk and meat

2.2 Global status of Indian livestock sector
   2.2.1 Livestock production
   2.2.2 Livestock population
   2.2.3 Livestock gross production value
   2.2.4 Livestock international trade
   2.2.5 Livestock productivity

2.3 International competitiveness of Indian livestock products

3. Structural shifts in Indian livestock sector

3.1 Livestock population
3.2 Livestock Production
3.3 Production system
3.4 Geographical shift
3.5 Value of livestock output
3.6 State wise value of output from livestock sector
3.7 Changes in food consumption
3.8 Nutrition from agricultural products
3.9 Performance of livestock trade

4. Significance of Livestock Sector

4.1 Role of livestock in Indian agricultural economy
4.2 Livestock exports
4.3 Livestock sector in India – Implications for rural poverty alleviation
4.4 Employment Generation from livestock sector

4.5 Significance of livestock for small scale farmers in India
  4.5.1 Role of livestock farming in economic viability of marginal and small farms
  4.5.2 Lorenz curve for distribution of land and livestock assets

5. Impact of Livestock Revolution on Small Scale Producers

  5.1 Role of marginal and smallholders in milk production of India
  5.2 Distribution of livestock resources in India
  5.3 Extent of diversification among livestock species by farm category
  5.4 Livestock income for farmers by farm category

6. Issues and Constraints of Livestock Sector in India

  6.1 Constraints faced by Indian livestock sector
    6.1.1 Low yield
    6.1.2 Interstate variations
    6.1.3 Livestock sector - A missing focus
    6.1.4 Feed and fodder deficit
    6.1.5 Problem of surplus cattle
    6.1.6 Poor veterinary services
    6.1.7 Lack of market access to small farmers
    6.1.8 Issues related to processing and marketing
    6.1.9 Data and information related issues
  6.2 Issues concerning small-scale producers in India during Livestock Revolution
    6.2.1 The ongoing revolution and incomes of the poor
    6.2.2 Social consequences/equity issues
6.2.3 Environmental impacts of the Livestock Revolution 134
   6.2.3.1 Increasing grazing pressure in arid, semi-arid dry lands 134
   6.2.3.2 Lack of crop-livestock integration 135
   6.2.3.3 Harmful gas emissions 135
6.2.4 Animal and human health effects from Livestock Revolution 136
6.3 Suggestions to improve India’s Livestock Sector 137

7. Summary, Conclusion and Policy Implications 140-150

   7.1 Summary 140
   7.1.1 Changes at Global Level 140
   7.1.2 Structural Changes Indian Livestock Sector 140
   7.1.3 Significance of Livestock Sector for Small Scale Farmers in India 141
   7.1.4 The Impact of Livestock Revolution on Small Scale Producers 143

   7.2 Conclusion 145

   7.3 Policy Implications 146

References 151-165

Annexures