

EFFECT OF LIME TREATMENT OF CORN ON THE AVAILABILITY OF NIACIN FOR CATS AND SWINE. J. Edgar Braham, Abel Villareal and Ricardo Bressani. Institute of Nutrition of Central America and Panama (INCAP), Guatemala, C.A.

A diet for cats containing 52% of either corn or lime-treated corn, 8% casein and 15% gelatin was supplemented with tryptophan, niacin or both. Since the cat cannot convert tryptophan to niacin, addition or withdrawal of the amino acid from the diet did not affect urinary n-methyl nicotinamide excretion significantly, but it did increase or decrease nitrogen retention. Withdrawal of niacin, in the presence of tryptophan, decreased n-methyl nicotinamide excretion without affecting nitrogen retention. The magnitude of the observed changes was the same for the raw corn and lime-treated corn diet. Weanling pigs were fed all-corn or lime-treated corn diets supplemented with tryptophan and lysine but no niacin. Maintaining a constant tryptophan level and decreasing step-wise the lysine level, increased proportionally the urinary n-methyl nicotinamide excretion. Decreasing the tryptophan level gradually, but keeping supplementary lysine constant, lowered the n-methyl nicotinamide excretion. The withdrawal of either amino acid decreased nitrogen retention. Results were similar with the corn or lime-treated corn diet. The effect of other essential amino acids is being studied.