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# Successful treatment of ovine Fasciolosis

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**Abstract**
In the present study faecal samples were collected randomly from 998 sheep for evaluating fasciolosis 136 samples were positive for *F. gigantica* along with clinical manifestation of dullness pale and edema of mucosa and conjunctiva sub-mandibular edema and discharge of frothy blood trough nostrils all sheep were treated with Triclabendazole along with liver tonic and recovered completely after 15 days of treatment.

**Keywords:** *F. gigantica;* prevalence, sheep

## Introduction
Ovines are known to suffer from various Endoparasitic helminth infections. Among these helminth infections are of great important. Helminths remain a major threat to small ruminant production. Among diseases caused by helminths, Fasciolosis is an important trematode disease of small ruminant caused by *Fasciola gigantica* (Soulsby, 1982) [9]. Fasciolosis is also known as liver fluke disease and 'Galasuj' (in local Marathi language) and is characterized by edema under sub-mandibular region, pale mucosa and conjunctiva, dry skin, sub mandibular edema and discharge of frothy blood through nostril (Radostitis *et al*. 2007) [7]. The disease causes heavily economic losses due to high morbidity and mortality (Soulsby, 1982) [9]. The clinically disease is diagnosis based on fecal smear examination. Therefore, the present study was conducted to evaluate prevalence of *F.gigantica* in sheep flocks at khandala (Tal Khandala, Satara).

## Materials and methods
### Animals and study locale
In present investigation a total 100 sheep were screened by fecal sample examination. The animals included from ten villages per one mobile veterinary dispensary of Satara during period of February –March 2017.

### Sample collection and examination
Faeces, 3-5g were either collected per-rectally or freshly defecated were collected in separate polyethylene pouches and labeled accordingly. The collected samples were examined within 24 hours by sedimentation. Each faecal sample was examined by Stoll's ova counting technique and egg of *F.gigantica* was identified based on morphological character based on Soulsby (1982) [9].

Eggs per gram of faeces = Number. of eggs counted ×100

### Diagnosis and Treatment
Clinical examination of each sheep flocks was done as per described by Radostitis *et al* (2007) [7]. Fasciolosis was diagnosed based on clinical signs of anemia (pale conjunctivae, faecal sample examination. All sheep positive for *F. gigantica* infection were advised Triclabendazole @ 10 mg/Kg body weight, Livotas (herbal liver tonic) @ 10ml/animal/orally and twice a day as hepatic supportive therapy.

## Result and Discussion
Out of 998 faecal samples examined, 136 were found positive for *F. gigantica* infection, indicating 13.63% prevalence of *F. gigantica* in flocks. The prevalence of *F. gigantica* in sheep has been recorded earlier from different parts of world. Prevalence results of present investigation are more or less similar to Mohammad Hashemnia *et al*., (2015) [6]. Heavy rainfall

Condition in region might be one reason for higher prevalence. Mortality rate of sheep was found to be 3.9% while Fiss L *et al*. (2013) [2] reported 3.8% mortality in monsoon due to *F. gigantica* infection. Analysis of age related data of *F. gigantica* positive sheep (N=136). That should higher prevalence of *F. gigantica* in sheep of about two year age that is 16.50% followed by 10.03% in 1-2 years age and 6.8 in % bellow one year of age. Prevalence was higher in older sheep than young sheep which was similar with the result of Satale BA (2001) [8]. The higher prevalence in older animal is associated with age and consequently longer exposure time. Yadav TS (1986) [10]. The prevalence of *F. gigantica* infection was higher in female 14.04% and then in male 9.5%. Similar findings have also recorded by Leathers CW *et al*., (1982) [4].

In present studies, clinical examination of *F. gigantica* infected sheep flocks revealed variable clinical science of weight loss, pale mucous membrane sub mandibular edema also known as bottle jaw, diarrhea passage blood stain nasal discharge , anorexia and loss of milk production. *F. gigantica* infestation is characterize by sheep showing pale mucous membrane and bottle jaw condition due to severe hepatic damage by migratory immature flukes in liver. Extensive liver damage and hemorrhages that induce severe clinical dieses with complication etc. weight loss animal become lazy, diarrhea and drop of production Radostitis *et al*., (2007) [7].

The overall mean value of faecal egg per grams of 136 sheep affected with *F. gigantica* infestation was 158.08 with a range of 100-400. Apparently healthy sheep did not show any parasite in faecal examination Diagnosis of *F. gigantica* infection was based on clinical sign and microscopic examination of faecal sample for egg of *F. gigantica* presence. All sheep positive for *F. gigantica* infestation were treated with Triclabendazole and Livotas. All sheep completely recovered within 50 days of treatment. Boray JC *et al*., (1983) [1].

**Fig 1:** The sheep showing Pale (Anaemic), Yellowish (Icteric) mucous membranes As the sheep ingested larval stages via contaminated food or water, a symptomless incubation period starts, The acute phase, lasting 2-4 months, begins when the immature worms penetrate the intestinal wall and the peritoneum, the protective membrane surrounding the internal organs. Typical symptoms include fever, nausea, a swollen liver, skin rashes and extreme abdominal pain.

**Fig 2:** The sheep showing typical Submandibular edema for ovine Fasciolosis in chronic form of disease. Fasciola hepatica eggs are released into the bile and reach the intestine, where they are evacuated in faeces, Symptoms include intermittent pain, jaundice and anaemia. Pancreatitis, gallstones and bacterial super-infections may also occur. Sheep after necropsy finding showing hardening of the liver (fibrosis) as a result of the long-term inflammation.

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