Original Research

Disease Incidence and Health Management of Animals at Draught Affected Marathawada Region of Maharashtra

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Abstract

Marathawada region of Maharashtra received very low rainfall during last three years causing great problem in agriculture which leads to scarcity of animal feed and fodder. So, animals were suffering from malnutrition related problems. Therefore, chara chawnis system developed in most of the districts of Marathawada region where farmers kept their animals in temporary shelter ie bamboo made structure with plastic sheet roof. Therefore, animal health camp was organized from this centre in collaboration with the state animal husbandry department with the object to provide veterinary service and to get information about the disease incidence during 2015 – 16. Based on the collected information in the camp, data were analysed and it was revealed that 1567 cattle and buffalo were treated and 814 farmers were benefitted. Most of the animals were suffering from worm infection, ectoparasite infection, enteritis, anorexia, debility, deficiency disorder, other cases were pyrexia, FMD, tympanitis, skin infection, eye infection, mastitis, agalactia, anoestrous, repeat breeding, metritis, retention of placenta, traumatic wound, patellar desmotomy, external growth and abscess.

Key words: Disease Incidence, Health Management, Marathawada Region, Maharashtra

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Introduction

Marathawada region of Maharashtra consists of eight districts namely Beed, Osmanabad, Latur, Aurangabad, Jalna, Parabani, Nanded and Hingoli which received very low rainfall during last three years. Out of these eight districts, first three districts were affected mostly. Average rainfall was around 250 - 500 mm, causing great problem in agriculture which leads to scarcity of animal feed and fodder. So, animals were suffering from malnutrition related problems. Therefore, *chara chawnis* system was developed by State Animal Husbandry Department in most of the districts of Marathawada region. Nowhere in India such

type of arrangement was made by state department, so in that way it was a unique system. As a part of extension activities of the centre, animal health camp was arranged in collaboration with the Animal Husbandry Department, Govt. of Maharashtra with the object to provide veterinary service and simultaneously to get information about the disease incidence and health management for future planning.

Materials and Methods

As a part of extension activities of the centre, regularly animal health camp was organized in collaboration with the State Animal Husbandry Department, Govt. of Maharashtra during the year 2015 – 16 in different districts of Marathawada region in the state of Maharashtra. In this year seven camps in Beed district and two camps in Osmanabad district were organized. Date and location of the animal health camp in a particular district of draught affected region was decided in consultation with the veterinary officers of the state department. In *chara chawnis* system farmers kept their animal in temporary type of shelter made of bamboo with a roof made of plastic sheet (Fig.1). Animals would be provided sugarcane tops as green fodder @ 15 kg / head / day, kadwa kutty as dry fodder @ 6 kg / head/ day and concentrate pelleted feed @ 3 kg / head / week (Fig. 2).

Fig.1: Shelter at *chara chawnis*

Fig. 2: Sugarcane tops fed to animal

Water was supplied by tanker and was provided to the animals two to three times in a day. Routine deworming and vaccination was done by local veterinarians who was in charge of the particular *chara chawnis*. All the staffs of local veterinary hospital would make effort for wide circulation about the programme in the *chara chawnis* and made necessary arrangement. All kinds of veterinary medicines and surgical equipments were taken with us. Local veterinary officer sometimes made arrangement of artificial insemination and vaccination. One register was being maintained to enter several information such as name of farmer, species of animal, number of animal, age group, different types of cases, clinical symptoms, tentative diagnosis, treatment done and medicines administered or given for feeding. Controlling measures and way of administering medicine was told to the farmers clearly. Diagnosis was made on the basis of history and clinical symptoms. Diagnosis and treatment of parasitic diseases were done as per Soulsby

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(1982). Based on the collected information in the camp, data were analysed as per Snedecor and Cochran (1994) and interpreted for reporting and further necessary action for keeping the animals healthy and productive.

Result and Discussion

Total nine animal health camps were organized during the period, out of these seven camps were in different *chara chawnis* of Beed district and two camps were in different *chara chawnis* of Osmanabad district of Maharashtra. Total 814 farmers were benefitted from these animal health camps, while 1567 animals were treated and vaccinated (Table 1).

Table 1: List of animal health camps with number of beneficiaries and animals treated

Date of the Camp	Location of Camp	Number of Beneficiaries	Number of Animals Treated	Most Important Case
20.1.16	Village – Palwan, Taluka – Beed, District – Beed	142	466	Worm infection (27.46 %)
21.1.16	Village – Dhanora, Taluka – Asthi, District – Beed	77	185	Worm infection (60.54 %)
2.2.16	Village – Sabalkhed, Taluka – Asthi, District – Beed	98	147	Worm infection (42.88 %)
3.2.16	Village – Ghata Pimpri, Taluka – Asthi, District – Beed	30	37	Worm infection (40.55 %)
3.2.16	Village – Dadegao, Taluka – Asthi, District – Beed	11	19	Worm infection (21.05 %), Anorexia (21.05 %)
10.3.16	Village – Charatha, Taluka – Beed, District – Beed	69	75	Pyrexia (30.67 %)
11.3.16	Village – Daulabaragao, Taluka – Asthi, District – Beed	129	208	Worm infection (20.68 %)
17.3.16	Village – Paranda, Taluka – Paranda, District – Osmanabad	138	176	Worm infection (28.38 %)
18.3.16	Village – Ainapurwadi , Taluka – Paranda, District – Osmanabad	120	254	Worm infection (41.73 %)
GT		**814**	**1567**	

Highest beneficiaries were from Palwan village of Beed district (142) followed by Paranda village of Osmanabad district (138) and Daulabaragao village of Beed district (129). Highest animals were treated at Palwan village (466) of Beed district followed by Ainapurwadi village (254) of Osmanabad district and Daulabaragao village (208) of Beed district. In all the camps worm infection was the most important case except in one camp *i.e.* at Charatha village of Beed district where highest incidence was pyrexia case (30.67 %) was recorded. In Dadegao village of Beed district anorexia was most important problem (21.05 %) besides worm infection. Highest worm infection case (60.54 %) was recorded at Dhanora village of Beed

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district followed by 42.88 % in Sabalkhed village of Beed district and 41.73 % in Ainapurwadi village of Osmanabad district. 4500 cattle and buffalo were maintained at *chara chawnis located* at Palwan village, hence highest number of animals was treated at Palwan village of Beed district. Very high worm infection in almost all the villages of both the districts indicated that necessary step is to be taken for regular deworming of livestock for maintaining health, reproduction and production of livestock. While different cases were classified as per species it was revealed that 78.17 % cattle and 21.83 % buffalo were brought to the camps for the treatment and vaccination. While different cases were classified as per age group it was observed that 82.00 % animals were adult and 18.00 % animals were young (Table 2).

Table 2: Classification of different cases as per species and age group of animal

S. No.	Particular	Number of Case	Percent
A	**Species**	1567	100
	Cattle	1225	78.17
	Buffalo	342	21.83
B	**Age Group**	1567	100
	Young	282	18
	Adult	1285	82

Different types of cases altogether in all the nine camps were delineated in Table 3. It was observed that 33.90 % worm infection cases were recorded followed by 13.91 % ectoparasite infection and 8.69 % anorexia. Worm infection, anorexia, enteritis and anoestrous cases were recorded in all the nine animal health camps as indicated by frequency (9). Whereas deficiency disorder, traumatic wound and repeat breeding cases were recorded in eight camps. High per cent of anorexia case might be due to unpalatable feed. High per cent of enteritis case might be due to worm infection. The main reason of 6.45 % debility and 5.42 % deficiency disorder cases (Table 3) were due to lack of sufficient feed and fodder due to low rainfall. Sugarcane tops as green fodder and Jowar straw as dry fodder were being fed to animals in *chara chawanis* and both the crops were nutrient and mineral deficient. Moreover, concentrate pelleted feed was fed @ 3.0 kg/head/week which was far below the maintenance requirement. 6.97 % anoestrous and 4.66 % repeat breeding cases were recorded (Table 3). The reason behind this might be mineral and vitamin deficiency due to insufficient feeding of animal. It was reported that incidences of repeat breeding in cattle and buffaloes in India ranges from 5.5 - 33 % and 6 – 30 %, respectively (Kumaresen *et al*., 2013). So, lesser incidence or repeat breeding than national level was observed in our present study in Marathawada region of Maharashtra. Other cases with low incidence such as agalacsia (2.04 %), traumatic wound (1.98 %), skin infection (1.85 %), pyrexia (1.60 %), eye infection (1.21 %), mastitis (1.02 %), were reported in the Table 3. Even few cases of castration (0.19 %), pregnancy diagnosis (1.60 %), artificial insemination (0.38 %) and vaccination (0.64 %) were attended.

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Table 3: Classification of different types of cases

S. No.	Type of Cases	Number of Case	Number of Camps	Percent
1.	Worm infection	531	9	33.9
2.	Ectoparasite infection	218	7	13.91
3.	Anorexia	136	9	8.69
4.	Enteritis	87	9	5.55
5.	Tympanitis	2	2	0.12
6.	Debility	101	5	6.45
7.	Deficiency Disorder	85	8	5.42
8.	Pyrexia	25	2	1.6
9.	Agalacsia	32	5	2.04
10.	Mastitis	16	4	1.02
11.	FMD	3	1	0.19
12.	Pneumonia	1	1	0.06
13.	Skin infection	29	2	1.85
14.	Eye infection	19	6	1.21
15.	Ear infection	1	1	0.06
16.	Lameness	3	1	0.19
17.	Traumatic wound	31	8	1.98
18.	Patellar Desmotomy	6	4	0.38
19.	Abscess	3	2	0.19
20.	External growth	1	1	0.06
21.	Anoestrous	109	9	6.97
22.	Repeat Breeding	73	8	4.66
23.	Prolapse of rectum	1	1	0.06
24.	Abortion	1	1	0.06
25.	Metritis	6	4	0.38
26.	Retention of placenta	3	1	0.19
27.	Pregnancy Diagnosis	25	4	1.6
28.	Artificial Insemination	6	2	0.38
29.	Castration	3	1	0.19
30.	Vaccination	10	1	0.64
	GT	**1567**		**100**

Worm infection was treated by fenbendazole and levamisole whereas in calves it was treated by pyrantel citrate. Ectoparasite infection was treated by Butox. Agrimine fort was advised to feed orally in deficiency disorder and debility cases whereas anorexia was treated by herbal product Himalayan Batisha and in severe case by Rumentoin or Bovirum bolus. Tympanitis case was treated by oral administration of Blotosil and i/m injection of antihistamine. There was good number of mastitis case which was treated by intramammary infusion of Tilox Fort in affected teats followed by i/m injection of enrofloxacin (Manzoor *et al.*, 2018). Agalacsia was treated by herbal galactopoetic medicine by feeding orally.

Anoestrous case was treated by Prajana capsule and Cyclomine Fort. Repeat breeding case was treated by hormone application after per rectum examination of female genitalia Abortion case was treated by inserting intrauterine antiseptic bolus along with parentral administration of broad spectrum antibiotic.

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Retention of placenta was treated by oral administration of herbal ecbolic followed by administration of intrauterine antibiotic.

Eye infection was treated by local application of eye ointment. Ear infection was treated by local drop of antibiotic solutions. Two cases of skin infection was also reported which was treated by Ivermentin i/m (Fig. 4). Pyrexia was treated by parentral injection of Meloxicom i/m and Oxytetracycline LA i/m. Even three cases of FMD were found and are advised to keep separately for avoiding spread of disease to healthy stock. Those cases were treated by parental injection of Enrofloxacine LA followed by local application of tincture iodine. Patellar desmotomy was treated by surgical intervention after local anaesthesia; afterwards local application of antiseptic lotion was made. A course of antibiotic and anti-inflammatory was continued for three days. Wound was dressed by local antiseptic lotion followed by parental injection of antibiotic (Fig. 5). External growth of the ear was surgically removed after local anaesthesia (Fig. 6). Afterwards analgesic and antibiotic were given i/m and requested to continue at least for three days.

Fig. 3: A typical case of debility

Fig. 4: A case of skin disorder

Fig. 5: Dressing of wound

Fig. 6: External growth is being operated

Conclusion

Special attention is needed for veterinary services to keep animals healthy and productive. Regular deworming and vaccination could reduce morbidity and mortality of the animals. As in *chara chawnis* large number of animals is sheltered at a particular place, so hygienic condition is to be maintained to keep disease

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problem at bay. Even though any animals suffer from contagious and infectious disease such as FMD, quarantine measures is to be taken to prevent dissemination of disease to other healthy animals. As most of the animals are suffering from malnutrition regular mineral and vitamin mixture is to provide animals to keep them productive and fertile.

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