

**Effect of increasing 1,25-dihydroxyvitamin D3 level on growth performance and mineral status in wean**  
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Vitamin D3 is involved in calcium (Ca) and phosphorus-(P) absorption and homeostatic regulation. This tolerance experiment was conducted to evaluate increasing dietary levels of 1,25-Dihydroxyvitamin D3 glycosides in seventy 28-day old weaned piglets during 6 weeks. Two basal basal diets (9.7 and 5.5 g Ca and P / kg diet and 500 U exogenous phytase) were formulated to contain 1000 (A) or 2,000 (B) IU vitamin D3. Diet A was added with 0 and 0.5 g PAN / kg diet (PAN, Panbonis HVD, Herbonis, Switzerland). Diet B was added with 0, 0.25, 0.5, 1.0 and 2.0 g PAN / kg diet. PAN contained 10 µ 1,25-dihydroxyvitamin D3 glycosides / g from *Solanum glaucophyllum*. After 6 weeks, all animals were in good health. Neither body weight nor daily weight gain were affected ( $P > 0.05$ ) by diet. Blood samples were collected weekly. Plasma Ca increased with 2.0 g PAN / kg diet versus control A ( $P < 0.05$ ), but not control B ( $P > 0.05$ ). On week 2, all doses of PAN increased plasma P compared to control A ( $P < 0.05$ ). At the end, plasma P was lower ( $P < 0.05$ ) with 2.0 g PAN / kg diet versus control A. Bones (metacarpus) were collected from animals fed control A and B and 1.0 and 2.0 g PAN / kg diet. Bone breaking strength ( $P < 0.05$ ), ash ( $P < 0.10$ ) and P ( $P < 0.10$ ) contents were reduced when 2.0 g PAN / kg diet were fed. The present data indicate that 1) 1000 IU vitamin D3 and 0.5 g PAN / kg diet was equivalent in growth and plasma values than 2000 IU vitamin D3; 2) 2.0 g PAN / kg diet resulted in 20% increased plasma Ca, 13% lower plasma P, 17% lower bone breaking strength and 4% lower bone P which indicates first signs of possible adverse effects (e.g. soft tissue calcification); 3) no adverse effect is to be expected in piglets fed levels up to 1 g PAN / kg diet with recommended Ca, P and vitamin D contents.