

**128 Nutritional values of carbohydrate sources fed to pigs.** S. K. Cervantes-Pahm\* and H. H. Stein, *University of Illinois, Urbana.*

Three experiments were conducted to determine the digestibility of GE and nutrients and the caloric value in carbohydrate sources fed to growing pigs. In Exp. 1, the caloric value of resistant starch (RS 60 and RS 70), soluble corn fiber (SCF), pullulan and maltodextrin were determined. The ME for RS 60 (1,903 kcal/kg), RS 75(1,677 kcal/kg), and SCF (1,712 kcal/kg) were less ( $P < 0.05$ ) than for maltodextrin (3,344 kcal/kg) and pullulan (2,766 kcal/kg), and pullulan contained less ( $P < 0.05$ ) ME than maltodextrin. In Exp. 2, the effect of RS 60, RS 70, SCF, pullulan and cellulose on apparent ileal (AID) and apparent total tract (ATTD) disappearance of GE, CP, and total dietary fiber (TDF) and on standardized ileal (SID) and standardized total tract (STTD) disappearance of TDF were determined. Results indicated that the AID of GE and DM was reduced ( $P < 0.05$ ) by addition of fiber to the diets, but the ATTD of GE and DM was not different among diets. The addition of cellulose and pullulan, but not RS 60, RS 75, and SCF reduced ( $P < 0.01$ ) the AID of CP. The average ileal and total tract endogenous losses of TDF were calculated as 25.25 and 42.87 g/kg DMI, respectively. The SID of TDF in diets containing RS 60, SCF, and pullulan were greater ( $P < 0.01$ ) than the SID of TDF in the cellulose diet, but the STTD of the SCF diet was greater ( $P < 0.05$ ) than for the cellulose and pullulan diets. The caloric value and the AID and ATTD of energy and nutrients in yellow dent corn, Nutridense corn, dehulled barley, dehulled oats, polished rice, rye, sorghum, and wheat fed to growing pigs were determined in Exp. 3. The AID of GE, OM, and total carbohydrates was greater ( $P < 0.001$ ) in rice than in all other cereal grains. Although dehulled oats, Nutridense corn, and wheat contained more TDF, the AID of starch in these grains was not different from rice. Dehulled oats had the greatest ( $P < 0.001$ ) ME (kcal/kg DM) whereas rye had the least ME (kcal/kg DM) among the cereal grains. Results indicated that the caloric value and the AID of starch were not influenced by the concentration of TDF in the cereal grains.

**Key Words:** carbohydrates, digestibility, total dietary fiber