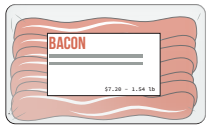
ESTIMATED PRODUCTION AND PROCESSING

AGGREGATED DATA

data source: FAOSTAT (2010–2018)
mean ± std

(A)

estimated global pork consumption



$$E_{pork} \approx 0.05 \cdot E_{day} \approx 100 \text{ kcal} \cdot \text{day}^{-1}$$

$$\rho_{pork} \approx 2 \text{ kcal} \cdot \text{g}^{-1}$$

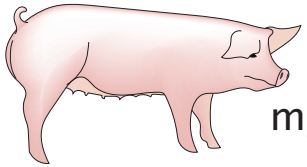
$$m_{pork} \approx \frac{100 \text{ kcal}}{\text{day}} \cdot \frac{1 \text{ kg pork}}{2000 \text{ kcal}} \cdot \frac{365 \text{ days}}{1 \text{ year}} \cdot 7 \cdot 10^{9} \text{ people}$$

$$\sim 10^{10} \text{ kg} \cdot \text{year}^{-1} \sim 100 \text{ Mt} \cdot \text{year}^{-1}$$

→ global pork production ≈ 115 ± 5 Mt · year⁻¹

(B)

total processed swine population



$$m_{pork} \sim 10^{10} \text{ kg} \cdot \text{year}^{-1}$$

$$m_{edible} \approx 75 \text{ kg} \cdot \text{pig}^{-1}$$

$$N_{pigs} \approx \frac{10^{10} \text{ kg}}{\text{year}} \cdot \frac{1 \text{ pig}}{150 \text{ kg}} \sim 2 \cdot 10^{9} \text{ pigs} \cdot \text{year}^{-1}$$

→ global processed swine population ≈ 15 ± 5 · 10⁸ pigs · year⁻¹