Parasitism by gastrointestinal and lungworm nematodes has a negative impact on sheep production. Therefore, the treatment with anthelmintic drugs is one of the most frequently implemented managements in sheep farms. Tactical parasite control treatments are based on routine monitoring and intervention when threshold values are reached, balancing effective worm control and preservation of anthelmintic efficacy. In this study the effects of a tactical anthelmintic treatment on productive performances of two sheep flocks for lamb production are described. Flocks were located in irrigated and non-irrigated agricultural areas in northern Spain, being representative of the main farm systems of the region. From early 2015 live weight, body condition score, packed cell volume, serum protein and faecal parasite egg counts (by McMaster technique) have been individually estimated at five and one week before pre-mating. By random selection, half of ewes were treated against parasites during the first sampling, confirming the efficacy of this treatment at 14 days after by faecal egg count reduction test. The same protocol was applied before parturition to get ewes treated just in pre-mating, in pre-parturition period or in both. Monitored productive parameters were apparent fertility, prolificacy, weight of the newborn lambs, days at weaning, average daily gains and survival of lambs. Effects of tactical treatment on productive traits were analysed in relation to faecal parasite egg counts, in order to determine thresholds values indicative of negative impact of parasites on ewe productive performances. The high variability of egg counts, however, precluded their estimation. Study funded by Spanish INIA(RTA2013-00064-C02-01)