A simple example

First we need some terminology because *assests* and *options* etc. may not be familiar terms.

Suppose for example that you go to the Urbana Farmer's Market and you agree to buy $\$100$ worth of sweet corn at the end of the day for $\$1$ per ear of corn. This is called a forward contract or *forward*. During the day, as the price of the corn fluctuates (due to demand or competition or whatever) this affects your forward.

For example, if the current value of corn at noon is say $\$2$, then you could by $\$200$ of corn for $\$100$.

This works the other way as well. If the value goes down, then your forward is worth less.

This is interesting, but there are questions

- What determines the *value* of the corn? (...lots of things)
- How stable is this value?
- How can we determine the risk or payoff of agreeing to this forward?

There's another element to this, called an *option*. We could purchase the option to buy or sell corn at different prices. The option is exactly what it seems: it gives the hold the option to buy or sell an asset at a certain price on a certain date. Therefore if you also have an option to buy, then a reduced price in corn would increase the value of your option.

This is called *hedging*.

Ok, what do do with this. Let's simulate a scenario knowing what we did with dice.