

Impact of Bioplex[®] and Sel-Plex[®] supplementation on semen production in Canadian boars

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The effects of addition of organic trace minerals (Bioplex[®] and Sel-Plex[®]) on boar semen production was addressed in a commercial boar stud in southern Alberta. Boars were allocated to two treatments (control and Bioplex[®]/Sel-Plex[®]) by age and breed. The control diet contained 130, 60, 35, 125 and 0.3 ppm of zinc, copper, manganese, iron and selenium, respectively, with all supplemental traces from inorganic sources. The Bioplex[®]/Sel-Plex[®] diet contained an additional 100, 10, 20, 30 and 0.3 ppm of zinc, copper, manganese, iron and selenium, respectively, from organic sources. Data were collected per normal management practices for semen volume (ml), concentration (cells/ml), motility score, quality, and number of tubes over 4 consecutive months. From the control group, 40 boars completed the study while data from 34 boars were available from the Bioplex[®]/Sel-Plex[®] treatment. Data were analyzed using the GLM procedure of SAS with pre-treatment measures used as a covariant. When the mean values for the 4-month test period were compared, there were no treatment differences in semen volume (154.9 vs. 158.0 ml; P>0.10), motility (4.77 vs. 4.80; P>0.10), or quality (78.5 vs. 78.7; P>0.10). However, treatment differences were noted in semen concentration (774.3 vs. 860.2 cells/ml; P<0.05) and number of tubes (30.0 vs. 32.9; P<0.10). Adding organic trace minerals from Bioplex[®] and Sel-Plex[®] to diets of boars resulted in an 11.1% increase in semen concentration and a 9.7% increase in the number of tubes produced.

Implications: the addition of Bioplex[®] and Sel-Plex[®] organic trace minerals in swine AI Boar stud rations improves semen concentration allowing for an increased number of semen tubes to be produced per boar per collection. Improved number of tubes per collection will result in the AI Boar stud producing more tubes of semen with the same number of boars thus improving efficiency.