



Kittitas County

WASHINGTON STATE UNIVERSITY
EXTENSION

Calculating pig gain and fair weights

--Tip Hudson, WSU Extension range and livestock specialist

Swine exhibitors growing and preparing a pig for the Kittitas County Fair need to be able to estimate how much daily weight gain is necessary to either make the minimum weight for market hogs or to avoid exceeding the maximum weight. It can be difficult to regulate weight gain, but knowing a target average daily gain is a necessary starting point. Here are our starting assumptions:

- Fair weights and carcass contest weights are 230-300 pounds.
- Hog of Merit requires 1.7 pounds average daily gain.
- There are 80 days between swine weigh-in and fair weigh-in.

Scenario 1: Light pig needs to make fair weight

A common scenario is a pig that is light at June weigh-in. How much does it need to gain in order to make a minimum fair weight? These are relatively simple calculations. Let's say a 50-pound pig needs to be 230 pounds. $230-50=180$ pounds of gain required to make weight. There are 80 days on feed this year between spring weigh-in and fair. $180/80=2.25$ pounds average daily gain. This is the minimum rate of gain necessary to reach 230 pounds by fair.

Scenario 2: Heavy pig needs to stay under fair weight ceiling

Let's say a 190-pound pig at weigh-in needs to only be 300 or less at fair. This pig can only gain 110 pounds in the same 80 days ($300-190$). $110/80=1.38$ pounds per day. Note that the minimum ADG to receive Carcass of Merit is 1.7. If this pig gains 1.7 lbs/day, she will weigh $190+(1.7 \times 80)$, or 326. This exhibitor can't have it both ways; the clear decision here is to make fair weight in order to be able to sell through the Sale. At the higher weight, achieved by the higher rate of gain, the animal is still ineligible for the carcass contest because she's too heavy. This will require limit-feeding your pig and monitoring weight gain. Keep in mind it is unethical and abusive to not feed your pig at all. The key is to feed but to regulate the quantity and type of feed the pig eats.

Scenario 3: Moderate pig will make fair weight but wants to achieve carcass contest ADG

A 100-pound pig at weigh-in has some flexibility in its weight gain trajectory. If one wishes to calculate a target weight that will ensure the animal has made the minimum gain necessary for the Carcass of Merit, we calculate this way: $100+(1.7 \times 80)=236$. To recap, if the pig weighs 236 at fair, she will have made enough gain to meet the ADG requirements for the carcass contest. Anything higher than that is safe up to . . . $(300-100)/80$. . . which is 2.5 pounds per day. To recap here, if the pig gains more than 2.5 pounds per day she will be heavier than 300 pounds and ineligible for the market class, the sale, and the carcass contest. Bacon anybody?