Cow Magnet Race

As the cow magnet falls through the copper tubing it induces a current in the copper to oppose the change in flux through that part of the tube. Two ways of explaining why the magnet slows down are as follows:

1) the current produced in the tube is such that it produces a B field to oppose the change in flux through that part of the tube. Since the B field is increasing downward, the induced B field will be upwards. Thus there are two opposing B fields much like two oppositely faced bar magnets. The magnet is slowed by the action of the opposing B fields.

2) A possibly simpler way of explaining the slowing of the magnet is through energy considerations. The B field of the magnet produces current as it moves through the tube. It takes energy to do this so that some of the kinetic energy of the magnet's fall is used up in I^2R losses in the copper tubing.