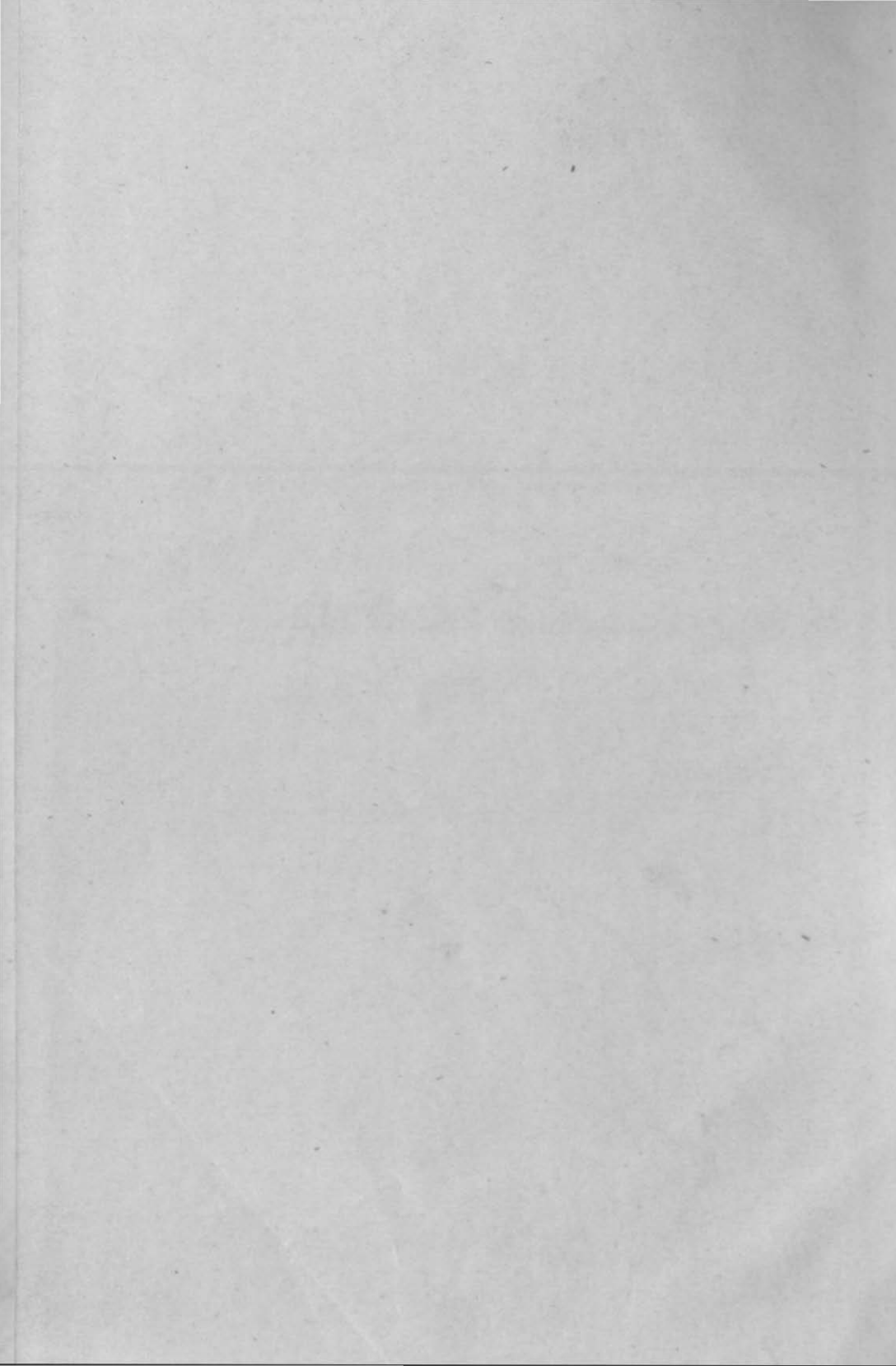


*Report on the*  
*Government Cattle Farm,*  
*HISSAR*

**E-53**  
**1905**



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**GOVERNMENT CATTLE  
FARM, HISSAR.**

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GOVERNMENT CATTLE  
FARM, HISSAR.

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## GOVERNMENT CATTLE FARM, HISSAR.

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THE following is a very brief history of the Hissar Farm since its establishment in the year 1809. In that year it was placed in the hands of Major J. Lumsdaine and used as a Camel-breeding Farm.

2. In 1815, cattle-breeding and horse-breeding for the supply of stallions were added. Hissar appears to have continued as a horse-breeding centre up to 1848 or 1849.

3. In 1853, it was decided to restrict operations to breeding bullocks for artillery and ordnance purposes, and in 1854 the farm was transferred from the Commissariat to the Stud Department. It was worked under a Mr. Taylor who held the appointment until his death in 1865. He was succeeded by Captain T. Robinson who carried on the farm until 1874, when it came under the notice of the Stud Commission, with the result that it was again transferred to the Commissariat Department, in whose hands it remained until a Committee appointed in February 1898 recommended that it should be handed over to the Civil Veterinary Department for a period of seven years, and on 1st April 1899 it was taken over by that Department and has remained in its charge since.

4. The farm is situated in the Hissar District of the Punjab and comprises an area of 44,000 acres. The land is roughly divided as follows:—

(a) Grazing land.

(b) Flow irrigation land, cultivated by the farm.

(c) Lift irrigation land, rented out to tenants.

5. There is another farm at Hansi situated some 16 miles from head-quarters belonging to the estate, which has been let out on lease for a period of five years.

6. When the farm was taken over by the Civil Veterinary Department, it was found that the buildings had been allowed to get out of repair, the cultivated plots were full of weeds, very dirty and surrounded by dense jungle, which harboured pigs and other wild animals. Little or no attention had been paid to water channels. The machinery was useless and out of order; in fact the whole farm was in a most dilapidated condition.

7. The work of reorganization was at once commenced and the land which it was proposed to cultivate was marked out and divided into four blocks, comprising the following areas :—

Mundiawalla	...	...	...	738 acres.
Chowni	...	...	...	341 "
Stables	...	...	...	283 "
Sully	...	...	...	400 "
			Total	...
				<u>1,762</u> "

8. The whole of the jungle was removed, superfluous trees cut down, roads made and the land thoroughly cleared and ploughed several times with the Turnwrist plough. A wall, 6 feet high and protected by a brick coping, was built round each block. This walling has been constructed at a comparatively small cost with farm labour and bricks made on the estate and has been the greatest saving. Formerly crops were completely ruined by wild pigs and other animals. The land was then levelled and the whole brought under flow irrigation.

9. Maps have been prepared, an iron plate fixed in each field showing area in acres and bighas, a systematic programme of rotation crops laid down, and the whole of this branch of the farm placed under the direct control of a qualified European agriculturist with a large Indian experience.

10. This work, owing to the great difficulty we had to contend with in removing trees, jungle growth, levelling lands, etc., has occupied nearly three years, but the result has been very

satisfactory, as we now have four thoroughly clean compact blocks well protected from wild animals under flow irrigation and capable of producing a large amount of fodder for the stock, thereby rendering us to a great extent independent of the rainfall which even in the best of seasons is very scanty.

11. *Irrigation*.—The whole of the farm receives its water-supply from the tail end of the Western Jumna Canal. The supply is somewhat limited and the flow not very rapid. Having got the land into good heart and thorough working order, it was very necessary that every endeavour should be made to ensure a plentiful supply of water at a quick rate. The canal banks were raised and the beds cleared of all weeds and silt. Some 9 miles of water courses remodelled, cleared and put into thorough working order. All bridges, sluice gates, etc., entirely renewed. Each field has been measured by the Canal Patwari and registered in the Canal Office as well as our own. This obviates any further difficulty with regard to the supply of water.

12. *The farm buildings* comprise the following and are situated some miles apart:—

- (a) Home Farm Block—consisting of 15 large walled enclosures, with stabling, Superintendent's house and two Farm Overseers' quarters.
- (b) Stable Block—consisting of 9 enclosures and stabling.
- (c) Chowni Block—consisting of 13 enclosures and an Overseer's quarter.
- (d) Sully Block—consisting of 10 enclosures, with stabling and Overseer's quarters.

These have been re-roofed and put into thorough repair and are in constant use for the accommodation of the various classes of stock on the farm.

13. *Machinery*.—One vertical 5 H. P. engine which works

the following machines :—

- 2 Threshing Machines.
- 2 Silo Cutters.
- 2 Gram and Oat Crushers.

In addition to the above, the farm possesses :—

- 18 Reaping Machines,
- 18 English ploughs,
- 2 Fire Engines,
- 1 Turning Lathe,
- 1 Band Saw,

and the usual quantity of carts, country ploughs and other farm implements necessary to work the cultivated land, Dutch barns and other machinery have been indented for this year.

14. All repairs are executed on the farm and component parts of the machines kept. The greatest care is taken of all machinery and, when not in use, it is painted and placed in sheds set aside for this purpose.

15. *Stock-cattle*.—When the farm was taken over by the Civil Veterinary Department, it was realized that the cattle were of mixed and indiscriminate breeding, largely due to the extensive use of Mysore and other exotic bulls. That many were small, stunted and quite unfit for brood or other purposes, and that it would be advisable to greatly reduce the existing head of stock.

16. It was recognized that the soil, climate and natural surroundings are more suitable to the indigenous breed than any other class of cattle and that this breed is fully up to the standard required for military purposes and is, moreover, the best class of bull for issue to the districts. With this object in view, the entire herd consisting of 5,420 head was most carefully examined and it was found necessary to discard 2,172 animals. These were all sold by auction and it was decided in future that nothing but pure Harriana cattle should be bred on



the farm. It was also necessary to adopt the following system so as to ensure the best results :—

- (a) To limit the herd of cows to 1,200. That this number of pure, young, well bred cows would be sufficient to turn out, annually, 250 siege train bullocks, 100 bulls for issue to the districts and that the best of the female stock should, when 3 years old, be drafted into the herds to replace old and worn out cows.
- (b) That all cows not truly bred or otherwise unsuitable should be drafted as soon as possible and replaced by pure bred heifers from the farm.
- (c) That all young stock found unsuitable for brood or other purposes be drafted and sold at 6 to 10 months old, thereby saving a large quantity of fodder which could be more profitably given to more promising stock.
- (d) That the cows be divided into herds containing 200 head in each herd and that they be graded, and that only the best bulls be allowed to run with the best herds. The young male stock from the best herds are retained as bulls for issue to the districts and the young female stock to replace worn out cows in the herds.
- (e) In the interest of the young stock, the dairy was abolished. Great difficulty was experienced in handling and milking the cows. They are liable to knock themselves about and slip their calves and the loss to young growing stock is not compensated by the small profits derived from the sale of milk and butter.
- (f) Owing to the large increase in the cultivation, it has been found possible to adopt a liberal policy with regard to the feeding of the young stock, with the result that they are well grown sturdy cattle.

17. *Bulls.*—Nothing but the best Harriana bulls are now retained on the farm. If the system of selection is carefully carried out in the future and only those animals possessing pure Harriana characteristics are retained, the farm will in the course of a very few years possess a herd consisting of some 3,000 head of cattle which are purely bred and true to type. They will, moreover, fully meet the requirements for siege train purposes and for bulls for the districts.

18. *Mule Rearing.*—Owing to the great difficulty experienced in obtaining ordnance mules in the market, it was determined to buy young mules and rear them on the farm. For this purpose it was necessary that paddocks surrounded by wire fencing should be constructed and some four miles of land were enclosed containing nine paddocks in which good water, ample shade, and, during certain seasons of the year, good grazing were obtainable.

19. It was originally intended that 500 young mules should be reared on the farm, but, owing to the difficulty experienced in buying the right class at the low price of Rs. 70, it was decided to somewhat modify the scheme and to reduce the number to 400 and to increase the purchasing price to Rs. 120.

20. Under the altered conditions, the scheme has proved most successful and the first batch of 66 mules were issued last year and 97 this year.

21. The scheme, as it now stands, necessitates the purchase and breeding of 100 mules and the issue of the same number annually.

22. The following remarks from the officers to whom these mules were issued speak for themselves. The General Officer Commanding, Sirhind Brigade, remarks:—

“The mules supplied from the Hissar Farm to this corps in February last are of an unusually good stamp and quite the best I have yet seen. They have good bone and exceptional girth and look quite a different class to animals purchased in the open market. If it is your farm system that does this, I think

it would be to the benefit of the service if you could supply us with animals in larger numbers than at present."

23. Colonel H. Goad, Director-General, Army Remount Department, remarks that they were superior to those usually purchased in the private market and that the results of the Hissar Rearing Farm are undoubtedly valuable to Government.

24. Captain C. W. Stulpnagel, Inspecting Officer, Kashmir Imperial Service Artillery, to Inspector-General, Imperial Service Troops, remarks :—

"I took over a batch of 53 ordnance mules from the Hissar Farm.

Their average age is 4 years,

„ „ height 13-3.

„ „ girth measurement 62·85 inches.

The mules as a whole are an extremely fine lot and will materially raise the standard of the Kashmir Battery. Eleven of the mules are somewhat light for ordnance purposes, but as they are only 4 years old there is every hope of their increasing in girth. Among the bigger mules are some as good as ever I have seen in mountain artillery."

25. *Mule-breeding.*—As an auxiliary to the mule rearing scheme and to render the farm to a certain extent independent of the outside market, it was determined to breed a certain number of mules annually and for this purpose 50 well bred, stout mares, about 14 hands, were purchased last year and have either foaled or are heavy in foal to the donkey stallions on the farm.

26. This scheme was based on the success which had hitherto attended the mule-breeding operations which had been carried out on a very small scale amongst the few mares kept on the farm for general utility purposes. It was found that the young mules born on the farm were far superior to those obtainable in the open market, and that without a single exception they had grown into animals fit for ordnance purposes,

27. As the scheme entails practically no increased expenditure and can be worked with the present establishment, it is estimated that after allowing for a high percentage of casualties and for the replacement of old and worn out mares, that it will result in a net profit to the farm of about Rs. 6,000 annually.

28. *Donkey-breeding.*—It is an accepted fact that the well bred Punjab mule has no equal in the world for mountain battery purposes, and that a certain percentage of these mules are the produce of jacks bred in the Punjab. For several years it was noticed that the supply of jacks from the Continent and Cyprus was rapidly failing and that the few obtained annually were so crooked and misshapen as to be perfectly useless for our purposes. China, Persia, Arabia, were all tried and found wanting, and as a last resource the American market was tapped. The animals obtained from there were good of their class, but there were great difficulties in the way of purchasing and importing, and the price, *vis.*, £120 each, was prohibitive.

29. It was decided, as an experimental measure in the year 1901, to rear and breed a few indigenous jacks and for this purpose some 25 mares and 26 donkey colts were purchased and the two best stallions in India were transferred to the farm.

30. The scheme is a complete and thorough success and conclusively proves that with careful selection, judicious feeding and rearing, we can breed donkeys better, more powerful and in every way more suited to our requirements at less than one-third the cost at which we can buy indifferent ones in foreign markets.

31. Owing to the fact that this scheme renders us independent of foreign countries, is very economical, and places us in possession of jacks which are considered the best in the world, it was deemed advisable to extend and enlarge it and the farm now contains 60 brood mares and young stock. The fillies will be used to replace old and worn out mares and the colts issued for breeding purposes.

32. During the past two years, the farm has sold 23 mature donkey stallions to the Army Remount Department, District Boards and Native States, and I estimate there will be no difficulty when the scheme is in full working order, in meeting the requirements of the whole of India. There can be no question that it was started at an opportune moment as the supply from other countries had failed us, and we were at a complete loss to know where to turn for donkey stallions. Beyond the fact that young donkey stock at 3 to 6 weeks old are delicate and require great care, there is no difficulty attending the scheme. The mares are very regular breeders, good mothers and give little or no trouble.

33. The following table is most interesting as it gives the measurements of the best American donkey stallion imported into India and those of a young donkey colt—1 year and 10 months old—bred on the Farm. He is a perfect type of what we require; very straight, short back, with well sprung ribs: stands perfectly true on his legs, very active and a good dark brown colour.

It is to be regretted that the plate showing this donkey has been mislaid.

*"Hasad"—American donkey.*

Age.	Height.	Girth.	Shank.
8 years.	12-3 $\frac{1}{4}$	58 inches.	7 inches.

*Country-bred donkey by "Calcutta" Italian, bred on the Farm.*

Age.	Height.	Girth.	Shank.
1 year 10 months.	13-1 $\frac{1}{4}$	57 inches.	8 inches.

34. Colonel Goad, Director-General, Army Remount Department, remarks that the donkey stallions obtained from the farm are of excellent type and admirably suited for our requirements.

35. *Zebrule-breeding.*—In February 1904, four zebra stallions were received from South Africa. They had been captured on the Morendat plains near Naivasha about 400 miles from



Mombasa and at a height of about 6,230 feet above sea-level. They belong to Grant's variety of Burchel's Zebra (*Equus Burchelli*, variety *Granti*). They arrived in excellent condition, very soon settled down and are now perfectly tractable and docile. Forty donkey and pony mares were purchased to mate with these animals and a series of most interesting experiments are being carried on.

36. The value of the zebra and its crosses is supposed to lie in their immunity from certain diseases, and it is to be hoped that this and many other questions with regard to these hybrids will be set at rest by these experiments.

37. *Sheep-breeding*.—During the past year, sheep-breeding on a small scale was established on the farm. So far as can be ascertained from available records, this industry has never been attempted before. Three hundred approved ewes and 6 rams of good stamp have been purchased.

38. The indigenous breed will in time be considerably improved, the land under cultivation at the farm will be thoroughly well manured without any extra expense, and weekly sales of surplus stock will keep the number down to the prescribed limit, and the proceeds will be a clear profit.

39. There are large tracts of land in the Hissar Bir which are of no use except for sheep grazing, so that beyond the wages of the six shepherds there will be no expense for the feed of the sheep. It is estimated that this small scheme will result in a net profit of Rs. 1,000 to 1,500 a year and that the farm lands will benefit very materially by the sheep manure.

40. *Establishment*.—The following permanent establishment is maintained on the farm :—

- 1 Superintendent—commissioned officer,
- 1 Deputy Superintendent,
- 2 Overseers, and
- 236 clerical and menial subordinates.

The pay of subordinates has been increased and put on a proper footing.

41. During harvest and other busy seasons of the year, it is necessary to entertain daily labour, but the main work in connection with the farm and stock is performed by the above establishment.

42. *Finances*.—For purposes of comparison, I have deemed it advisable to give two tables:—

No. 1 showing the receipts and expenditure for the five years prior to the farm being taken over by the Civil Veterinary Department.

No. 2 since the farm has been in charge of this department.

43. The expenditure in table No. 2 includes capital expenditure, salaries and travelling allowances of officers and establishment, purchase of *all* animals, and extra expenditure involved in experiments and improvements; whereas the sums shown under the head "Expenditure" in table No. 1 do *not* include salaries and travelling allowances of officers and establishment.

44. As the present system of keeping the accounts is in many ways unsatisfactory, it has been decided to introduce a new system under the direction of Mr. H. G. Tomkins, Examiner of Local Fund Accounts, Punjab. This system, after a year's trial, will be brought into force and regularly checked by the peripatetic Auditor of the Punjab Local Fund Accounts.

45. I have deemed it advisable to put up a statement, marked C, which I consider a fair and not too sanguine estimate of what in future years, and when the farm is in thorough working order, should be its approximate receipts and expenditure. I think that this result can be arrived at providing the present system is maintained and the main object of the farm, *vis.*, the breeding and rearing of only the very best class of stock is never for a moment lost sight of. No doubt, during certain seasons of very scanty rainfall, the grazing and supply of hay will be limited and the expenditure increased; but, to meet this contingency, the large area under flow irrigation has been provided and should in ordinary years more than suffice.

46. Of course it is extremely difficult under present conditions to run the farm on true commercial lines. The price for each head of stock is fixed as low as possible by Government as Government themselves are the purchasers. It is acknowledged that animals of similar merit are unobtainable in the open market; therefore, if the receipts and expenditure, allowing for good and bad seasons, more or less balance themselves at the end of a series of years and the output of stock is kept up to estimated requirements, the farm may be considered to fully justify the object for which it is maintained.

47. I consider the future of the farm very promising. Its aim and object is now clearly defined. The irrigated land is to be entirely devoted to the cultivation of the best and most nutritious fodder crops, and it is distinctly laid down that only a certain number of animals shall be maintained, whose produce shall be reared to meet the requirements of Government annually.

48. A reference to the plates at the end of this report will show the various kinds of stock that have been bred on the farm. These are considered distinct types of each particular class of animal which is best suited to the climate, soil and other local conditions. These types are to be strictly adhered to and every endeavour made to improve them year by year.

49. It must be borne in mind that completely reorganizing a large farm like Hissar, drafting and grading up the stock, is a work that could not be accomplished in a short space of time and only within the last two years has the enormous amount of labour expended by the department commenced to bear fruit.

50. During the past five years the farm has been in charge of Captain Farmer, Indian Civil Veterinary Department, and to his untiring zeal and energy I attribute the successful results which have been achieved.

J. W. A. MORGAN, Colonel,  
*Inspector-General,  
 Veterinary Department.*

SIMLA; }  
 The 9th October 1905. }

No. 1.

## HISSAR CATTLE FARM.

Statement showing the receipts and expenditure for the six years prior to the farm being taken over by the Civil Veterinary Department:

Receipts.			Expenditure.		
	Rs.	A. P.		Rs.	A. P.
In 1893-94 ...	26,591	7 3	In 1893-94 ...	82,921	15 5
In 1894-95 ...	28,510	5 1	In 1894-95 ...	52,415	3 4
In 1895-96 ...	15,378	3 3	In 1895-96 ...	60,492	0 5
In 1896-97 ...	14,988	13 7	In 1896-97 ...	1,83,065	1 0
In 1897-98 ...	18,640	15 11	In 1897-98 ...	1,02,908	10 10
In 1898-99 ...	22,791	1 11	In 1898-99 ...	1,19,032	12 2
Total ...	1,26,900	15 0	Total ...	5,91,835	11 2

Loss in 6 years = Rs. 4,64,934-12-2. Average annual loss = Rs. 77,489-2-0.

(a) These sums do not include salaries and travelling allowances of officers and establishment.

J. W. A. MORGAN, Colonel,

Inspector-General,

Civil Veterinary Department.

SIMLA;

The 9th October 1905.

## HISSAR CATTLE FARM.

*Statement showing the Receipts and Expenditure since the farm has been in charge of the Civil Veterinary Department :*

Receipts.			Expenditure.		
	Rs.	A. P.		Rs.	A. P.
In 1899-1900 ...	31,611	10 1	In 1899-1900... (a)	81,569	5 7
In 1900-01 ...	50,732	10 3	In 1900-01 ...	1,27,446	12 1
In 1901-02 ...	55,981	13 9	In 1901-02 ...		99,562
In 1902-03 ...	74,865	14 10	In 1902-03 ... (b)	73,385	2 7
In 1903-04 ...	1,00,594	10 8	In 1903-04 ...		95,086
In 1904-05 ...	85,790	7 10	In 1904-05 ...	1,12,838	14 1
Total ...	3,99,578	3 5	Total ...	5,89,889	9 6

Loss in 6 years = Rs. 1,90,311-6-1. Average annual loss = Rs. 31,718-9-0.

(a) As the accounts of the first year were submitted to the Military Accounts Department under the old system of rendering accounts, this sum does *not* include salaries and travelling allowances of officers and establishment.

(b) From the following year the accounts were transferred to the audit of the Civil Departments, and the sums shown include capital expenditure—salaries and travelling allowances of officers and establishment purchase of all animals, and extra expenditure involved in experiments and improvements. The increase in 1904-05 is accounted for by extra expenses in connection with cultivation owing to scanty rainfall.

J. W. A. MORGAN, Colonel,  
Inspector-General,  
Civil Veterinary Department.

SIMLA ;  
The 9th October 1905. }



## C.

When the farm is in complete working order, it is estimated that the annual output will be as follows:—

	Rs.
250 Siege train bullocks at Rs. 120 each	... 30,000
100 Bulls for district work at Rs. 200 each	... 20,000
100 Mules, two-thirds Ordnance at Rs. 400 and one-third Baggage at Rs. 225 each	... 34,750
25 Donkey stallions at Rs. 500 each	... 12,500
Sale of unserviceable stock	... 2,000
Rent of land	... 8,500
Grazing rights, sale of timber, etc.	... 2,000
Sheep	... 1,000
Miscellaneous receipts	... 1,000
Total	... <u>1,11,750</u>

Against an expenditure which in future years is, approximately, calculated not to exceed one lakh of rupees per annum.

J. W. A. MORGAN, *Colonel,*

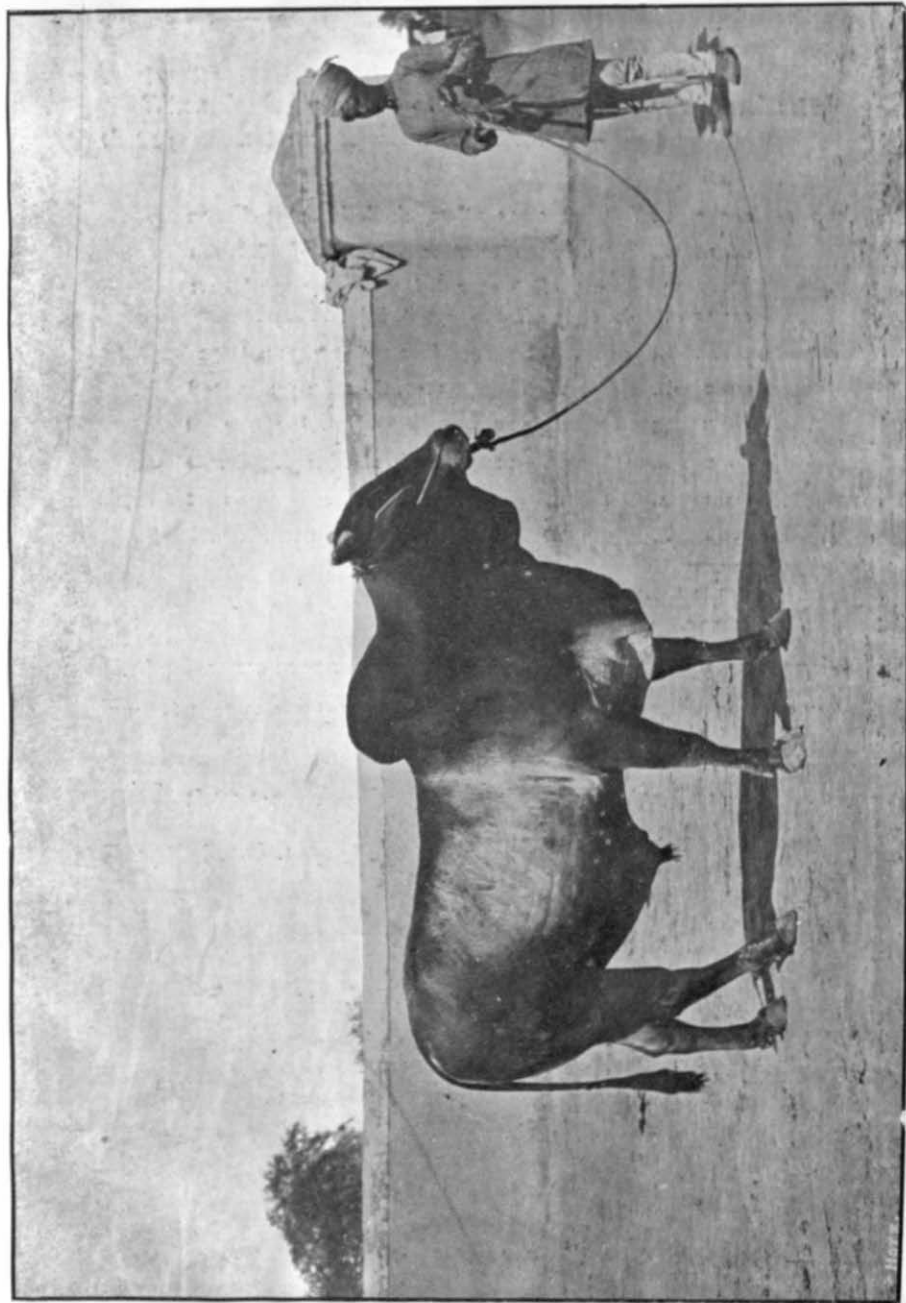
*Inspector-General,*

*Civil Veterinary Department.*

SIMLA ;

The 9th October 1905. }





Herd Bull No. H 46. Age 8 years. Height 57 inches. Girth 78 inches. Shank 8 inches.

Photo-block.

Survey of India Office, Calcutta, 1906.

1870

1871

1872

1873

1874

1875

1876

1877

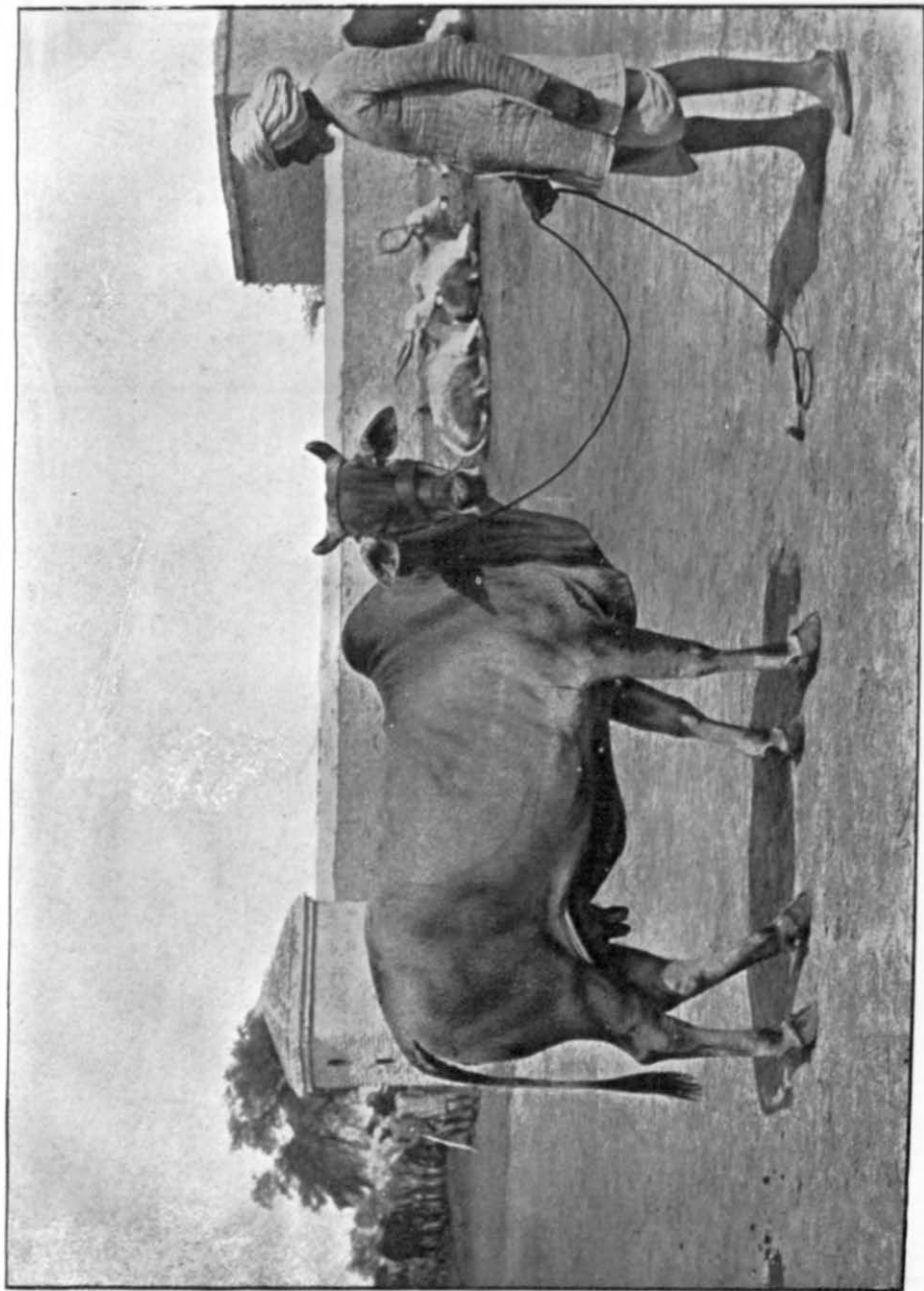
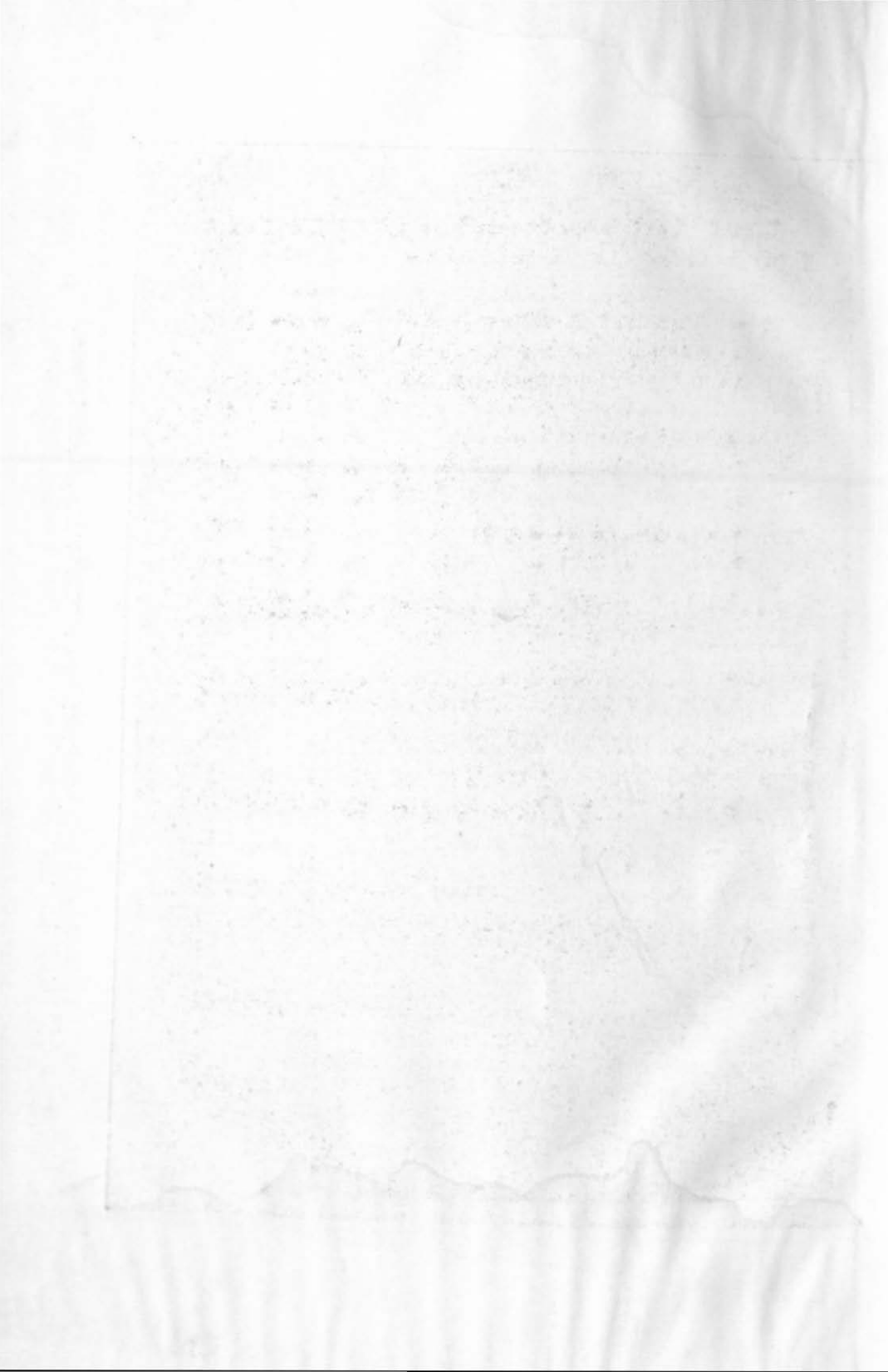


Photo-block.

Cow No. 16 H. Age 5 years. Height  $54\frac{1}{2}$  inches. Girth 70 inches. Shank  $7\frac{1}{4}$  inches.

Survey of India Office, Calcutta, 1906.





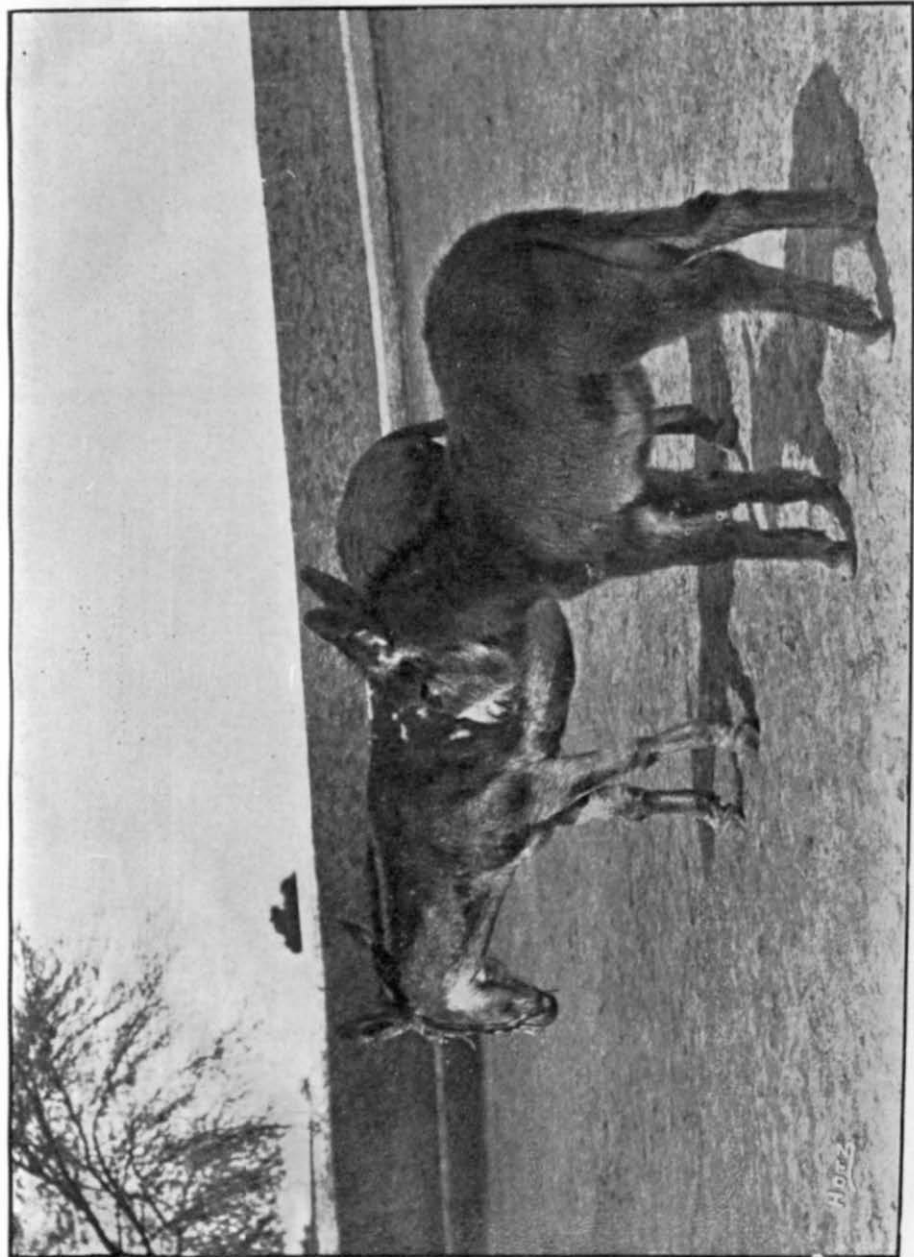
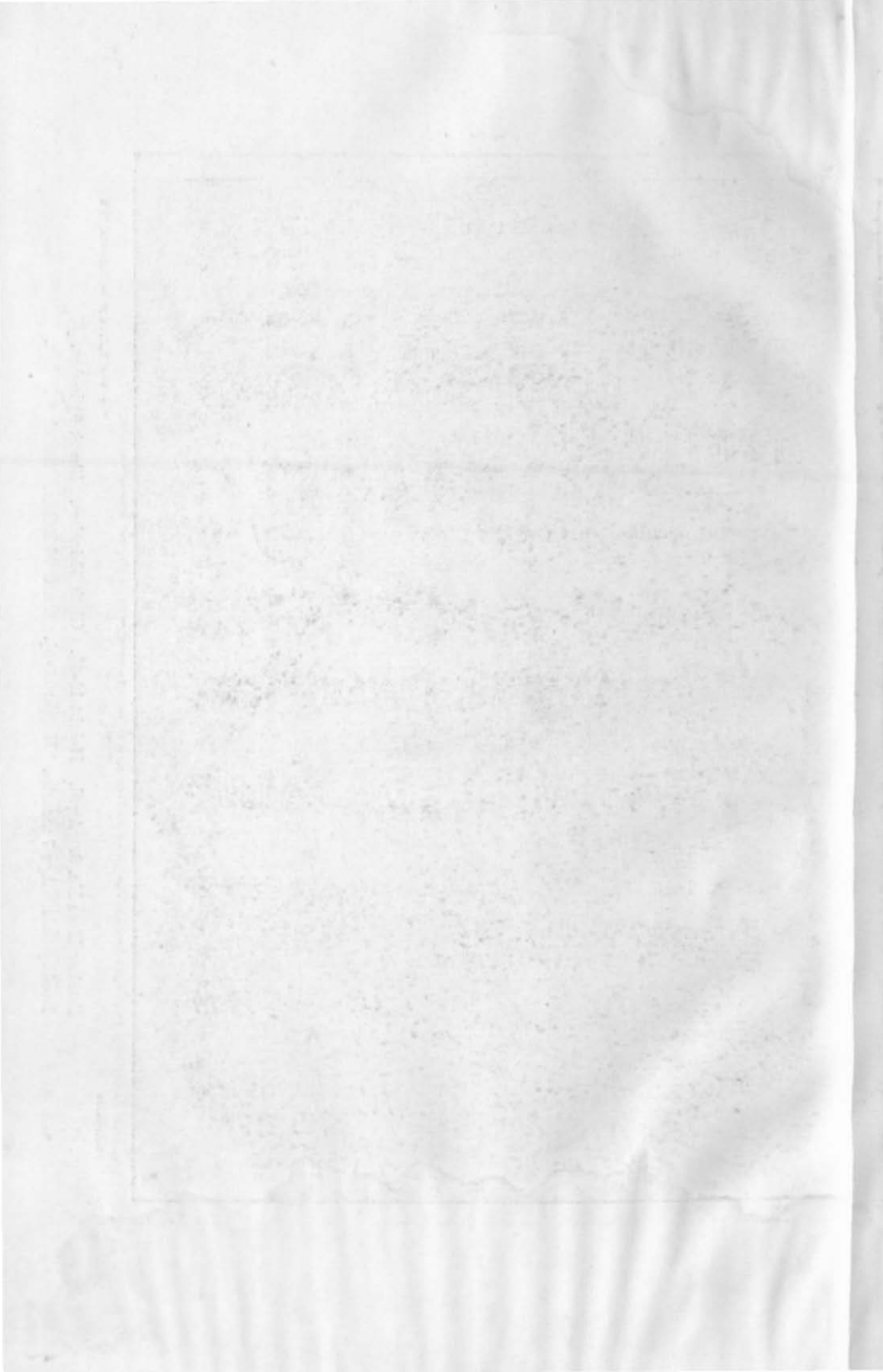


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Survey of India Office, Calcutta, 1905.

Donkey Mare No. 8. Aged. Height 12-2½. Girth 56 inches. Shank 6¼ inches.  
Donkey Colt. Age 7 months. Height 11-3½. Girth 46 inches. Shank 6 inches.



No. 4.  
Bred at the Hissar Farm.

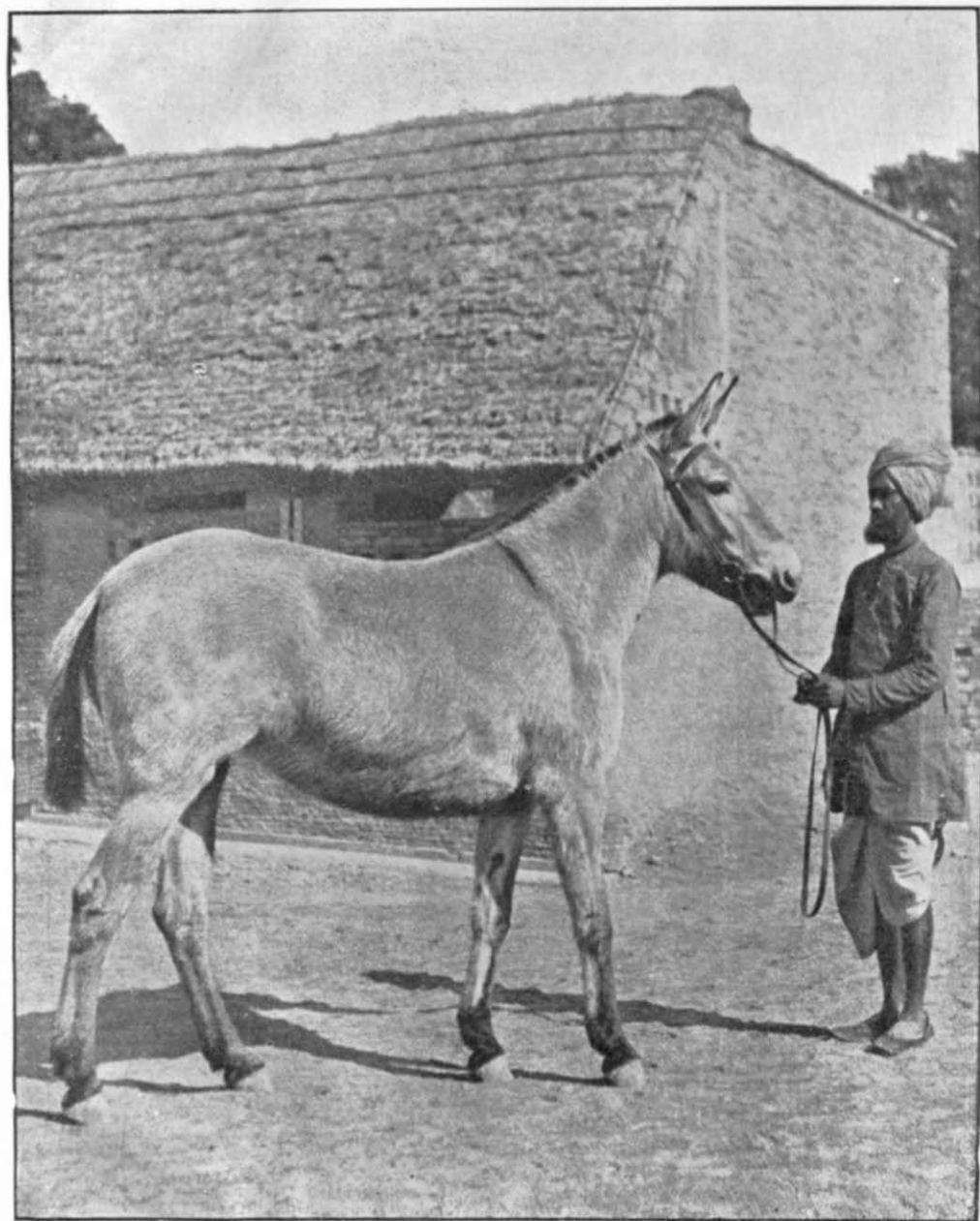
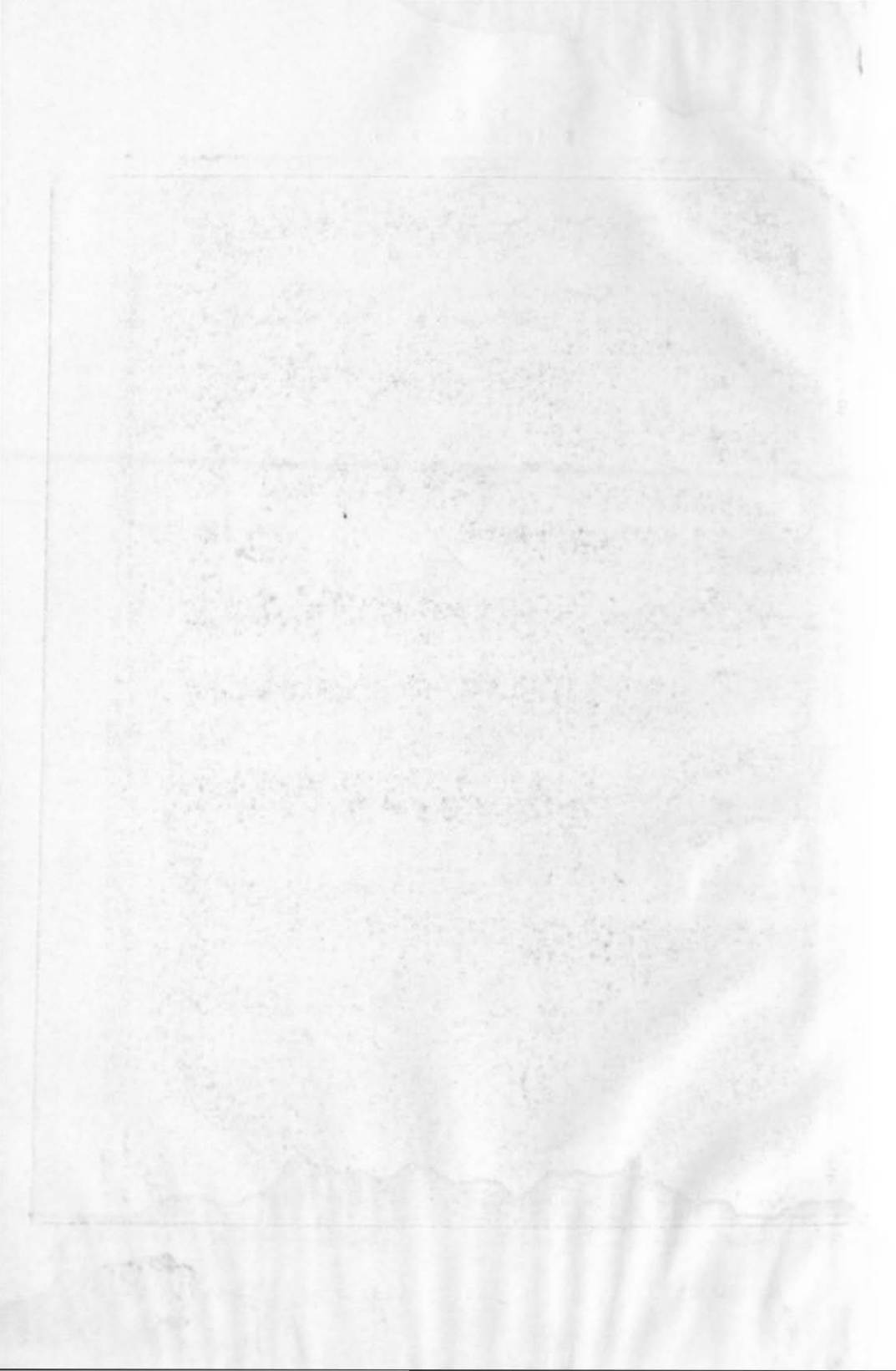


Photo-block.

Survey of India Offices, Calcutta, 1906

Mule No. 63. Age 4 years. Height 13-3 $\frac{1}{4}$ . Girth 67 inches. Shank 7 inches.



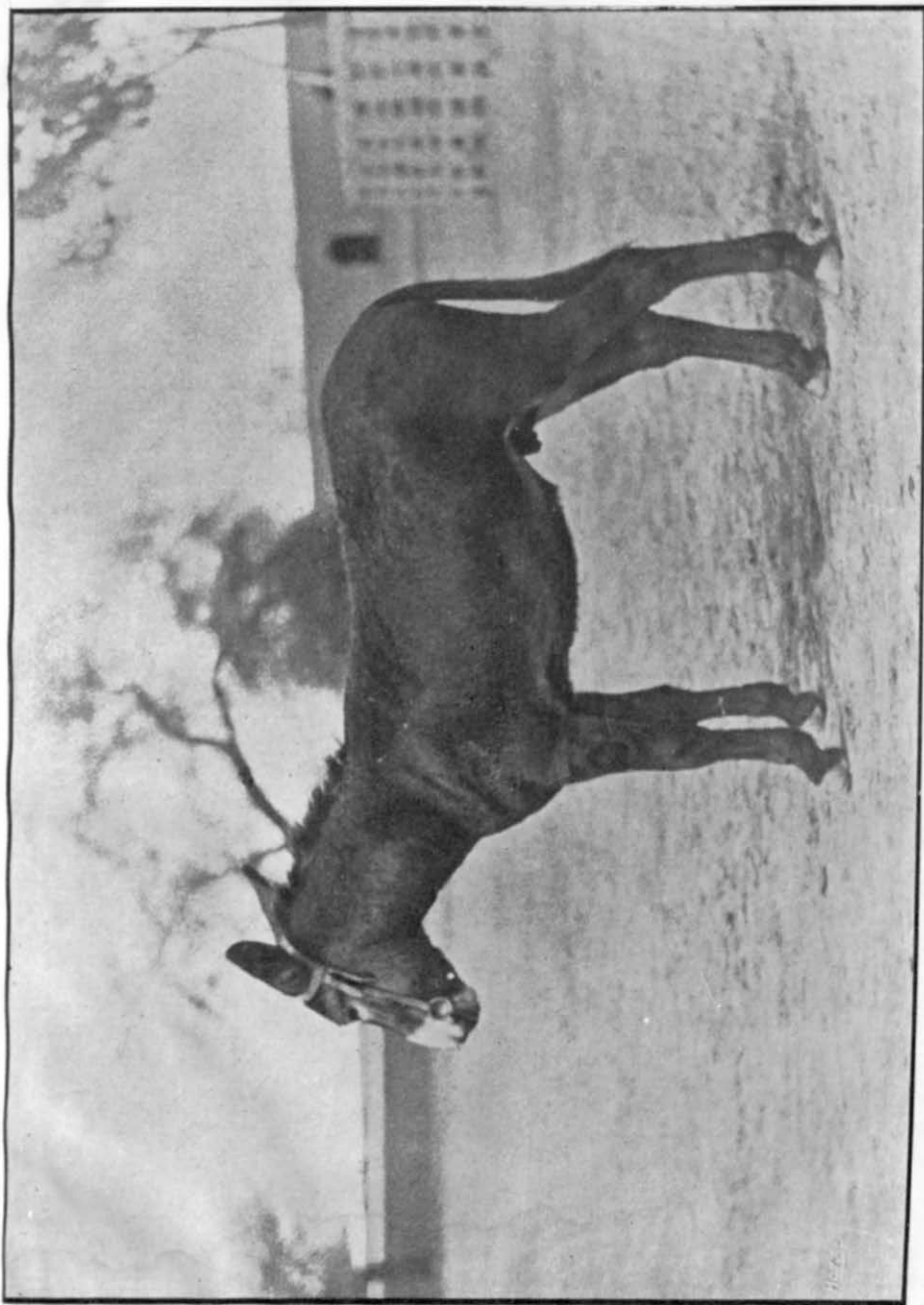


Photo-block.

Donkey Colt No. 29. Age 2 years & 6 months. Height 13-1 $\frac{1}{4}$ . Girth 55 $\frac{1}{2}$  inches. Shank 61 inches.

Survey of India Office, Calcutta, 1906



