An alternative substrate in the biogas or bioethanol production may be the sugar containing juice obtained after fractionation of beets into a juice used for fermentation and into a pulp used for feeding. The objective of the present experiment was to evaluate the fresh pulp of top and root from sugar (Angus) and fodder (Colosse) beets as feed for pigs and ruminants. The pulp was prepared by a cold mechanical pressing. Two digestibility experiments were carried out according to the difference method. In experiment 1, 30 sows were housed individually in metabolic cages for 12 d, and urine and feces were collected during the last 7 d. The daily ration consisted of either root or top pulp combined with a basal diet. In experiment 2, 25 wethers were housed individually, and feces were collected during the last 7 d of the experiment. The daily ration was either root or top pulp combined with hay. The chemical composition of the pulp of the 2 beet varieties varied only little. However, the top fraction contained more ash (150 vs. 34 g/kg DM), crude protein (175 vs. 53 g/kg DM) and total dietary fibre (460 vs. 206 g/kg DM) compared to the root fractions. The in vitro and the apparent digestibility of sows and wethers were higher for root pulp than for top pulp, whereas there were no differences between the two beet varieties. The fresh root pulp may be considered a good energy source for both sows and ruminants, whereas the fresh top pulp may serve as a satiety-enhancing feedstuff for sows. The protein value of both root and top pulp is considered to be low.