

## Buffalos in Pakistan: Incidence and Control of Gastrointestinal Parasitic Infections in Naturally Infected Water Buffaloes

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Received: 30.Nov.2017; Accepted: 15.Dec.2017; Published: 27.Dec.2017

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Cite this article: Iqbal, M.N., Ashraf, A., 2017. Buffalos in Pakistan: Incidence and Control of Gastrointestinal Parasitic Infections in Naturally Infected Water Buffaloes PSM Vet. Res., 2(2): 33-34.

### EDITORIAL

Buffalo and cattle are playing main role in production of dairy items in Pakistan. It is our main animal in terms of milk production and has higher production potential. Buffalo farming is playing a pivotal role in the national economy of Pakistan by producing significant proportion of milk, meat and draught power. Total population of buffalo in Pakistan was 36.6 million (Economic Survey of Pakistan, 2015-16). The milk production in Pakistan during 2014-2015 was 54,328 thousand tones and the contribution of buffalo was 33,137 thousand tones (Economic Survey of Pakistan, 2015-16). Average milk produced by buffalo and cow was recorded as 180 and 135 liters per month, respectively (Neelam and Khan, 2017).

Water buffalo (*Bubalus bubalis*) is very important because of its high milk yield to meet the protein requirement. In Pakistan, various causes attributed to low productivity in livestock are due to unfavorable climate condition, low animal genetic potential, insufficient feed supplies, failure of the genetic improvement program and lack of proper health care facilities.

Livestock diseases are common and widespread, and an important factor contributing to low productivity. A variety of parasites particularly helminthes harbor the gastrointestinal tract (GIT) of animals affecting the health status of animals and cause enormous economic losses to the livestock industry (Rafiullah *et al.*, 2011). The effects of infections caused by parasites are decrease in milk production, reduced product quality and quantity and increase mortality rate (Gupta *et al.*, 1978; Soulsby, 1982). Therefore, it is important to control the parasites of the gastrointestinal tract through better management as in

developed countries, and knowledge on prevalence of these parasites is very necessary.

A study was designed to find out the prevalence of *G. explanatum* at Sihala Slaughter House, Rawalpindi. Sixty three livers were found infected by *G. explanatum* among three hundred livers examined and the prevalence rate was 21.24% (Muhammad *et al.*, 2015).

In our study, a total of 289 rumens and reticulums of buffaloes were examined for the presence of *Paramphistomum cervi* by visiting local abattoirs. The results revealed that 17.3 percent buffaloes were infected by *P. cervi* in central Punjab. Highest average worm burden was found in Sargodha and lowest in Mandi Bahaudin (Iqbal *et al.*, 2013).

The histology of trematodes, collected from approximately 50 buffaloes, has been carried out for identification, resulting 25 percent *Gigantocotyle explanatum* infection in naturally infected water buffaloes in central Punjab. The highest average worm burden was found in Sargodha followed by Faisalabad (Iqbal *et al.*, 2014a).

A total of 265 rumens and reticulums of buffaloes were examined for the presence of *Gastrothylax crumenifer* and infection rate recorded was 18.8% in central Punjab. It was found that buffaloes aged 22 years have the highest worm burden (Iqbal *et al.*, 2014b).

The heavy losses due to parasitic disease cause great damage to livestock field. The epidemiological information of parasitic burden is helpful in the development of rational control measure against parasites in water buffaloes. In Pakistan, basic village farmers do not have much knowledge regarding these endoparasites and as a consequence, Pakistan faces a lot of economic loss every year. So, it is required to take immediate steps for reduction

of infectious rate. The availability of fresh water snails serving as intermediate host, existence of extensive water channel system and poor grazing management of animals being practiced in these areas should be managed to control the trematode infections.

It is recommended that farmers who rear buffaloes should improve the provision of feeds to their animals so that the animals can have good body condition that confers some level of resistance against parasitic infections. Besides, they should be able to regularly treat their animals with the appropriate anthelmintics or vaccines if available and awareness should be spread on the prevention and control methods of gastrointestinal parasites.

### CONFLICT OF INTEREST

The writers have announced that no contending interest exists.

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