Canola oil, organic selenium and vitamin E in steers rations and Se levels in animals and humans. **ZANETTI[1], M. A.; CORREA, L. B.[1]; SARAN NETTO, A.[1]; GARCIA[1], S.A.; CUNHA[1], J.A. . [1]University of São Paulo, FZEA, Pirassununga, Brasil,** mzanetti@usp.br ;

The objective of this research was to study the effect of canola oil, organic selenium and vitamin E inclusion in feedlot steers ration, upon Se and vitamin E serum and meat animal's levels and the effect of meat Se on human serum Se levels in the people that ate the fortified meat. Forty eight Nellore steers were allocated in four treatments (twelve animals per treatments), in individual pens: C (control); C + Antioxidants (2, 5 mg of organic selenium/kg of DM + 1000 IU of vitamin E/day); Oil (3% of canola oil in DM diet); Oil + Antioxidants (3% of canola in DM diet + 2.5 mg of organic selenium in DM diet + 1000 IU of vitamin E/day). The experimental period lasted 82 days. In the weeks 0, 4, 8 and 12 the steer blood was sampled for vitamin E and selenium analysis. At the end of the trial the animals were slaughtered for the assessment of vitamin E and selenium in the meat. Part of the meat was offered to humans during 90 days to study the effect of selenium and vitamin E in the meat on human blood serum. Statistical analysis was for a completely randomized design using the mixed procedure (SAS). The selenium supplementation in steers ration increased ($P < 0.01$) the selenium serum levels and the selenium meat levels ($P < 0.001$). The vitamin E was not yet analyzed. In the supplemented steer meat, the selenium increased from 39.3 µg/kg in the control group to 667 µg/kg in the group that received selenium, vitamin E and canola oil in the ration. At the end of the trial, the selenium blood levels in the steers were 42 µg/mL for the control and the oil groups, 105 µg/mL for the antioxidant group, and 103 µg/mL for the antioxidant plus the oil group. The selenium in the meat increased the human serum selenium ($P< 0.05$). It was concluded that the selenium supplementation during 82 was enough to increase significantly the selenium in the steers serum and meat. People who ate meat with selenium during 45 days had higher serum selenium levels.