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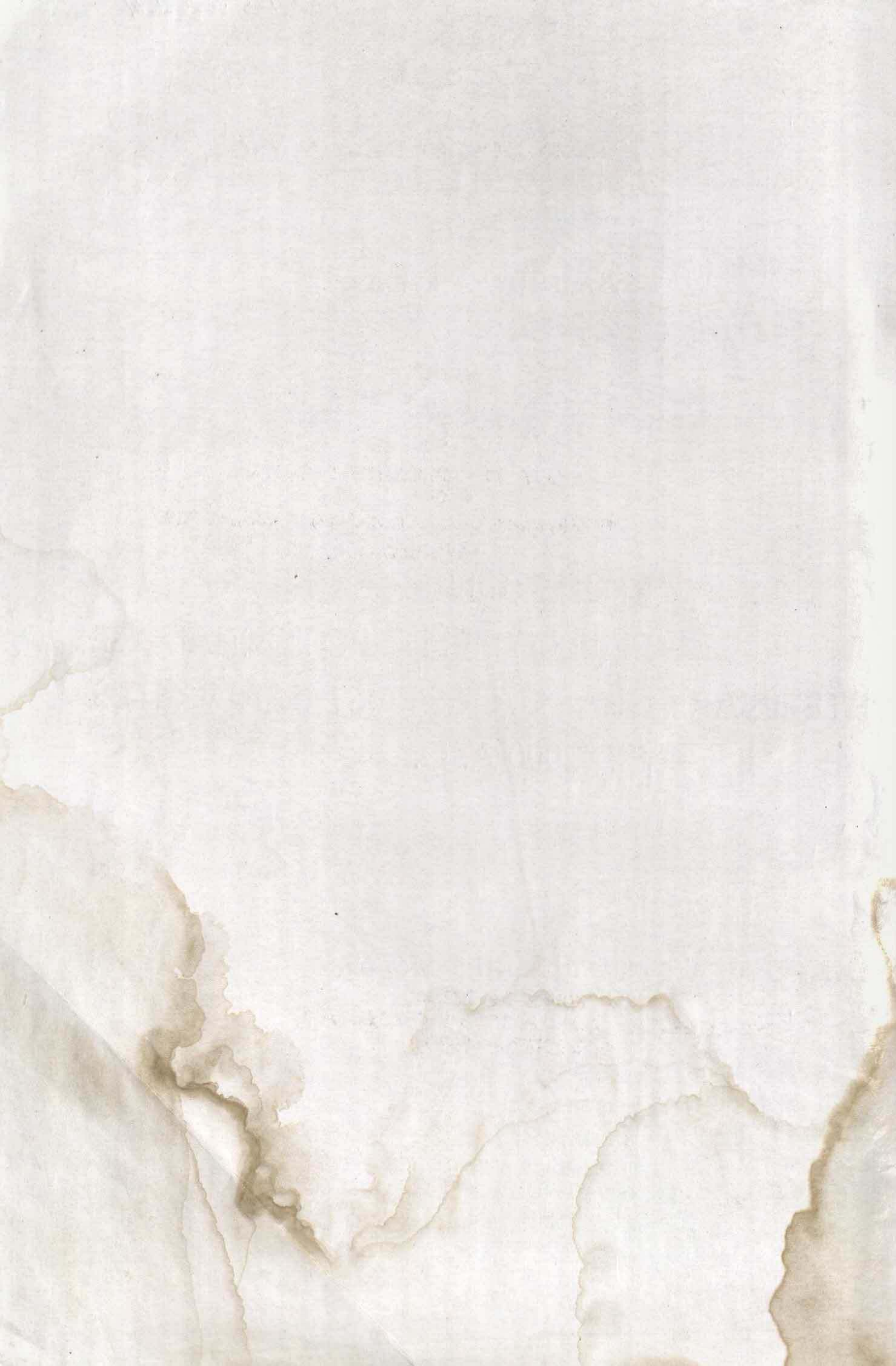


GOVERNMENT OF KERALA

**STUDY ON
EMPLOYMENT POTENTIAL OF
VETERINARY GRADUATES/POST GRADUATES
BY 2000 A. D.**

MANPOWER STUDY SERIES No. 65

DEPARTMENT OF
ECONOMICS & STATISTICS
TRIVANDRUM
1989



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STUDY ON EMPLOYMENT POTENTIAL
OF
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MAN POWER DIVISION,
DEPARTMENT OF ECONOMICS AND STATISTICS,
KERALA, MARCH 1989.

MNR.20/3.

P R E F A C E

Unemployment among educated persons is a serious problem facing Kerala Economy. Though technically qualified persons are also reported to be unemployed, a particular sector, viz, the veterinary sector is more or less an exception to this general phenomenon. A study conducted in this sector showed that the supply of veterinary personnel is not sufficient to meet the requirement. In this context it is hoped that this report by Smt.R.Shylaja Gopal, Research Officer of the Manpower Division of this Department will be useful for planners and administrators for restructuring the education in the veterinary sector so as to provide sufficient veterinary graduates and post graduate as situation by 2000 A.D demands.

Trivandrum
17--2--1989.

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DIRECTOR OF ECONOMICS AND STATISTICS

Study on Employment Potential of Veterinary Graduates/Post Graduates by 2000 A.D

The department of Animal Husbandry is the major employer of the veterinary personnel in the state. The Animal Husbandry Department is carrying out activities connected with animal health care and Livestock and Poultry development in the state. This responsibility includes provision of veterinary services and looking after animal health, cattle development, poultry development, pig development, goat development and other livestock development. The Kerala Livestock Development and Milk Marketing Board and Kerala Co-operative Milk Marketing Federation Limited, the Department of Dairy development are the other department and organisations which employ veterinary personnel. An assessment of the employment potential of veterinary personnel by 2000 A.D would be a worthwhile exercise in planning of this manpower category.

The main object of this study is to assess the requirement of veterinary personnel by 2000 A.D and the supply of the category in future.

The supply of the veterinary graduates and post graduates is assessed on the basis of actual out-turn and anticipated out-turn from veterinary college, Mannuthy. The anticipated annual out-turn is determined allowing twentyfour percent wastage. The requirement of veterinary personnel can be assessed from the development scheme proposed by the users of this manpower category, mainly the Animal Husbandry department, Kerala Livestock Development and Milk Marketing Board and Kerala Co-operative Milk Marketing Federation Limited. The pattern of utilisation of the veterinary personnel in the state is also furnished based on the details collected from the concerned departments and institutions.

2. Limitation of the study

To get a correct picture of the demand for veterinary personnel in the state, the demand that would arise both in public sector and private sector undertakings have to be considered. But the demand of the veterinary personnel in the private sector is too low. Hence it has not been considered.

The details relating to the supply side are also estimated to the extent that it does not include the details of persons who get themselves qualified by their studies outside the state.

Veterinary personnel working outside the country and state have not been included in the report.

3. Veterinary Education

In Kerala, the veterinary college at Mannuthy was started in 1955 with an intake capacity of 70 students for B.V.S.C. course. Later the college was affiliated to the Kerala Agricultural University.

The staff pattern of the Animal Husbandry and veterinary personnel in the Agricultural University (1987) was as shown below.

Table : 1

Name of post	Number of sanctioned Post	Number of post filled up
Dean	1	-
Director	5	5
Professor	55	47
Asso. Professor	42	20
Asst. Professor	68	38
Jr. Asst. Professor	50	21
Total	221	131

The university has notified for the recruitment of the personnel in the following category of posts to meet the additional requirement due to expansion of the university in the VIIth plan period.

Table: 2

Name of post	No. Notified
Director	2
Professor	17
Asso. Professor	18
Asst. Professor	18
Jr. Asst. Professor	18
Total	73

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4. Wastage in Veterinary Education in Graduate Level:-

The I.A.M.R has recently estimated wastage rates for B.V.SC and M.V.SC courses for the last decade. The wastage rate for B.V.SC works out to 20.6% and that for M.V.SC to be 10.3%.

The Manpower cell of the Ministry of Agriculture, Government of India has also calculated the wastage rates for B.V.SC and M.V.SC courses. These are based on the admissions and corresponding out-turn of the B.V.SC and M.V.SC for the last decade. The wastage rates are worked out to be 21.5% in B.V.SC and 10.5% in M.V.SC courses.

The wastage rate of veterinary graduates in the state is calculated based on the admission and corresponding out-turn. The estimate is made in the following table.

Table-3
Wastage rate of B.V.SC in the state

Total intake over a period of 5 years ending.		Total out-turn over a period of 5 years ending		Out-turn percentage of corresponding in-take	Estimated wastage
1	2	3	4	5	6
Year	No.	Year	No.	$\frac{\text{Col.4}}{\text{Col.2}} \times 100$	$100 - \text{Col.5}$
1977	255	1981	202	79	21
1978	276	1982	215	78	22
1979	284	1983	209	74	26
1980	299	1984	228	76	24
1981	338	1985	254	75	25
1982	351	1986	260	74	26
1983	359	1987	280	78	22
Average				76	24

From the above table it is seen that the average wastage of students admitted during the period 1973 to 1984 is 24% which is nearly 3% above the estimate made by the I.A.M.R and the Ministry of Agriculture.

Table-4
Wastage rate of M.V.SC in the state

Total intake over a period of 5 years ending		Total out-turn over a period of 5 years ending		Out-turn as percentage	Estimated wastage
1	2	3	4	5	6
Year	No.	Year	No.	$\frac{\text{Col.4}}{\text{Col.2}} \times 100$	$100 - \text{Col.5}$
1977	91	1979	76	84	16
1978	112	1980	101	90	10
1979	115	1981	111	97	3
1980	112	1982	107	96	4
1981	116	1983	100	86	14
1982	100	1984	90	90	10
1983	77	1985	68	88	12
Average				90	10

Thus the wastage during the period 1973 to 1984 is 10% which is more or less the same as the estimate made by the I.A.M.R and the Ministry of Agriculture.

5. Stock and utilisation pattern of veterinary graduates and post graduates

As per the details collected from the concerned departments and institutions, the stock of veterinary graduates as on 1987 was found to be 972 and the post graduates numbered 244. If we add out-turn of veterinary graduates from the veterinary college, Mannuthy to the number of veterinarians in the services and allow 1% attrition for retirement etc. the stock since 1987 would be as shown below:

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Table : 5Stock of veterinary graduates

Year	Stock as on 31st March of the year	Attrition loss (1% of col.2)	Additions during the year	Stock at the end of the year (Col.2-Col.3 + Col.4)
1	2	3	4	5
1987	972	10	60	1022
1988	1022	10	87	1099
1989	1099	11	90	1178
1990	1178	12	84	1250
1991	1250	13	91	1328
1992	1328	13	91	1406
1993	1406	14	91	1483
1994	1483	15	91	1559
1995	1559	16	91	1634
1996	1634	16	91	1709
1997	1709	17	91	1783
1998	1783	18	91	1856
1999	1856	19	91	1928
2000	1928	19	91	2000

The above analysis is on the assumption that since 1987, the intake of the veterinary graduates remains the same as 120 of which there shall be a wastage of 24 percent.

mTable 6Stock of the veterinary post graduates personnel

Year	Stock as on 31st March of the year	Attrition loss (1% of Col.2)	Additions during the year	Stock at the end of the year (Col.2-Col.3 + Col.4)
1	2	3	4	5
1987	244	2	7	249
1988	249	2	13	260
1989	260	3	13	270
1990	270	3	13	280
1991	280	3	13	290
1992	290	3	13	300
1993	300	3	13	310
1994	310	3	13	320
1995	320	3	13	330
1996	330	3	13	340
1997	340	3	13	350
1998	350	4	13	359
1999	359	4	13	368
2000	368	4	13	377

The out-turn is worked out on presumption that there shall be an intake of 15 personnel in the post graduate course since 1987 and a wastage of 10%.

6. Utilisation pattern

The major source for employment of veterinary graduates and post graduates is employment under Public Service. In Kerala they are employed under state government departments such as department of Animal Husbandry. Veterinarians are also employed in corporations/boards such as Kerala Livestock development and Milk Marketing Board, Kerala Co-operative Milk Marketing Federation Limited, and Kerala Agricultural University. A few of them are working in banks. The following table shows the percentage distribution of veterinary personnel employed in the state.

Table 7
Percentage distribution of veterinary personnel employed
in Kerala as on 1987

Department/ Organisation	<u>Veterinary graduates</u>		Veterinary Post-gradua- tes		<u>Total</u>	
	Number	Percentage	Number	Perce- ntage	Number	Perce- ntage
1	2	3	4	5	6	7
1. Animal Husban- dry Department	884	90.95	20	8.20	904	74.34
2. Boards/ Corporation	84	8.64	2	0.82	86	7.07
3. Agricultural University	-	-	221	90.57	221	18.17
4. Banks	4	0.41	1	0.41	5	0.42
Total	972	100.00	244	100.00	1216	100.00

The above table reveals that the Animal Husbandry Department is the major employer of the veterinarians in the state. Among the post graduates about 91% is employed under the Kerala Agricultural University. Utilisation of the veterinary personnel in various institutions is briefly discussed below:

(i) Department of Animal Husbandry

The department of Animal Husbandry in the state is responsible for implementing schemes relating to animal welfare activities including livestock and the poultry production.

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The Director of Animal Husbandry is the head of the department. He is assisted by technical officers such as Additional Directors, Joint Directors, Deputy Directors, and Assistant Directors at the Directorate. The district administration is rested with the fourteen Joint Directors. He has both the technical and administrative control over the various institutions like veterinary hospitals, dispensaries, polyclinics, artificial insemination centres etc. in the district. The veterinary hospitals functioning at District Headquarters are considered as District veterinary hospitals. These hospitals are placed under the immediate control of senior veterinary officers. There are now 3 such hospitals in the state. To co-ordinate the animal health activities of the veterinary polyclines and veterinary hospitals on a referral basis and to make available clinical and other technical support in their routine activities, district veterinary centres are to be established at district headquarters in a phased programme.

Cattle development programmes in this state are aimed to achieve the per capita availability of Milk as recommended by the World Health Organisation.

Cattle development in the state is being implemented through the following media

- (i) Cross Breeding Schemes
- (ii) Intension Cattle development project
- (iii) Livestock farms
- (iv) Fodder development

The department has under its control seven Regional Poultry farms, two district poultry farms, one central hatchery two broiler farms, one duck farm, one turkey farm and two intensive poultry development blocks in operation.

Disease investigation and control programme

Main objectives of the disease investigation organisation are to co-ordinate the investigation activities in the various fields of animal health programmes, to study the epidemiology, incidence mortality and other factors relating to various diseases. Investigation work on diseases reported from time to time are also undertaken and control measures are chalked out.

The programme is carried out by the Chief Investigation Officer. Under him three investigation units, one each for poultry, cattle and T.B are functioning under the immediate control of each Disease Investigation Officer.

In addition to the three institutions for disease investigation programme, a veterinary and Biological institute is also functioning at Palode in charge of a Director assisted by a standardisation officer, a quality control officer, two Research Officers, 4 Research Assistants, 13 Veterinary surgeons and a chemist. This institution is doing postmortems and various diagnostic tests utilising specimens received both from the field veterinarians and also from the collections made by the technical officers of the disease investigation units.

The employment pattern of veterinary personnel (graduates & Post graduates) in the department of Animal Husbandry is given below.

Table 7

Sl. No.	Name of the post	Number
1	2	3
1.	Director	1
2.	Additional Director	5
3.	Joint Director	24
4.	Deputy Director	50
5.	Assistant Director	252
6.	Veterinary Surgeon	572
Total		904

(ii) Kerala Livestock Development & Milk Marketing Board Ltd.

The Kerala Livestock Development & Milk Marketing Board Ltd. a fully owned Government Company was formed in 1976 integrating the Department of Indo-Swiss Project Kerala, Milk Chilling plants, dairies and the bull station Dhoni of the Dairy Development department and L & P feed factory Malampuzha of the Animal Husbandry department. The feed factory, dairies and chilling plants were separated in 1983 and now the Board handles only developmental activities. The Board is responsible to implement the

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cattle breeding programme of the state with the aim of creation of a new breed of cattle suitable for economic milk production under Kerala conditions and to develop fodder resources and supply the inputs and services required for the fodder development activities in the state.

Utilisation pattern of veterinary personnel in the Board is as shown below:

Table 8

Sl. No.	Designation of the post	Minimum qualification of the post	Number of post
1	2	3	4
1.	Executive (General planning)	B.V.SC	1
2.	Progeny Testing Officer	B.V.SC	1
3.	Officer in charge	B.V.SC	2
4.	Livestock Development Officer	B.V.SC	2
5.	Co-ordinator (Vety)	B.V.SC	1
6.	Officer on special duty	B.V.SC	1
7.	Animal Husbandry Officer	B.V.SC	3
8.	Cattle Breeding Research Officer	M.V.SC	1
9.	Cattle Breeding Officer	B.V.SC	1
10.	Superintendent Semen Bank	B.V.SC	1
11.	Assistant Manager (AH)	B.V.SC	9
Total			23

(iii) Kerala Co-operative Milk Marketing Federation Ltd.

Kerala co-operative Milk Marketing Federation, an apex organisation of the Milk Producers of Kerala State, was formed in the year 1980 with a wide object of marketing milk produced by the poor farmers scattered in the rural areas of the state and implementation of the national programme of operation Flood II in Kerala.

The main objectives of Milk Marketing Federation are:-

- (a) To carry out the activities of procurement, processing and marketing of milk and milk products incorporating the necessary improvements and developments after studying the problems specially prevalent in this state with regard to dairying, under the organised sector eliminating the middlement.

b) To provide veterinary service to milk producers and to advise, guide, assist and control the primary milk co-operative societies and member unions.

c) To manufacture balanced cattle feed and supply it to milk producers of co-operative societies at the minimum costs as to reduce the cost of milk production.

The objectives of the Federation are implemented utilising the services of the following staff.

Table 9

Designation of the post	Minimum qualification of the post	Number of post
1	2	3
1. Manager (MIS)	B.V.SC and M.SC (Dairing)	1
2. Assistant Manager (P&I)	B.V.SC	7
3. Veterinary Officers	B.V.SC	55
	Total	63

7. Demand for veterinary Graduates and Post-Graduates during the VIIth Plan Period

Demand for veterinarians may arise due to attrition losses by retirement, death etc. and due to the expansion programme of the departments and implementation of new schemes.

For the estimation of demand for specific period the programmatic-cum-normative approach is generally adopted. The coverage of the plan scheme and the recommended staff pattern will give the number of personnel required for different categories of posts. The demand in the organised sector like Government Departments, Boards, Banks, University etc. are collected through the agencies concerned. The demand for the veterinary graduates and post-graduates during the VII th Plan period is estimated as follows.

The department of Animal Husbandry is one of the major departments that utilises the services of veterinary personnel by and large. They have a plan to reorganise and establish one veterinary institution each for every local body. There are altogether 1048 local bodies in the State and consequently there will be 1048 institutions. Each such institution will have to be provided with a veterinary surgeon. The main object of such

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a planning is to provide maximum services of veterinary personnel to the needy rural people.

Five of the above units will constitute a block. Each such block is under the immediate control of an Assistant Director. Over and above the local bodies and blocks there will be district veterinary centres which are under the immediate control of Joint Directors. It is also envisages for the creation of three Deputy Directors under each of these district veterinary centres with certain specified duties viz. District administration, animal production and veterinary services.

Based on the materials collected from the Animal Husbandry Department it is expected that they require the following veterinary personnel by 1990.

Table - 10

<u>Name of the post</u>	<u>No.</u>
Director.	1
Additional Directors	5
Joint Directors	24
Deputy Directors	70
Assistant Directors	311
Veterinary Surgeons	1112

Total	1523

(ii) Another agency that is utilising the services of veterinary personnel is the Kerala Livestock Development and Milk Marketing Board. At present there are 23 veterinary personnel working in the institution of which 21 are B.V.SC. holders and the remaining 2 are M.V.SC. In addition to these they require 17 M.V.SC. and 29 B.V.SC. holders during the VII th plan period. Kerala Co-operative Milk Marketing Federation Ltd. and the two Regional Co-operative Milk Producers Union Ltd. functioning at Trivandrum and Ernakulam altogether require 96 veterinary personnel by 1990.

There are 4 veterinary graduates and one veterinary post graduate now working in the banking sector. In the absence of further demand from banks we can presume that the present staff will be sufficient for the VIIth plan period also.

In addition to the present staff working in the Agricultural University 73 posts are also required by 1990 in view of the developmental programmes of the university. In other words the University requires a total number of 294 veterinary personnel by 1990.

Table 11

The Veterinary personnel required by 1990

<u>Sl.No.</u>	<u>Organisation</u>	<u>Veterinarians required</u>	
		<u>B.V.Sc</u>	<u>M.V.Sc</u>
1.	Animal Husbandry Department	1523	..
2.	Other departments	146	19
3.	Banks	4	1
4.	Agricultural University	..	294
Total		1673	314

8. Requirement of veterinary personnel by 2000 A.D

It is not so easy to estimate the Demand for veterinary personnel in the State by 2000 A.D. for want of sufficient information of veterinary personnel required by various departments and also due to lack of information relating to the schemes under the departments which provide the services of veterinary personnel. However an earnest attempt is made based on a previous study conducted on this subject during the period 1976-77 and the available statistics supplied by the departments of Animal Husbandry Kerala Livestock Development & Milk Marketing Board, Kerala Co-operative Milk Marketing Federation Ltd. Kerala Agricultural University and Banks.

During 1984 the requirement of B.V.SC and M.V.SC. was 1274 and 127 respectively where as the corresponding figures, relating to 1990 is 1673 and 314, Based on these the growth rate is 0.05 for B.V.SC and 0.03 for M.V.SC.

Adopting the above growth trend as basis a projected requirement of B.V.SC and M.V.SC as on 2000 A.D. has been worked out as follows.

Table 12

Estimated requirement of B.V.SC and M.V.SC by 2000 A.D.

Year	B.V.SC	M.V.SC
1990	1673	314
1991	1757	323
1992	1845	333
1993	1937	343
1994	2034	353
1995	2136	364
1996	2243	375
1997	2355	386
1998	2473	398
1999	2597	410
2000	2727	422

9. Supply of veterinary graduates and post graduates

The only institution imparting veterinary education in the State is the veterinary college at Mannuthi in Trichur District. When the institution was started in 1955, the sanctioned intake was 70 students for B.V.SC. But the actual intake was found to be increased up to 80 till 1959. Further it was limited to 40. At present the sanctioned intake is 120. The post-graduate course was started in 1965. Though the number of seats for M.V.SC is 20 the actual intake is found to be always less than the sanctioned strength. The actual intake and out turn of B.V.SC and M.V.SC is given in Appendix I.

In the estimation of out turn of B.V.SC on 24% wastage and for M.V.SC 10% wastage is attributed. One percent attrition of the total stock of every year is applied as there may be loss due to outmigration which is not studied. Based on these assumptions the estimated stock of B.V.SC by 1990 is 1250 and for M.V.SC it is 280. The estimated requirement according to programmes comes to 1673 for B.V.SC and 314 for M.V.SC. Thus there will be a shortage of 423 B.V.SC and 34 M.V.SC. The effective stock of B.V.SC by 2000 A.D will be 2000 against the total requirement 2727. The shortage of B.V.SC by 2000 will be 727. In the case of M.V.SC the stock by 2000 will be 377 against the total requirement 422. The storage of M.V.SC by 2000 will be 45.

APPENDIX I

INTAKE AND OUT-TURN OF B.V.SC AND M.V.SC

Year	Graduates		Post graduates	
	Intake	Outturn	Intake	Outturn
1970	33	31	13	5
1971	39	36	6	7
1972	40	42	7	8
1973	40	42	13	9
1974	62	41	18	6
1975	56	36	13	7
1976	43	31	10	7
1977	54	27	37	11
1978	61	48	34	22
1979	70	37	21	29
1980	71	40	10	32
1981	82	50	14	17
1982	67	40	21	7
1983	69	42	11	15
1984	114	56	16	19
1985	118	66	15	10
1986	110	56	6	7
1987	120	60

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