

# Pass the salt

Few people bothered G. M. White when he was experimenting with corn and soybeans. But ever since he began heating up his popcorn popper, his laboratory has been a popular meeting place for fellow scientists in search of a mid-afternoon snack.

White's research, begun a couple of years ago at the request of the National Popcorn Growers Association, is among the most popular ever undertaken at the University of Kentucky's agricultural engineering lab. "We have never had trouble getting rid of our experimental results," White declared.

Kentucky is the nation's sixth largest popcorn producing state, contributing about 3.5 percent of the country's annual yield. Income from popcorn amounted to just under \$1-million for Kentucky farmers in 1978.

White has been trying to improve popcorn's "popability" — how much a kernel expands when heated — by experimenting with kernels containing various

amounts of moisture and dried at different temperatures. On experiment days, he may pop as much as 15 batches of the fluffy white stuff.

One reason scientists haven't found the ideal popping conditions, White said, is that no one knows exactly why popcorn pops and other types of corn do not.


White has experimented with popcorn with moisture as high as 26 percent and drying temperatures as high as 160 degrees F. Ideally, however, popcorn should be harvested with around 16 percent moisture and dried until the moisture level is around 13 to 14 percent, he said. November and December are good months to harvest corn that has the proper moisture content for good popping, he added.

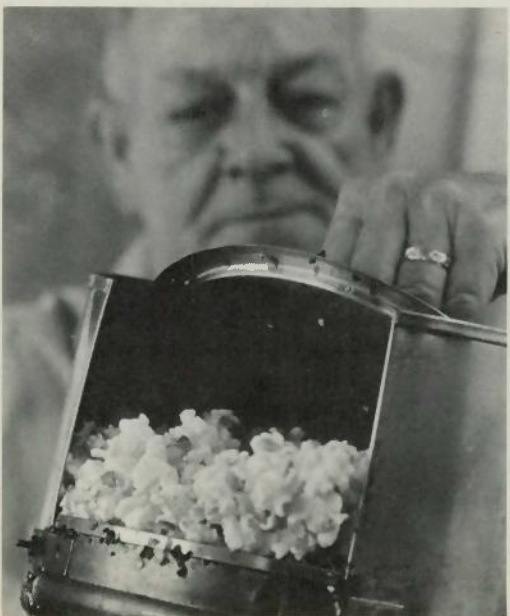
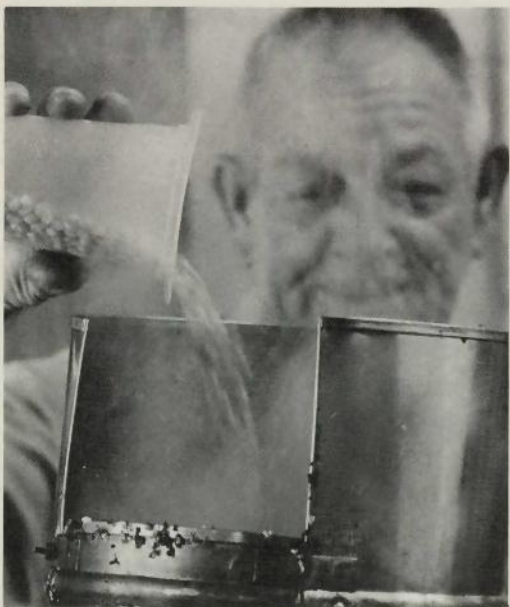
Home popcorn growers can dry their corn fairly well by simply spreading out the ears in a dry area for about three weeks, White said. Farmers who use high temperature dryers, however, must be careful not to dry their corn too fast, he

said. This can produce stress cracks in the corn, which can reduce popping by as much as 20 percent.

"The popcorn you buy in the store is likely to be too dry rather than too wet," White said.

Once the proper moisture level is reached, popcorn should be stored in a sealed container. For home use, White recommends keeping the corn in a glass jar inside a refrigerator.

If you don't have equipment for testing moisture levels, you can get an indication by popping some of the corn, White said. If it pops slowly and not very large it is probably too wet and should be allowed to dry further. If the corn pops fast and is still small it is probably too dry. Adding a tablespoon of water to a quart of popcorn will raise the moisture about 1.5 percent. After the water is added, the container should be sealed and turned over or shaken several times the first day, then left for several days before the corn is popped. 



*Assistant Ted Garrett knows the secret for successful corn-popping. Start with 50 millimeters of oil, add 150 grams of corn and wait for the results. Project director White (opposite page) says corn pops best at 400-450 degrees F., and should be kept in an air-tight container. Sometimes he pops 15 batches a day but seldom has trouble getting rid of the results. Hmmm, hmmm. As the man said, please pass the salt.*

*Photographed  
by Christina Freitag*