

# ORAL-PRO™

## Vitamin D3 *plus* E Dispersible Liquid Concentrate

Highly Concentrated Vitamin D3 *plus* E Supplement for Oral Use in Baby Pigs  
and in Drinking Water of Nursery and Finishing Pigs

### FEATURES AND BENEFITS

- Flexible dosing as a 1 mL oral product for baby pigs or diluted in a stock solution at 2–4 ounces per gallon for administration to nursery and finishing pigs.
- Unique, water-stable emulsion for easy mixing in water.
- Minimum 40,000 IU per mL of vitamin D3 to meet the piglets' needs in the farrowing crate.
- Provides vitamin E to reduce the oxidative effects of iron dextran when given at processing.



16 OZ. BOTTLE — REORDER NO: 21012  
1 GALLON — REORDER NO: 21011

**Aurora Pharmaceutical, LLC**  
NORTHFIELD, MINNESOTA 55057  
888-215-1256  
www.aurorapharmaceutical.com



MANUFACTURED IN THE USA

ORAL-PRO™ Vitamin D3 <i>plus</i> E					5-Day Treatment	
Dose	Blood Levels Day 0, 5, 12 and 19 by IU Using RIA				Total Cost/16# Pig	
	Day 0	Day 5	Day 12	Day 19	Pints	Gallons
2 oz./gallon	14	44	31	32	1.8¢	1.6¢
4 oz./gallon	14	63	45	37	3.5¢	3.3¢

**INDICATIONS:** For use in swine as a supplement during periods of reduced feed intake or stress.

**GUARANTEED ANALYSIS:**

Vitamin D3, min ..... greater than or equal to 40,000 IU/mL  
Vitamin E, min ..... greater than or equal to 100 IU/mL

**INGREDIENTS:** Water, PEG 400 MO, propylene glycol, di-alpha tocopheryl acetate, polysorbate 80, ethyl lactate, vitamin D3, potassium sorbate, BHT.

**DIRECTIONS FOR USE IN BABY PIGS:** Administer 1 mL dose orally at processing. Each 1 mL dose delivers a minimum of 40,000 IU of Vitamin D3 and 100 IU of Vitamin E activity, suitable as a one-time supplement in baby pigs.

**DIRECTIONS FOR USE IN NURSERY AND FINISHING PIGS:** Mix 2–4 oz. of ORAL-PRO™ Vitamin D3 *plus* E liquid per gallon of stock solution, delivered at 1 oz. per gallon of drinking water in nursery and finishing pigs as a supplement. Use for 5–7 days.

**WARNINGS:** For oral animal use only. Keep out of reach of children. Store at 15°–30° C (59°–86° F). Shake well before using. Keep out of direct sunlight. Duration of use not to exceed 7 consecutive days.

REORDER NO: 21012 TAKE TIME OBSERVE LABEL DIRECTIONS

PACKAGED BY:  
Aurora Pharmaceutical, LLC  
NORTHFIELD, MN 55057  
888-215-1256  
www.aurorapharmaceutical.com  
IN 50-1204 REV 01

For Oral Animal Use Only

16 fl. oz. (473 mL)

NDC 51072-059-16

## ORAL-PRO™

### Vitamin D3 *plus* E Dispersible Liquid Concentrate

Highly Concentrated Vitamin D3 *plus* E  
Supplement for Oral Use in Baby Pigs  
and in Drinking Water of  
Nursery and Finishing Pigs



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**INDICACIONES:** Para su uso en cerdos como un suplemento durante periodos de ingesta de alimento reducida o estrés.

**ANÁLISIS GARANTIZADO:**

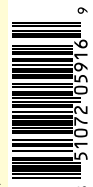
Vitamin D3, min ..... mayor o igual a 40,000 IU/mL  
Vitamin E, min ..... mayor o igual a 100 IU/mL

**INGREDIENTES:** Agua, PEG 400 MO, propylene glycol, di-alpha tocopheryl acetate, polysorbate 80, ethyl lactate, vitamin D3, potassium sorbate, BHT.

**INSTRUCCIONES PARA EL USO EN LOS CERDOS DEL BEBÉ:** Administrar 1 mL por vía oral en dosis de procesamiento. Cada dosis de 1 mL proporciona un mínimo de 40,000 UI de vitamina D3 y 100 UI de actividad de la vitamina E, adecuado como complemento de una sola vez en los lechones.

**INSTRUCCIONES PARA EL USO EN LOS VIVEROS Y LOS CERDOS DE ACABADO:** Mezclar 2–4 oz. de ORAL-PRO™ Vitamin D3 *plus* E líquido por galón de solución stock, entrega en 1 oz. por galón de agua potable en vivero y cerdos de cebo como complemento. Uso durante 5-7 días.

**ADVERTENCIAS:** De animales por vía oral únicamente. Mantener fuera del alcance de los niños. Almacenar a 15°–30° C (59°–86° F). Agite bien antes de usar. Manténgase fuera de la luz solar directa. La duración del uso de no más de 7 días consecutivos.



### ORAL-PRO™ Vitamin D3 plus E

#### Aurora Pharmaceutical Research Summary

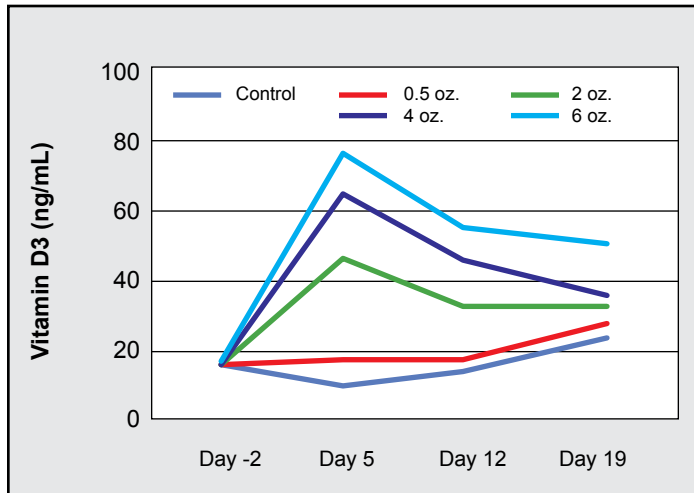
Vitamin D supplementation in pigs has become nutritionally important due to the lack of sunlight in modern pork production. D3 is the preferred form of vitamin D over the plant-based D2, which has poor bioavailability in pigs. Many supplemental vitamin D products have recently emerged on the market. ORAL-PRO™ Vitamin D3 plus E is one such product. It is easy to give as a 1 mL pump in the mouth of the piglet or delivered in the drinking water to nursery age pigs. Comparison with competitor products given at label directions showed ORAL-PRO Vitamin D3 plus E was superior in raising and maintaining higher serum blood levels (data not shown). Aurora Pharmaceutical has the following research and field trial data to support our dosage recommendation of 2 to 4 oz. per gallon stock solution to maintain normal (25–30 ng/mL)<sup>1</sup> vitamin D3 blood levels. In both studies below, typical nursery ration levels of vitamin D3 were present in the feed.

#### Dose titration study nursery

Table 1. Average serum levels of Vitamin D3 by dose and day.

Serum (ng/mL)	Dose				
	Control (0)	0.5 oz.	2 oz.	4 oz.	6 oz.
Day -2	14.15	13.87	14.73	13.17	13.34
Day 5	10.95	16.72	44.27	63.34	77.38
Day 12	13.00	17.54	31.68	45.26	52.61
Day 19	21.89	24.51	31.77	36.61	47.33

#### Nursery pig vitamin D3 serum levels



#### Take home message from this research:

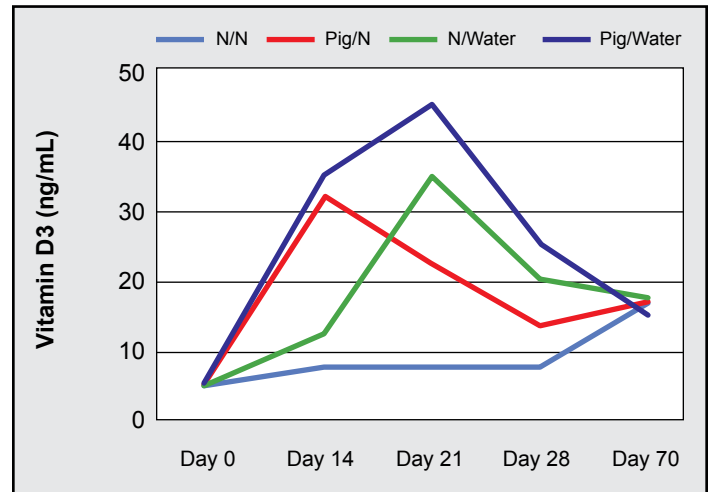
- Vitamin D3 in feed does not get pigs to normal blood levels at a time in the nursery when the immune system is challenged through vaccination and/or disease organisms.
- Dose recommendations on other products do not result in normal vitamin D3 levels. (Data not shown.)
- ORAL-PRO Vitamin D3 plus E does reach normal blood levels at the recommended dose of 2–4 oz./gallon stock solution metered at 1:128.
- Optimal dose levels (2–4 oz./gallon) depend on the starting level of serum vitamin D3 in the wean pig. Our recommendations are:
  - a. Less than 9 — use 4 oz./gallon of stock solution for 7 days.
  - b. 9 to 14 — use 3 oz./gallon of stock solution for 7 days.
  - c. greater than 14 — use 2 oz./gallon of stock solution for 7 days.

#### Field study piglet and nursery

Table 2. Average serum levels of Vitamin D3 by treatment and day.

Serum (ng/mL)	Treatment (N=nothing, Pig=1 mL dose, Water=2 oz./gal. stock solution)			
	N/N	Pig/N	N/Water	Pig/Water
Day 0 (1 week old)	5.58	4.41	5.20	5.49
Day 14 (weaning)	8.87	31.51	12.84	35.16
Day 21	8.95	23.71	35.82	44.91
Day 28	8.22	14.86	20.50	25.77
Day 70	17.66	17.74	18.16	16.18

#### Piglet and nursery vitamin D3 serum levels



#### Take home message from this field trial:

- Vitamin D3 in feed does not get pigs to normal blood levels at a time in the nursery when the immune system is challenged through vaccination and/or disease organisms.
- Giving vitamin D3 to piglets in the farrowing crate and to nursery pigs at arrival to the nursery produced the best results.
- Giving vitamin D3 at weaning only should be given at 2–4 oz. per gallon stock depending on the piglets starting level of D3.
- If you can only give ORAL-PRO Vitamin D3 plus E in one place, the nursery is the best place to use it.
- Vitamin D3 is essential for a healthy immune system and bone development.<sup>2</sup> The correct serum level and bioavailability during the transition from the sow to grow-finish may be underestimated as the pig meets some of its greatest performance challenges such as disease exposure, vaccination and nutrient diversification.

1 Goff, JP; Horst, L; Littledike, ET, Effect of sow vitamin D status at parturition on the vitamin D status of neonatal piglets. J Nutr. 1984. 114:163–169.

2 NRC-Nutrient requirements of swine: 11th revised edition. 2012. The National Academies Press (pg 107–108).