

Response of Pigs to Streptomycin.* (18313)

R. O. NESHEIM AND B. CONNOR JOHNSON.

From the Division of Animal Nutrition, University of Illinois, Urbana.

Using *ad libitum* feeding Moore *et al.*(1) found that streptomycin produced a growth response in chicks fed a casein-synthetic type ration. Stokstad *et al.*(2) using a semi-practical ration supplemented with vitamin B₁₂ found that a growth response by chicks was obtained from a fermentation product of *Streptomyces aureofaciens* and a similar growth response was obtained from crystalline aureomycin hydrochloride. Jukes *et al.*(3) reported that aureomycin-hydrochloride added to a corn-peanut basal ration supplemented with vitamin B₁₂ produced approximately a 50% increase in average daily gain of weanling pigs and a reduction in the incidence of diarrhea. Luecke *et al.*(4) reported similar results with streptomycin when added to a corn-soybean meal ration.

Experimental. Four pairs of 2-day-old pigs were used to study the effect of adding streptomycin to a complete "synthetic milk" ration for baby pigs. The basal ration was the 30% alpha protein "synthetic milk" previously described by Neumann *et al.*(5). Vitamin B₁₂ was injected intramuscularly at

TABLE I. Effect of Streptomycin on Growth and Feed Utilization of Baby Pigs (Pair-fed for 49 days).

	Basal diet	Basal + streptomycin
Avg initial wt, kg	1.50	1.51
Avg final wt, kg	16.54	18.27
Avg daily gain, kg	.306	.342*
Live wt gain/kg dry matter consumed, kg	.71	.80*

* Highly significant over the basal diet. $P < 0.01$.

the rate of 0.8 µg per kg of body weight per day. Two grams of sulfathalidine were added per liter of milk. The technic of care and feeding of the pigs has been described by Johnson *et al.*(6). The pigs were pair-fed equal feed intakes for 7 weeks. One pig of each pair received the basal diet, while the other received the basal diet plus 500 mg of crystalline streptomycin per kg dry matter. The results are summarized in Table I.

Summary. The addition of 500 mg per kg dry matter of streptomycin to a nutritionally adequate "synthetic milk" containing 2 g of sulfathalidine per liter produced a highly significant increase in the average daily gains and a highly significant reduction in the amount of dry matter required per kilogram body weight gain.

We are indebted to Merck and Company, Inc., Rahway, New Jersey, for streptomycin and water soluble vitamins; to Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York, for folic acid; and to Sharp and Dohme, Inc., Glenolden, Pennsylvania, for sulfathalidine.

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* A preliminary report of this work was made at the Philadelphia meeting of the American Chemical Society, April 11, 1950.

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Received October 30, 1950. P.S.E.B.M., 1950, v75.