

1) Yield Farming Questions (feel free to include assumptions if you need any)

Given that

BNB/USDT price = 300

You have 100k USDT to farm

You farm all of it in on PancakeSwap, BNB-USDT

Questions....

- a) What is your BNB delta right after you create the BNB-USDT LP?
- b) What will be your BNB delta if BNB/USDT price moves to 330?
- c) What is the value of your LP tokens after the move?
- d) If you had hedged the BNB delta thru BNB Perp futures at an exchange at 300, what PnL would the hedge have given you?
- e) How much \$ collateral do you think is reasonable to put with the exchange to avoid liquidation, assuming that BNB/USDT volatility is 10% per day?

2) Programming

Can you back test above yield farming strategy, i.e. yield farming on 100k USDT worth of BNB-USDT while hedging your BNB delta through BNB Perp futures? To simplify, say we want to see how this strategy would have performed if we put in 100kUSD in it on 1june21 till 30jun21, let's assume constant APR of 50%.