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SEVERE UDDER EDEMA AS A CAUSE OF REDUCED COLOSTRUM QUALITY AND MILK PRODUCTION IN SOWS – A CASE REPORT

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A piglet-producing herd in Finland suffered from inadequate milk production of sows. Investigation of the problem revealed that 35% of the sows had low water intake, constipation and excessive swelling of the udder prior and during parturition. The severity of the udder edema was graded (Grade I to III) visually and with ultrasound. The first four pairs of the mammary gland were inspected for markings of the slatted floor, redness, and unclear definition of individual glands. If none of the criteria were present the Grade was I (physiological edema), if one criteria was present the Grade was II (mild edema), and if two or more criteria were present the Grade was III (severe edema). Furthermore, the colostrum production of 34 sows (Parity 2 to 4; housed in crated (n= 19) and free (n= 15) farrowing pens) was evaluated.

Ultrasound examination showed thickened dermal and subdermal tissue, more hyperechoic lobuloalveolar tissue with enlarged blood and lymphatic vessels, and increased shadowing in udders with Grade III (all $P < 0.005$). There was a negative effect on colostrum quality ($P = 0.021$) but no effect on colostrum yield ($P = 0.656$). Furthermore, severe edemas occurred only in crated sows ($P = 0.001$) and mostly in younger sows ($P = 0.004$; Parity 2: 4/4 (n/N), Parity 3: 2/14; Parity 4: 2/16).

As a potential cause for the severe edema, a transition diet high in energy (3.8 kg/ day; 10.1 MJ/KG) and low in fiber (4.3%) was identified. As a treatment, a gradual decrease in the energy level (3.8 to 2.7 kg/day) and increase in fiber content (addition of 200 g sugar beet pulp / day) were recommended. At a control visit to the herd four weeks later, the incidence of severe udder edema was decreased and colostrum quality and milk production was improved.