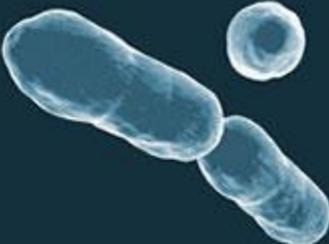




**Influence of tiamulin therapy on weight gain in
Brachyspira dysentery in piglets**

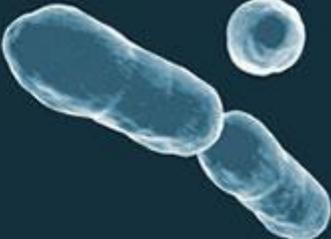
**Alexandru O. Doma, Andreia B. Chirilă,
Eugenia Dumitrescu, Florin Muselin
Romeo T. Cristina***



Justification of the approach

Among the diseases that can cause *great damage* in swine farms, treponemic dysentery (currently *Brachyspira*) has a special importance, because it involves great *economic losses*, both by growth failure and high mortality, as well as significant costs of the outbreaks *prevention and control*





Objective

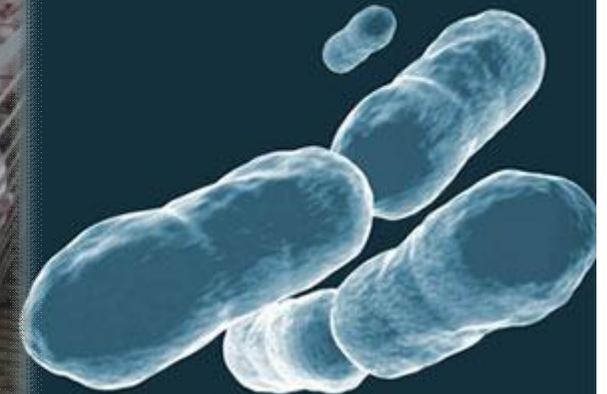
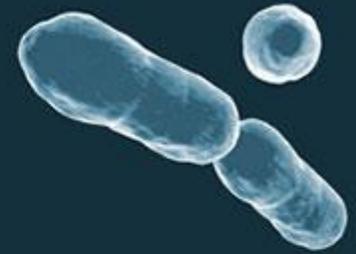
Influence of tiamulin therapy on **weight gain** in *Brachyspira dysentery* in piglets.

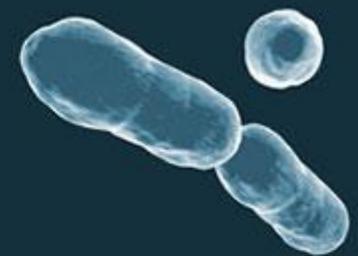


Materials and methods

The experiment was conducted in a swine growing and fattening facility from Timiș County.

The unit was set up as an *intensive farm system*, with an effective of 6500 heads.





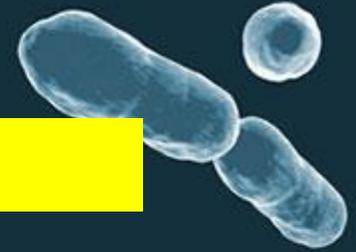
Highest incidence and source of infection

The main *source of infection* is represented by the *sick pigs* which eliminates great amount of treponemas with faeces

Highest incidence of disease was found especially in the young categories, aged between *35 - 45 days*



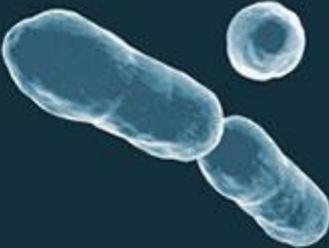
The study



- » The study duration was **21 days**
- » the individual weighting of the piglets
- » the drug administration
- » efficiency economic (weight gain) was analyzed

The research was conducted only on **sick piglets**, with acute clinical signs, manifested by sanguinolent diarrhoea.





Three experimental **and one** Control group,

Consisting of **12 individuals**/group, as follows:

- G. T1 & T2, treated P.O. with soluble tiamulin fumarate;
- G. T3, treated with oily suspension of tiamulin fumarate
- Control (untreated until day 7 of the study).



Diagnostic & Confirmation

The diagnosis was made by **morpho-pathological examination**



Fig. 1. **Diffuse hemorrhagic enteritis**
(original Doma AO)

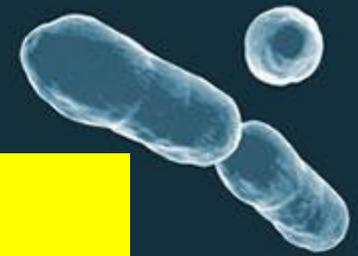
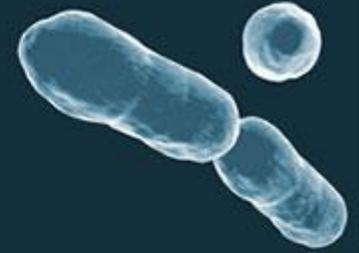
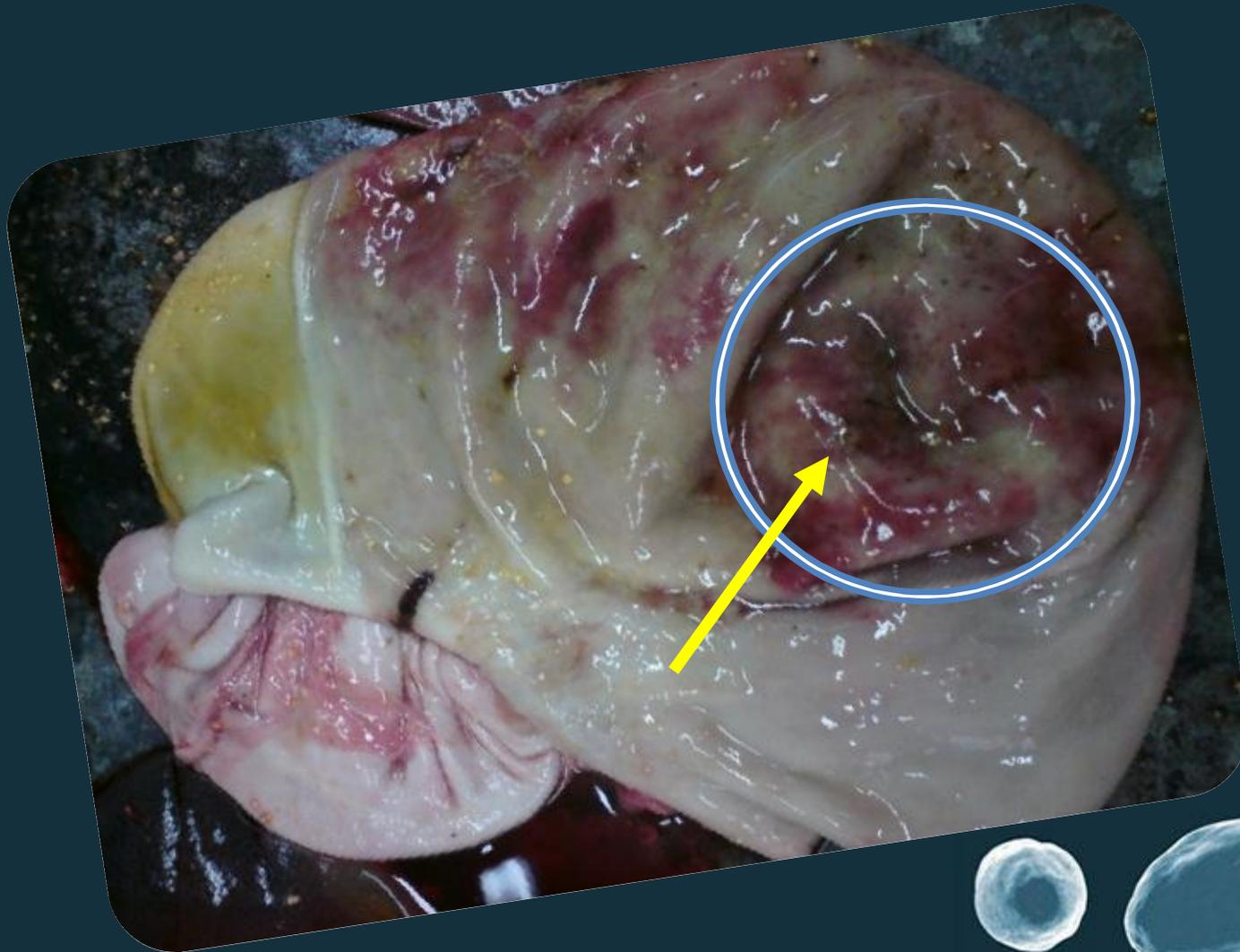
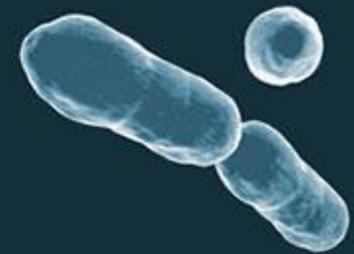
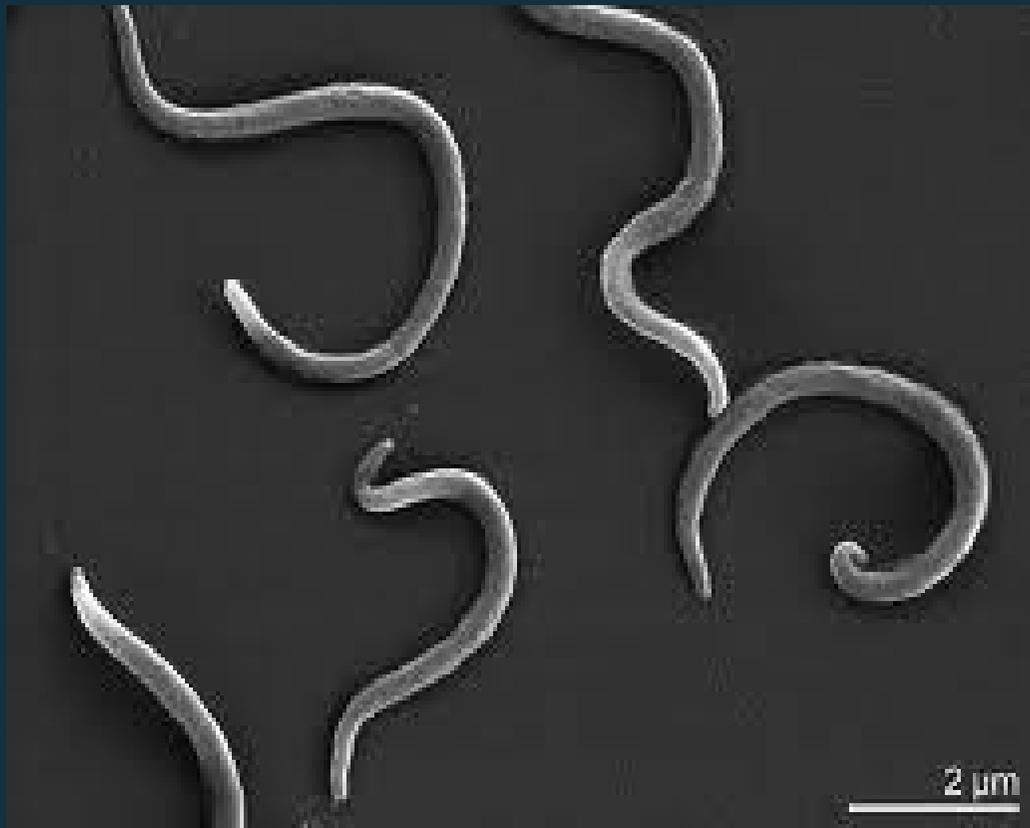


Figure 2. **Gastritis** (original Doma AO)



Laboratory confirmation

was made at the *Sanitary Veterinary and Food Safety Institution Timis County (DSVSA)*.



Drug formulations used

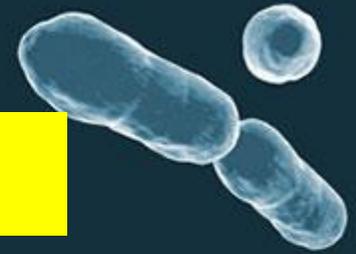
The drugs used in the study respected the manufacturer's administration indications.

Tiamutin 45% soluble granules (Ceva),

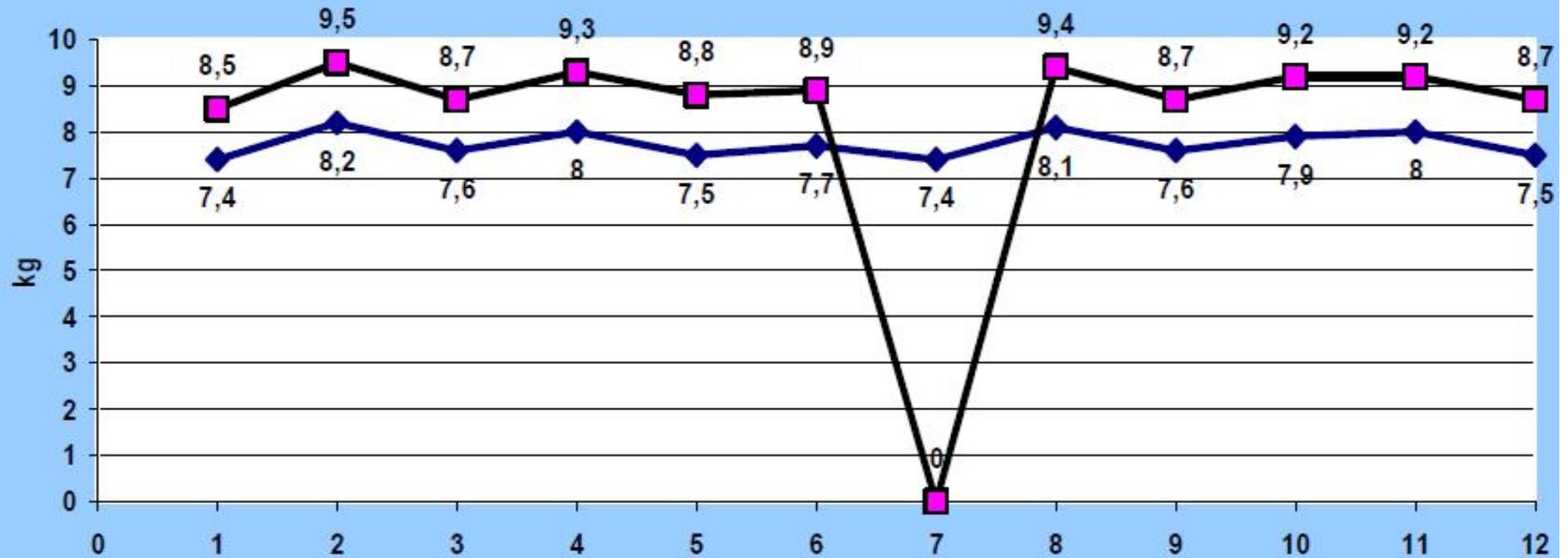
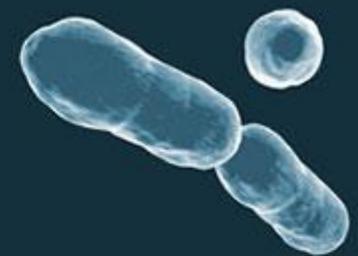
- in the concentrations of 0.006% (meaning dose of: 6 mg/kg.bw.) for T1 group
- and 0.008% (dose of: 8 mg/kg.bw.), for T2 group.

Tiamutin 10% oily injectable solution was administered profoundly I.M.

- at the dose of 8 mg/kg.bw (0.8 ml/10 kg.bw.)

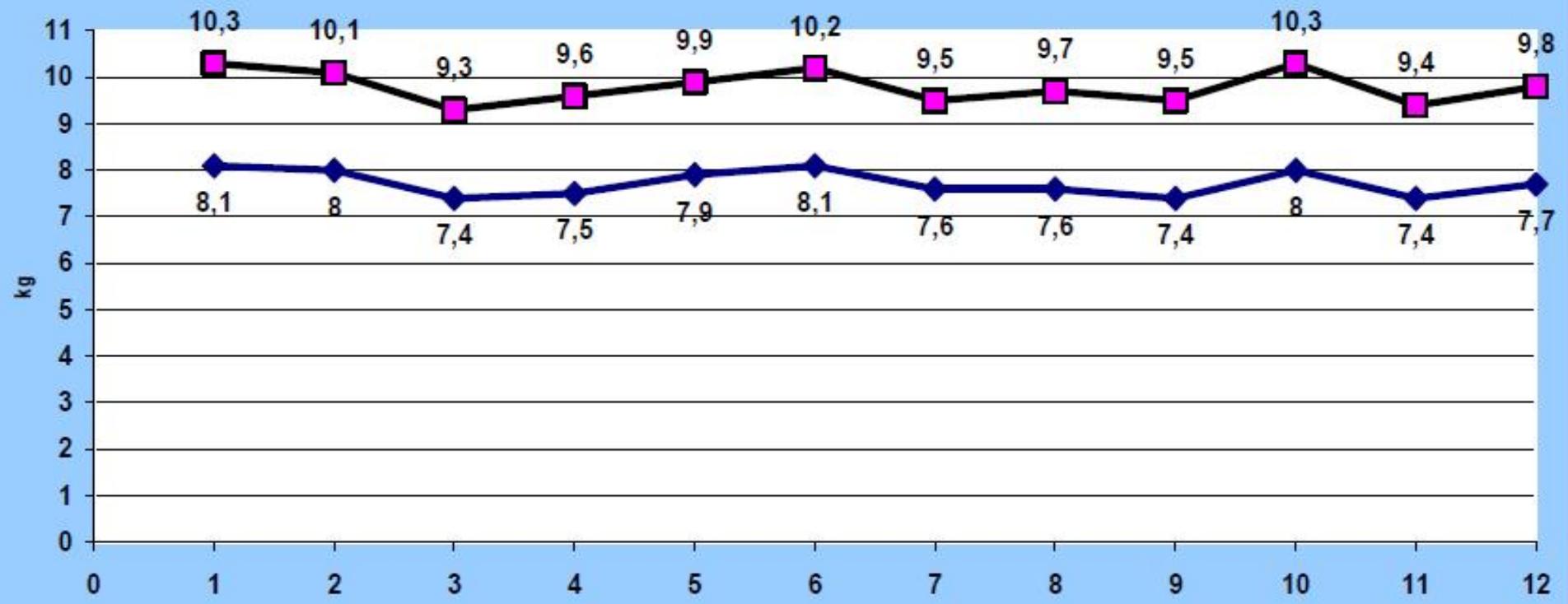
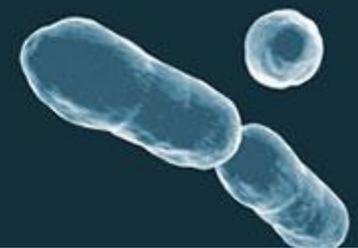


Results and discussion



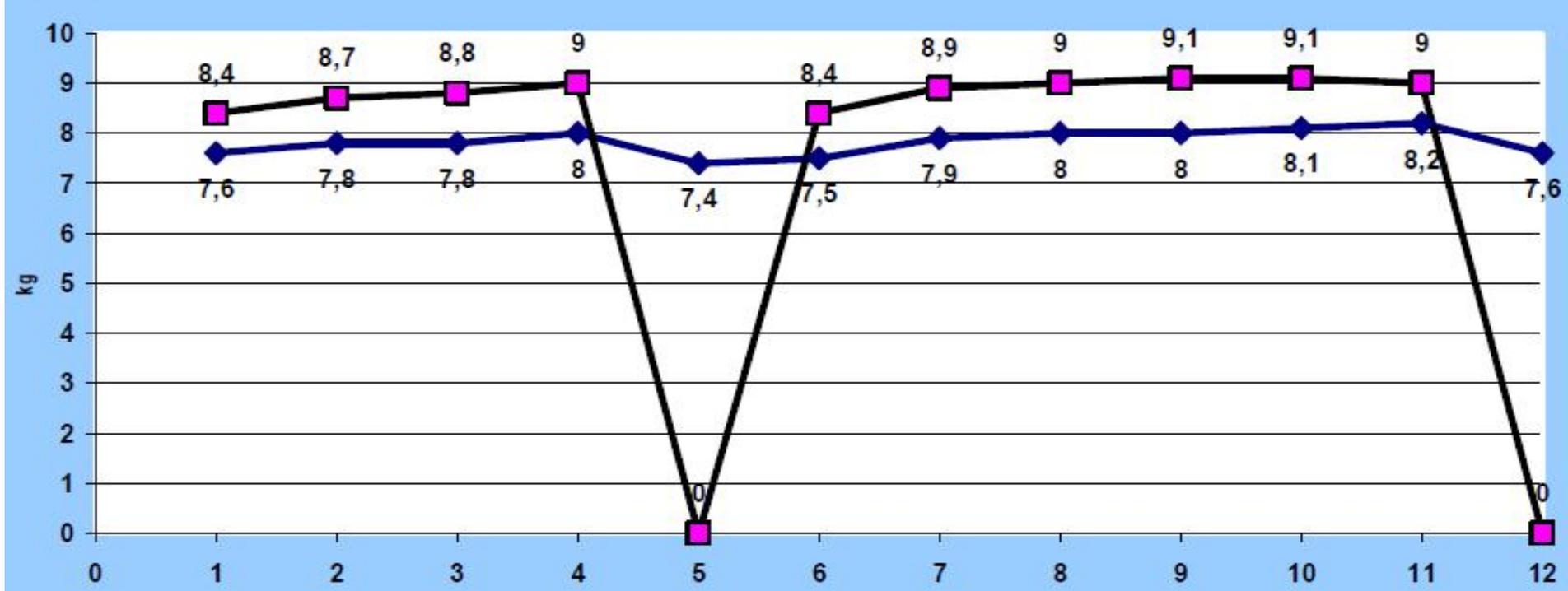
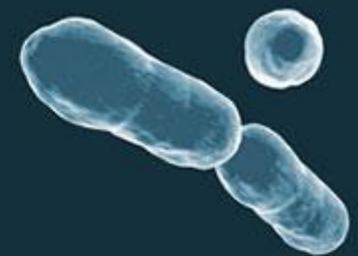
Presentation of individual weight evolutions for the **T1 group**
(dose: 6 mg.kg.bw.⁻¹)





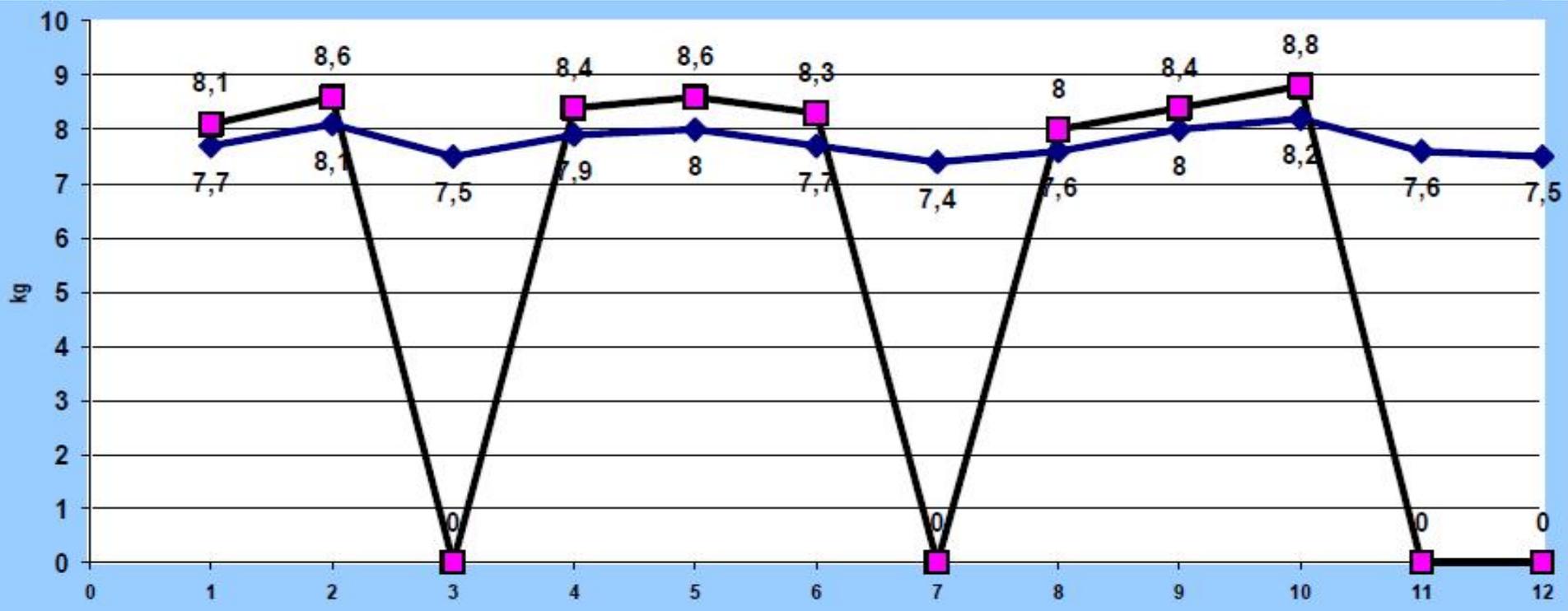
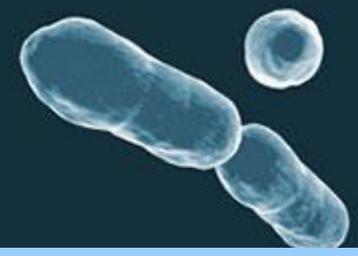
Presentation of individual weight evolutions for **T2 group**
(dose: 8 mg.kg.bw.⁻¹).





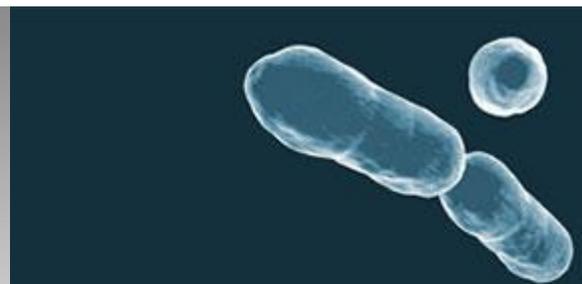
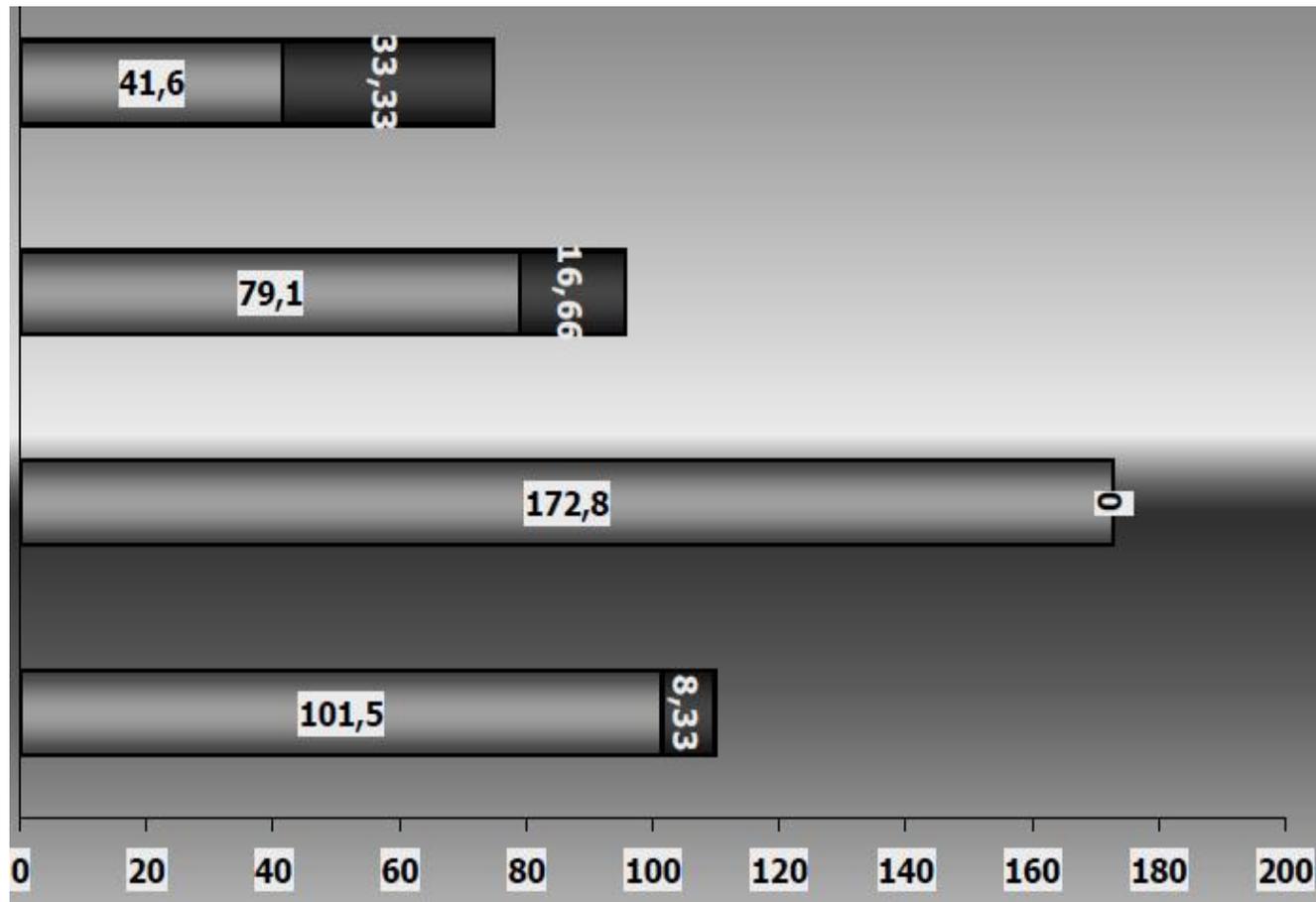
Presentation of individual weight evolutions of **T3 group**
(dose: 8 mg.kg.bw.⁻¹)





Presentation of individual weight evolutions for **Control group**





Comparative economic developments (individual weight gain) and mortality on studied groups:

T1 = 101.5 g / day;

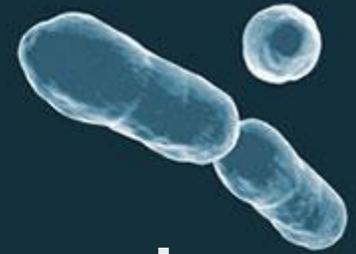
T2 = 172.8 g / day;

T3 = 79.1 g / day ;

C = 41.6 g / day

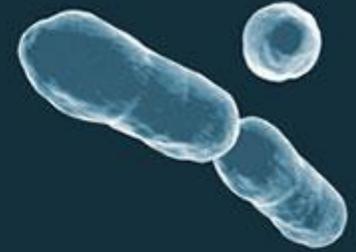


- **Swine dysentery** caused by *Brachyspira hyodysenteriae* **is a constant** in swine rearing units in the recent years.
- **Injectable form** administrations in treponemal swine dysentery are, obviously, **more reduced**, in comparison with orally administered soluble formulations.
- In our study **tiamulin fumarate** as oral administration proved to be the **most effective**.



Conclusions

- The **best results** were recorded at a concentration of **0.06 mg/ml** of drinking water administered for 5 days consecutively.
- In the therapy of treponemic dysentery single **injectable** forms are **not recommendable**; their effectiveness was considered poor average.
- It is **recommended to extend the study** for the case of preventively administered Tiamutin, as feed supplement in various concentrations.



Thank you

for

your

attention

"That's
all
folks!"



!!!

