

**SINDH POULTRY VACCINE CENTRE  
KARACHI**



**PC-I**

**STRENGTHENING OF  
SINDH POULTRY VACCINE CENTER  
2008-2013**



Government  
of Sindh

**GOVERNMENT OF SINDH  
LIVESTOCK AND FISHERIES DEPARTMENT**

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**PROJECT PROFORMA FOR DEVELOPMENT PROJECTS**  
**Code Number for Project**

**PROJECT DIGEST**

<b>1.</b>	<b>Name of the Project</b>	Strengthening of Sindh Poultry Vaccine Centre
<b>2.</b>	<b>Location</b>	Sindh Poultry Vaccine Centre, Animal Science Complex, Korangi-Karachi.
<b>3.</b>	<b>Authorities Responsible</b>	
<b>a.</b>	<b>Sponsoring</b>	Livestock & Fisheries Dept, Govt. of Sindh. Karachi.
<b>b.</b>	<b>Executing</b>	Sindh Poultry Vaccine Centre, Animal Science Complex-Korangi. Karachi
<b>c.</b>	<b>Operation and Maintenance</b>	Sindh Poultry Vaccine Centre, Animal Science Complex-Korangi. Karachi
<b>4.</b>	<b>Time Required for Completion Of the Project</b>	60 months
<b>5.</b>	<b>Plan Provision</b>	
<b>i.</b>	<b>If the Project is included in the Current five year Plan specify actual allocation</b>	Included in the Provincial ADP # 69 for the year 2008-09 with an allocation of Rs. 20 M and a total cost of 100 million. Whereas the tentative cost of the project is Rs. 202.523 million.
<b>6.</b>	<b>Project Objective</b>	<b>OBJECTIVE</b>
	<b>The objective of the sector/sub sector as indicated in the medium term/five years plan is produced. Indicate objective of the project and a linkage between the proposed project and the sectoral objective</b>	<p>The phenomenal of achievements of science and its impact on every sector of human and veterinary endeavor have made it imperative for the developing countries to recognize its vital role in their plans of national development. In this context it is realized that specific progress involves a highly complex process of phased planning and programming of national efforts over a wide front. This is so, because the research relating to the development of power resources, industries and agriculture are closely inter linked activities.</p> <p>The project was initiated from a USDA, PL-480 project entitled, "The immune response of chickens to Newcastle disease vaccine". As the performance of that project was good the USDA authorities approved another project with an allocation of Rs.25 million. At the same time world Food Program grant Rs 0.17 million for the construction of a Lab. However, the equipment for the production of vaccines was provided by the UNDP funds, not less than US\$, 250,000-00.</p> <p>The Sindh Poultry Vaccine Center was started in 1975-76 with the production of 9.7 million doses of Newcastle disease vaccine and has been increased steadily now exceeding 170 million doses per annum. Other vaccines such as IB, IBD, Fowl pox, Hydro vaccine also being produced for the last ten years and supplied in Sindh, Punjab and other provinces including Azad</p>

		<p>Kashmir.</p> <p>To meet the international demands of our products we have to strengthen our centre by establishing BSL III Facilities, upgrading existing facilities of vaccine production and poultry sheds and strengthen research activities</p> <p>The overall objective of the project is to realize the potential of the industry with 745 million birds including breeders and commercial poultry flocks. This will be achieved through research oriented work in laboratories regarding disease, diagnosis and treatment.</p> <p>The overall impact of this project is to strengthen the SPVC to contribute a greater share in the poultry industry. This can be achieved by meeting the international standards of vaccine manufacturing and improving the vaccine quality. This project will also strengthen the research activities being carried out at the centre and establish a strong industry academia linkage. Thus, SPVC will contribute to increase countries economic reserves through serving poultry industry which has a turn over of Rs. 162 billion annually.</p>
	Long Range Objective	
		<p>The long range objectives of the project are:</p> <ul style="list-style-type: none"> <li>• To increase the per capita intake of animal proteins through increased production and consumption of eggs and poultry meat.</li> <li>• To increase the income, social status and poverty elevation.</li> <li>• To save the poultry industry from viral and bacterial diseases.</li> </ul>
	The Above Objective Would be Achieved Through	
		<ul style="list-style-type: none"> <li>• Strengthening of the existing SPVC facilities.</li> <li>• To meet the national and international demands for the vaccine production.</li> <li>• To establish tissue culture lab for vaccine production.</li> <li>• To boost research to improve the quality of vaccine and molecular characterization of endemic local strains of Newcastle Disease, Avian Influenza, Hydropericardium disease, Infectious Bursal Disease, Infectious Bronchitis etc.</li> <li>• To establish environmental control houses to keep bird to meet the criteria of SPF Eggs.</li> <li>• To meet the international demand of biosafety and biosecurity for our employees.</li> <li>• To boost our marketing through e-marketing and publication of advertisements in different magazine and</li> </ul>

		<p>journals.</p> <ul style="list-style-type: none"> <li>• Carry out research projects of industrial demand.</li> </ul>						
7	<b>Description and justification of the project</b>	<p>Sindh Poultry Vaccine Center started its functioning during 1975-76 with an income of Rs. 0.119 million and after its 25 years in 1999-2000 the income reached about Rs. 17.34 million. At present the centre has a yearly turn over ranging from 25-30 M and has a potential to increase up to 50 M. <b>The unique thing about this center is that it's running on self-finance basis for the last 30 years.</b> Therefore, we are not in a position to invest on capital spending, the production cost is increasing day by day and to meet the market competition, the centre needs its strengthening in the form of infrastructure and a strong marketing network. By this project we meet the international requirement like HVAC system Specified Pathogen Free (SPF) unit for the birds, be submitted in the next ADP funding.</p> <p>The centre has only one regional office at Karachi. Whereas more than 70-80% poultry production has shifted to Punjab. Therefore there is a dire need to expand centre by setting up regional offices in other parts of the country.</p> <p>The project is designed to meet the healthy requirement of poultry industry, by research oriented work in poultry diagnosis and treatment of birds by preventive measures like vaccination.</p>						
8	<b>Cost Estimates</b>	<table border="1"> <tr> <td><b>Capital Cost in (M)</b></td> <td>70.091 M</td> </tr> <tr> <td><b>Revenue Cost in (M)</b></td> <td>132.432 M</td> </tr> <tr> <td><b>Total (M)</b></td> <td><b>202.523 M</b></td> </tr> </table> <p>Enclosed as Annexure-A</p>	<b>Capital Cost in (M)</b>	70.091 M	<b>Revenue Cost in (M)</b>	132.432 M	<b>Total (M)</b>	<b>202.523 M</b>
<b>Capital Cost in (M)</b>	70.091 M							
<b>Revenue Cost in (M)</b>	132.432 M							
<b>Total (M)</b>	<b>202.523 M</b>							
	<b>i Date of Estimate</b>	August 2008						
	<b>ii Basis of Cost</b>	Estimates as per schedule of rates of 2008 and prevailing market rates.						
9	<b>Describe the project and indicate existing facilities in the area and justify the establishment of the project</b>	<p><b>EXISTING FACILITIES IN THE AREA</b></p> <p><b>(A) Sindh Poultry Vaccine Centre (SPVC)</b></p> <p>We have no hesitation to claim that this center is playing an important role for the national economic development as it is contributing about 8-10% of total poultry vaccines used in the country without any financial liability either from the private/donor or public sector. We are sure that after the completion of the project the productivity, quality and income will enhance and its share in national economic development will be increased. The vaccine market may be increased Rs. 50 million.</p>						

		<p><b><u>EXISTING FACILITIES AT SPVC</u></b></p> <p><b>1) PRODUCTION UNIT</b></p> <ul style="list-style-type: none"> <li>• Avian Influenza Unit</li> <li>• Fowl Pox Unit</li> <li>• Infectious Bronchitis Unit.</li> <li>• Infectious Bursal Disease Unit.</li> <li>• Newcastle Disease Unit.</li> <li>• Quality Control Unit</li> <li>• Hydropericardium Syndrome Unit</li> <li>• Bacterin: <ul style="list-style-type: none"> <li>➤ <i>Hemorrhagic Septicemia</i> Unit</li> <li>➤ <i>Enterotoxaemia</i></li> <li>➤ <i>Escherichia coli</i></li> </ul> </li> </ul> <p><b>2) MARKETING &amp; DEVELOPMENT UNIT</b></p> <ul style="list-style-type: none"> <li>• Marketing Unit</li> <li>• Accounts and Administrative Section</li> </ul> <p><b>3) RESEARCH UNIT</b></p> <ul style="list-style-type: none"> <li>• Polymerase Chain Reaction (PCR)</li> <li>• Sodium Dodecyl Sulfate Polyacrylamide Gel Electrophoresis (SDS-PAGE).</li> <li>• Enzyme Linked Immuno Sorbant Assay (ELISA)</li> <li>• Tissue Culture.</li> <li>• Immunoblotting.</li> </ul> <p><b>4) DIAGNOSTIC UNIT</b></p> <ul style="list-style-type: none"> <li>• Haemagglutination (HA) &amp; Haemagglutination Inhibition (HI)</li> <li>• Polymerase Chain Reaction (PCR)</li> <li>• Agarose Gel Precipitation (AGP)</li> </ul> <p><b><u>B) POULTRY RESEARCH INSTITUTE KARACHI.</u></b></p> <p>The project poultry research institute Karachi, was started in 1970-71, completed on 30/06/1980 and then transferred to non-Development side with effect from July, 1980 and redesigned as Directorate Poultry Production and Research Sindh. It comprises of five units:</p> <ul style="list-style-type: none"> <li>• Pathology</li> <li>• Nutrition</li> <li>• Housing and Management</li> <li>• Breeding and Incubation</li> <li>• Economics and Marketing</li> </ul>
<b>10</b>	<b>Provide technical parameters i.e. input and</b>	<b>IMPROVEMENT THROUGH RESEARCH WILL BE</b>

	<p><b>output of the project in the quantitative terms. Also discuss the technology aspect of the project</b></p>	<p>CARRIED OUT IN THE FOLLOWING AREAS:</p> <ul style="list-style-type: none"> <li>To boost the quality and quantity of vaccine.</li> </ul> <table border="1" data-bbox="899 319 1177 571"> <tr> <td>IBD (SPF)</td> <td>10 M</td> </tr> <tr> <td>Hydro</td> <td>50 M</td> </tr> <tr> <td>Flu</td> <td>50 M</td> </tr> <tr> <td>HS</td> <td>2 M</td> </tr> <tr> <td>ETV</td> <td>0.1 M</td> </tr> <tr> <td>ND</td> <td>200 M</td> </tr> <tr> <td>ND Oil</td> <td>10 M</td> </tr> </table> <ul style="list-style-type: none"> <li>Adoption of tissue culture based vaccine despite of egg based vaccine.</li> <li>Environmental control of the sheds.</li> <li>Strengthen R&amp;D Unit which automatically boosts the area of research.</li> <li>Setup a gene bank of all local viruses of poultry.</li> <li>To determine the effect of different antivirals compound used for hand sanitization.</li> <li>Component analysis of vaccine which boost the vaccine quality.</li> </ul> <p>The result of the above mentioned projects will improve the quality of vaccine and to meet international demand for the production of vaccine.</p>	IBD (SPF)	10 M	Hydro	50 M	Flu	50 M	HS	2 M	ETV	0.1 M	ND	200 M	ND Oil	10 M
IBD (SPF)	10 M															
Hydro	50 M															
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HS	2 M															
ETV	0.1 M															
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<p><b>11</b></p>	<p><b>Provide details of civil works, equipment, machinery and other physical facilities required for the project</b></p>	<p>The details are as follow:</p> <ul style="list-style-type: none"> <li>I. Civil Works (Enclosed as Annexure-N) <ul style="list-style-type: none"> <li>Biosafety Lab</li> <li>Additional Block</li> <li>Biosafety Lab III</li> <li>Poultry Sheds</li> <li>Stores</li> </ul> </li> <li>II. Equipment and Machinery (Enclosed as Annexure-C)</li> <li>III. Glassware and Plastic ware (Enclosed as Annexure-D)</li> <li>IV. Chemicals and Medicines (Enclosed as Annexure-E)</li> <li>V. Furniture and Fixture (Enclosed as Annexure-F)</li> <li>VI. Training (Enclosed as Annexure G &amp; H)</li> </ul>														
<p><b>12</b></p>	<p><b>Indicate governance issues of the sector relevant to the project and strategy to resolve them</b></p>	<p>Sindh was the pioneer to commercialize the poultry production in the country. But due to disease outbreaks and higher feed cost the province industry has been badly hampered but now the agricultural development program (ADP) will boost up the industry in Sindh.</p>														
<p><b>13</b></p>	<p><b>Financial Plan and Mode of Financing</b></p>															
	<p><b>Indicate the amount of equity to be financed from</b></p>	<p>Govt. of Sindh</p>														

	<b>each source</b> <ul style="list-style-type: none"> <li>• <b>Provincial Government</b></li> </ul>	Rs. 202.523 million
<b>14</b>	<b>PROJECT BENEFITS AND ANALYSIS</b>	
	<b>Financial</b>	<p>The conclusion of overall project is to strengthen the Sindh poultry vaccine centre by which the quality of the vaccine will be improved. The centre will meet the national demand as well as able to export poultry vaccines. After the completion of the project it will be the first of its kind which meet the international standards of manufacturing vaccine in Public sector of Pakistan. The biosafety and biosecurity principles will be achieved. This will also boost the research at the centre which will be helpful to improve the quality of vaccines.</p>
	<b>Economics</b>	<p>Currently the total export earning of Pakistan from poultry sector is Rs. 71 billions. This low level of export is due to the fact that the prevalence of disease in the poultry industry. Pakistan is now importing Rs. 3 billion Vaccines per annum. By this project we can improve the quality of vaccine to meet the international standards as well as the demand of our local farmers. Our poultry farmers have faith on imported vaccine despite the fact that many time it also fails to protect the flocks. Through this program the vaccine for disease like Newcastle Disease, Avian Influenza, Fowl Pox, Hydropericardium Syndrome, Hemorrhagic Septicemia, Infectious Bronchitis Unit and Infectious Bursal Disease will be improved and protect the poultry industry.</p> <p>With regards to increase well being of poultry owners and farmers (who are now suffering from production losses as a consequence of poultry diseases) the project will contribute to:</p> <ul style="list-style-type: none"> <li>• Decrease mortality</li> <li>• Improved productivity of poultry.</li> <li>• Increase family income.</li> <li>• Overcome the unemployment and change the socio-economic conditions.</li> </ul>
	<b>Environmental Impact</b>	Positive
<b>15</b>	<b>IMPLEMENTATION SCHEDULE</b>	
	<b>Indicating starting and completion date of the project.</b>	60 months (2008- to 2013)
	<b>Item wise / year wise implementation schedule in line chart co-related. With the phasing of physical activities.</b>	Enclosed as Annexure – N

	<b>MANAGEMENT STRUCTURE AND MANPOWER REQUIREMENTS.</b>	
	<b>Administrative arrangements, implementation of projects</b>	Enclosed as Annexure-L
	<b>The manpower requirements by skills/professions during execution and operation of the project.</b>	Enclosed as Annexure-B
	<b>The job description, experience, qualification, age, Salary of each job may be provided</b>	Enclosed as Annexure- B
	<b>INDICATE ADDITIONAL PROJECTS/DECISION REQUIRED</b>	
	<b>Indicate additional projects/decision required to optimize the investment being undertaken on the project</b>	Establishment of Specified Pathogen Free (SPF) poultry sheds for the rearing of SPF poultry could boost this investment.

Certified that the project proposal has been prepared on the basis of instructions provided by the planning commission for the preparation of PC-1 for production sector project.

**PREPARED BY:** **DR. SHAFQAT FATIMA REHMANI**  
EXECUTIVE DIRECTOR  
SINDH POULTRY VACCINE CENTRE  
ANIMAL SCIENCE COMPLEX  
KORANGI-KARACHI. 74900

**CHECKED BY:** **i** **DR. GHULAM SARWAR SHAIKH**  
DIRECTOR  
LIVESTOCK PLANNING & MONITORING SINDH  
HYDERABAD

**ii** **MR. GHULAM MUHAMMAD MEHAR**  
DIRECTOR GENERAL  
LIVESTOCK & FISHERIES  
GOVERNMENT OF SINDH. KARACHI

**APPROVED BY:** **MR. SHOAB AHMED SIDDIQUI**  
SECRETARY  
LIVESTOCK & FISHERIES  
GOVERNMENT OF SINDH. KARACHI

**SUMMARY OF THE PROJECT COST**

**ANNEXURE-A**

S.NO	PARTICULAR	5 YEARS					TOTAL Million
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	
<b>A</b>	<b>REVENUE</b>						
1	Salary and regular Allowances	-	-	2.55	2.55	2.55	7.650
2	Laboratory Equipments	3.905	15.619	15.619	31.237	11.714	78.093
3	Glassware and Plastic Ware	0.345	1.381	1.381	2.762	1.036	6.905
4	Chemicals and Medicines	1.655	2.483	4.966	4.966	2.483	16.553
5	Furniture and Fixture	-	0.594	1.188	0.594	-	2.376
6	Trainings	-	-	0.21	0.26	0.43	0.9
7	Miscellaneous	3.991	3.991	3.991	3.991	3.991	19.955
	<b>TOTAL A</b>	<b>9.896</b>	<b>24.068</b>	<b>29.905</b>	<b>46.360</b>	<b>22.204</b>	<b>132.432</b>
<b>B</b>	<b>CAPITAL</b>						
1	Additional Block	10.000	26.625	33.466	-	-	70.091
2	Biosafety level III						
3	Biosafety lab A & B						
4	Marketing Accounts						
5	Store / Ware house						
6	Poultry Sheds						
	<b>TOTAL B</b>	<b>10.000</b>	<b>26.625</b>	<b>33.466</b>	<b>-</b>	<b>-</b>	<b>70.091</b>
<b>GRAND TOTAL (A + B) M</b>		<b>19.896</b>	<b>50.693</b>	<b>63.371</b>	<b>46.360</b>	<b>22.204</b>	<b>202.523</b>

**DETAIL OF PAY (ON CONTRACT BASIS)**

**ANNEXURE-B**

S.NO	NAME OF POST	NO. OF POST	FIXED PAY @	5 YEARS					TOTAL
				2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	
1	Manager Maintenance	1	20,000.00	-	-	240,000.00	240,000.00	240,000.00	720,000.00
2	Electrical and Mechanical Supervisor	1	15,000.00	-	-	180,000.00	180,000.00	180,000.00	540,000.00
3	IT Manager	1	15,000.00	-	-	180,000.00	180,000.00	180,000.00	540,000.00
1	Laboratory Technician	5	10,000.00	-	-	600,000.00	600,000.00	600,000.00	1,800,000.00
2	Plumber	2	7,500.00	-	-	180,000.00	180,000.00	180,000.00	540,000.00
3	Laboratory Attendant	2	7,500.00	-	-	180,000.00	180,000.00	180,000.00	540,000.00
4	Poultry Attendant	7	7,500.00	-	-	630,000.00	630,000.00	630,000.00	1,890,000.00
5	Mali	2	6,000.00	-	-	144,000.00	144,000.00	144,000.00	432,000.00
6	Sanitary Worker	3	6,000.00	-	-	216,000.00	216,000.00	216,000.00	648,000.00
	<b>TOTAL B</b>		94,500.00			2,550,000.00	2,550,000.00	2,550,000.00	<b>7,650,000.00</b>
	<b>GRAND TOTAL IN MILLION RS</b>					<b>2.55</b>	<b>2.55</b>	<b>2.55</b>	<b>7.65</b>

**LIST OF EQUIPMENT****ANNEXURE-C**

<b>S.NO</b>	<b>PARTICULAR</b>	<b>QUANTITY</b>	<b>RATE Rs</b>	<b>AMOUNT Rs</b>
1	Air Fume Hood	2	15,000.00	30,000.00
2	Autoclave Floor Model (Vertical)	3	100,000.00	300,000.00
3	Autoclavable bags	5000	25.00	125,000.00
4	Autoclavable bags (Bio Hazard)	5000	50.00	250,000.00
5	Autoclave (Double door)	1	500,000.00	500,000.00
6	Autoclave (Wall Mounted)	1	500,000.00	500,000.00
7	Bio Safety Cabinets Class II	3	600,000.00	1,800,000.00
8	Biohazard containers	250	250.00	62,500.00
9	Biosafety dress code for BSL-II and BSL-III	500	400.00	200,000.00
10	Centrifuge (Microcentrifuge)	1	250,000.00	250,000.00
11	Centrifuges (Benchtop)	2	250,000.00	500,000.00
12	Centrifuges (Refrigerated Floor Model, 1 litre Capacity)	2	1,000,000.00	2,000,000.00
13	CO2 Production Unit	1	500,000.00	500,000.00
14	Distilled Water Plant (Commercial)	1	40,000.00	40,000.00
15	Egg Chillers (10,000 eggs)	1	45,000.00	45,000.00
16	Fermenter (30 L)	2	4,000,000.00	8,000,000.00
17	Freezer (Vertical -40 °C, 600-700 litres)	1	500,000.00	500,000.00
18	Freezer (Vertical -70 °C 600-700 litres)	1	700,000.00	700,000.00
19	Freezer (walk in cooler)	1	200,000.00	200,000.00
20	Incubator (Shaker Capacity 50 litres)	4	100,000.00	400,000.00
21	Incubator (Bacteriological)	2	250,000.00	500,000.00
22	Incubator (Roller Bottles for CO2)	1	500,000.00	500,000.00
23	Incubators (CO2 Lab Scale)	2	100,000.00	200,000.00
24	Incubators (Egg without hatcher, Capacity 5000 eggs)	3	300,000.00	900,000.00
25	Lyophilizer (Capacity 10000 vials)	1	17,500,000.00	17,500,000.00

26	Microscope (Compound)	1	150,000.00	150,000.00
27	Microscope (Inverted )	1	400,000.00	400,000.00
28	Mixer L4RT (Capacity 1-10 Litres)	2	350,000.00	700,000.00
29	N2 Storage Tank	2	45,000.00	90,000.00
30	Orbital Shaker	6	30,000.00	180,000.00
31	Oven	1	400,000.00	400,000.00
32	Pipettes (0.1-10 ul) Mono Channel	5	15,000.00	75,000.00
33	Pipettes (100 - 1000 ul) Mono Channel	5	12,000.00	60,000.00
34	Pipettes (10-100 ul) Mono Channel	5	12,000.00	60,000.00
35	Pipettes (5-50 ul) Multichannel	5	85,000.00	425,000.00
36	Filling Machine (1-10 ml)	1	3,000,000.00	3,000,000.00
37	Printing Machine	1	100,000.00	100,000.00
38	Rocker	1	100,000.00	100,000.00
39	Safety shower and eye/face wash	2	25,000.00	50,000.00
40	Vaculizers Mobile Units	5	120,000.00	600,000.00
41	Voltage Stabilizers	25	8,000.00	200,000.00
42	HVAC System			35,000,000.00
	<b>TOTAL</b>			<b>78,092,500.00</b>

**LIST OF GLASSWARE AND PLASTIC WARE  
ANNEXURE-D**

<b>S.NO</b>	<b>PARTICULAR</b>	<b>QUANTITY</b>	<b>RATE Rs</b>	<b>AMOUNT Rs</b>
1	6 Wells Plate (Iwaki, Japan)	1,000.00	200.00	200,000.00
2	96Wells Plate (Iwaki, Japan)	1,000.00	250.00	250,000.00
3	Angled Neck Flask (225 cm <sup>2</sup> ), Corning	500.00	850.00	425,000.00
4	Cage (Mice), Local	200.00	3,500.00	700,000.00
5	Cage (Rabbit), Local	10.00	5,000.00	50,000.00
6	Canted neck Flask (150 cm <sup>2</sup> ), Corning	500.00	650.00	325,000.00
7	Canted neck Flask (25 cm <sup>2</sup> ), Corning	500.00	100.00	50,000.00
8	Cell scraper (Large)	10.00	450.00	4,500.00
9	Conical Flask 500 ml, Autoclavable, Pyrex	250.00	250.00	62,500.00
9	Culture Bottles, 1000ml (Autoclavable), Simax or Pyrex	250.00	700.00	175,000.00
10	Culture Bottles, 100ml (Autoclavable), Simax or Pyrex	250.00	300.00	75,000.00
11	Culture Bottles, 250ml (Autoclavable), Simax or Pyrex	250.00	400.00	100,000.00
11	Culture Bottles, 500ml (Autoclavable), Simax or Pyrex	250.00	525.00	131,250.00
12	Culture dishes (Iwaki, Japan)	200.00	350.00	70,000.00
13	Culture tube (Small)	200.00	68.00	13,600.00
14	Culture Tube screw cap, 10 ml, Autoclavable, Pyrex	500.00	50.00	25,000.00
15	Culture Tube screw cap, 30 ml, Autoclavable, Pyrex	500.00	75.00	37,500.00
16	Eppendorf (1.5-2.0mL) (VWR, Axygen, Corning, CLP)	50,000.00	1.00	50,000.00
17	Falcon Tubes 15 ml (VWR, Axygen, Corning, CLP)	5,000.00	20.00	100,000.00
18	Falcon Tubes 50 ml (VWR, Axygen, Corning, CLP)	3,500.00	25.00	87,500.00
19	Flask 250 ml, Autoclavable, Pyrex	250.00	425.00	106,250.00
20	Flask 500 ml, Autoclavable, Pyrex	250.00	525.00	131,250.00
21	Glass Bottles 10 Litre, Pyrex, simax	100.00	7,000.00	700,000.00

22	Glass Bottles 20 Litre, Pyrex	50.00	20,000.00	1,000,000.00
23	PCR Tubes (VWR, Axygen, Corning, CLP)	10,000.00	2.50	25,000.00
24	Petri Dishes Medium Autoclavable, Pyrex	200.00	80.00	16,000.00
26	Roller bottles (1750 cm2), Sigma or Pyrex	100.00	1,200.00	120,000.00
28	Roller bottles (490 cm2), Sigma or Pyrex	100.00	750.00	75,000.00
29	Test Tubes (12 X 100mm) Autoclavable, Pyrex	10,000.00	15.00	150,000.00
30	Tips 1000uL (VWR, Axygen, Corning, CLP)	50,000.00	5.00	250,000.00
31	Tips 100uL (VWR, Axygen, Corning, CLP)	50,000.00	4.00	200,000.00
32	Tips 10uL (VWR, Axygen, Corning, CLP)	100,000.00	3.50	350,000.00
33	Tissue culture filter unit (Millipore)	1.00	500,000.00	500,000.00
34	Trolley (Mice Cage), Local	7.00	50,000.00	350,000.00
	<b>TOTAL</b>			<b>6,905,350.00</b>

**CHEMICALS AND MEICINE**

**ANNEXURE-E**

<b>S.NO</b>	<b>PARTICULAR</b>	<b>QUANTITY</b>	<b>VOLUME</b>	<b>RATE Rs</b>	<b>AMOUNT Rs</b>
1	Adjuvant (ISA-206)	1000	KG	2,500.00	2,500,000.00
2	Adjuvant (ISA-70 VG)	2500	KG	2,500.00	6,250,000.00
3	Agarose	0.5	KG	114,000.00	57,000.00
4	Arlacel 80	300	KG	420.00	126,000.00
5	Aurodye	50	LITRE	10,000.00	500,000.00
6	Bacteriological Agar	10	KG	6,500.00	65,000.00
7	Bis-Acrylamide	250	MG	200.00	50,000.00
8	Boric Acid	2.5	KG	1,600.00	4,000.00
9	Cloning Kit	3	No	100,000.00	300,000.00
10	DEFE Gel	25	No	25,000.00	625,000.00
11	ELISA Kits	14	No	25,000.00	350,000.00
12	Fetal Bovine Serum	8	LITRE	8,000.00	64,000.00
13	Formaldehyde	250	LITRE	520.00	52,000.00
14	Formamide	100	ML	300.00	30,000.00
15	Lab Lemco (Oxoid/Merck)	25	No	17,000.00	425,000.00
16	MacConkey Agar	5	KG	8,000.00	40,000.00
17	Mineral Oil	10	LITRE	500.00	5,000.00
18	Nutrient Broth	15	KG	6,800.00	102,000.00
19	Paraffin Oil	500	KG	185.00	92,500.00
20	PCR-Kits	5	100 RXN	20,000.00	100,000.00
21	Peptone (Oxoid/Merck)	50	No	25,000.00	1,250,000.00
22	Poly Ethylene Glycol 1400	2.5	KG	5,000.00	12,500.00
23	Potassium Aluminium Sulfate	50	KG	5,300.00	265,000.00
24	RCM Broth (Oxoid/Merck)	45	KG	9,600.00	432,000.00

25	RNA/DNA/Protein Extraction Reagent (TRI Reagent)	1	LITRE	400,000.00	400,000.00
26	RT- Kits	10	No	25,000.00	250,000.00
27	RT-PCR Kits	15	No	80,000.00	1,200,000.00
28	Sabuorod Dextrose Agar	1	KG	6,400.00	6,400.00
29	Standard Antigens	7	No	40,000.00	280,000.00
30	Supplemental Vials (Clostridium Perfirenges) (1 X 10)	10	No	8,000.00	80,000.00
31	Tissue Culture Media (DMEM)	5	KG	20,000.00	100,000.00
32	Tissue Culture Media (MEM-199) With Earl's Salt	5	KG	20,000.00	100,000.00
33	Tissue Culture Media (MEM-199) With Hank's Salt	5	KG	20,000.00	100,000.00
34	Tissue Culture Media (RPMI-1640)	5	KG	20,000.00	100,000.00
35	Trypsin	1	KG	38,000.00	38,000.00
36	Tween 80	300	KG	412.00	123,600.00
	<b>TOTAL</b>				<b>16,553,000.00</b>

\*All chemicals should from either of these: OXOID, MERCK, ICN, FERMENTAS, QIAGEN, PROMEGA, INVITROGEN

**FURNITURE AND FIXTURE****ANNEXURE-F**

<b>S.NO</b>	<b>PARTICULAR</b>	<b>QUANTITY</b>	<b>RATE Rs</b>	<b>AMOUNT Rs</b>
1	Cabinets Wooden (8' X 3'X 2')	24	10,000.00	240,000.00
2	Centre Table Committee Room	1	45,000.00	45,000.00
3	Chairs VIP Committee Room	40	7,000.00	280,000.00
4	Lab Counters			350,000.00
5	Laboratory Chairs	50	2,500.00	125,000.00
6	Miscellaneous			500,000.00
7	Office Chairs	60	2,000.00	120,000.00
8	Office Counters (5x3) unit	25	8,000.00	200,000.00
9	Office Tables	24	4,000.00	96,000.00
10	Revolving Chairs	100	4,000.00	400,000.00
11	Sofa cum Bed	2	10,000.00	20,000.00
	<b>TOTAL</b>			<b>2,376,000.00</b>

**TRAINING PROGRAMS****ANNEXURE-G**

<b>S.NO</b>	<b>DURATION</b>	<b>TRAINING</b>	<b>QTY</b>	<b>AMOUNT</b>
1	3-4 weeks	Vaccine Production Technology	3	200,000.00
2	1-2 Weeks	Workshop related to Molecular and Serological diagnostics (in service staff and others)	2	400,000.00
3	1 Week	Workshop on Quality Control	2	300,000.00
<b>TOTAL</b>				900,000.00

**DETAIL OF TRAINING PROGRAM****ANNEXURE-H**

<b>S.NO</b>	<b>TRAININGS</b>	<b>QTY</b>	<b>1st Year</b>	<b>2nd Year</b>	<b>3rd Year</b>	<b>4th Year</b>	<b>5th Year</b>	<b>TOTAL</b>
1	Vaccine Production Technology	3	-	-	1	1	1	3
2	Workshop related to Molecular and Serological diagnostics (in service staff and others)	2	-	-	-	1	1	2
3	Workshop on Quality Control	2	-	-	1	-	1	2
<b>TOTAL IN MILLION (M)</b>					0.21	0.26	0.43	0.90

**MISCELLANEOUS****ANNEXURE-J**

<b>S.NO</b>	<b>PARTICULAR</b>	<b>QUANTITY</b>	<b>RATE Rs</b>	<b>AMOUNT Rs</b>
1	UPS Batteries	20	5,000.00	100,000.00
2	Computers (Core 2 Duo complete set INTEL)	4	80,000.00	320,000.00
3	Computers (Pentium IV complete set INTEL)	5	60,000.00	300,000.00
4	Ice Packs	5000	100.00	500,000.00
5	Laser jet Printers Heavy Duty	3	50,000.00	150,000.00
6	Paper Rim (80 gm)	2000	350.00	700,000.00
7	Photocopier	2	300,000.00	600,000.00
8	POL (For Generators operating at SPVC)			10,000,000.00
9	Printer (Dot Matrix) Heavy Duty	3	45,000.00	135,000.00
10	Softwares (Accounts, indenting, salary)	1 each	-	1,000,000.00
11	Cold chain System for Sampling	1	3,500,000.00	3,500,000.00
12	UPS 1KVA	5	15,000.00	75,000.00
13	UPS 20KVA	5	500,000.00	2,500,000.00
14	Fax Machine (Laser)	1	75,000.00	75,000.00
	<b>TOTAL</b>			<b>19,955,000.00</b>

**PHYSICAL PHASING OF DEVELOPMENT ACTIVITIES**

**ANNEXURE-M**

PARTICULAR	YEARS				
	2008-09	2009-10	2010-11	2011-12	2012-13
Salary and regular Allowances					
Laboratory Equipments					
Glassware and Plastic Ware					
Chemicals and Medicines					
Furniture and Fixture					
Trainings					
Miscellaneous					
Additional Block					
Biosafety level III					
Biosafety lab A & B					
Marketing Accounts					
Store / Ware house					
Poultry Sheds					

	Indicates activity in the specified Year
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**EXISTING PAYROLL****ANNEXURE-P**

<b>S.NO</b>	<b>NAME OF POST</b>	<b>BPS</b>	<b>STRENGTH</b>
1	Executive Director	20	1
2	Senior Research Officer	18	2
3	Sales & Technical Officer	17	1
4	Accounts & Administrative Officer	17	1
5	Research Officer	17	5
6	Accountant	16	1
7	Electrical & Mechanical Supervisor	13	1
8	Computer Operator	12	1
9	Assist. Cum Store Keeper	11	1
10	Accountant cum Cashier	11	1
11	Electrical Supervisor	11	1
12	Senior Clerk	9	1
13	Laboratory Technician	7	9
14	Sales Assistant	7	2
15	Drivers	7	3
16	Junior Clerk	7	3
17	Electrician	6	1
18	Generator Driver	5	1
19	Plumber	5	1
20	Establishment Clerk	4	1
21	Feed Mill Operator	4	1
22	Poultry Assistant	3	5
23	Laboratory Assistant	3	2
24	Painter	3	1
25	Laboratory Attended	3	4
26	Naib Qasid	2	2
27	Chowkidar	2	4
28	Sanitary Worker / Lab. Cleaner	2	3
29	Poultry Attended	2	8
30	Poultry Attended (contract)	2	15
31	Daily Wages Employee	-	18
	<b>EXISTING PAYROLL</b>		<b>101</b>