

# The Effect of Drying Time on the Spread of Toxic Fungi

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### Introduction

Toxic fungi is one of the problems which a farmer face during preparation of their crops. The food affected with toxic fungi is dangerous to the health of consumer. all crops which needs to be dried before storage and supplied to the consumer is the crops mostly affected with toxic fungi example cassava, maize ,fruits and other cerial crops.

### AIMS.

The aims of the project is to help farmer to know that the time taken to dry the crops has impact on the growth of fungi on their crops products which led to toxic fungi



### Method

We opt to use practicle methods so as to see the effects of time taken to dry crops relate to the growth of fungi which spreads toxic to the food.

material needed. 1. cassava 4kg  
2.digital balance  
3.knife  
4.mkeka  
5. electric dryer/forced drying (artificial)  
6.sun/natural way of drying crops

First steps was to peel off the cassava and chops to small pieces and get 4kg of cassava.

steps 2 was to divide two portion of cassava each weigh 2kg. the first portion was dried using sun and the second portion was dried using electric dryer/forced dryer.

TIME (hours)	DRYERMASS (gm)	SUNMASS (gm)
0	2000	2000
4	1767	1996
8	1420	1903
12	792	1817
216	-----	798

### Procedure

Note. the mass of cassava reduce as the product get drying

The electric dryer use only 12 hours to dry the cassava from 2000g to 792g which is equivalent to 60.4% of water removed.

Drying through sun took about 9 days to reach 798grams of dried cassava.

### observation during drying.

The color of cassava slice dried using electric dryer was more brighter than those dried on sun . The cassava dried on sun make a layer of dark green substance.

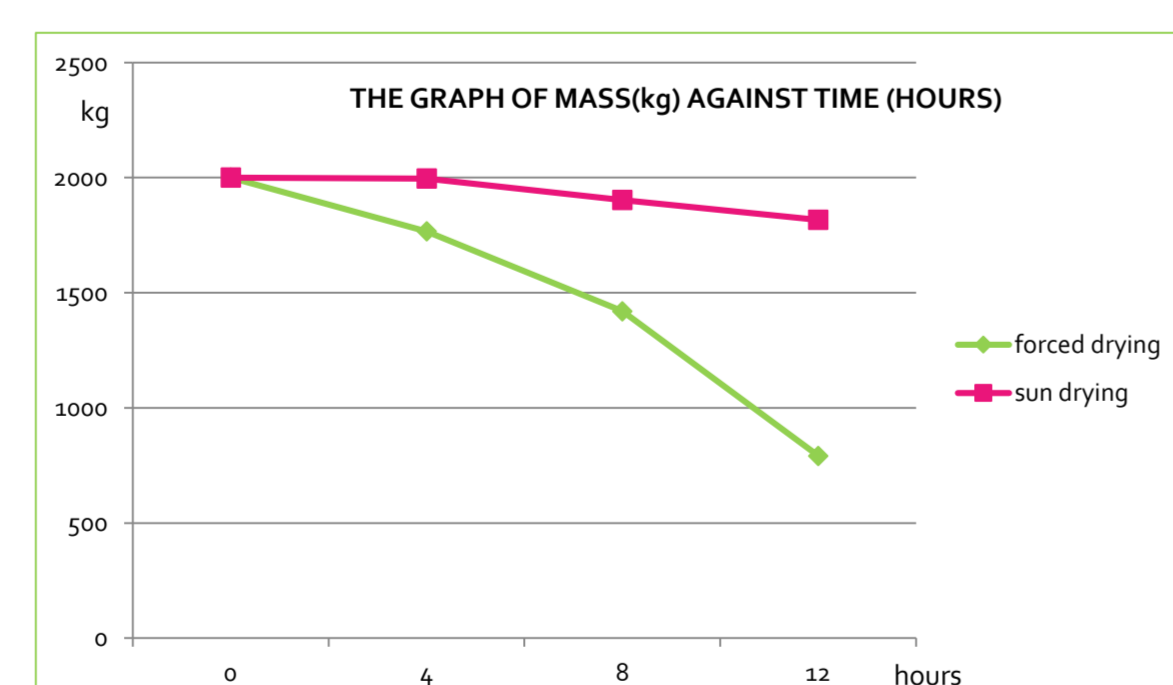
### observation during storage

The last steps was preservation of already dried cassava slice. after two weeks of storing dried slice on open container , we observed that the cassava dried by sun start to grow the mold but that dried by electric dryer are still brighter.

### Results

it seems that the drying cassava through sun take more time. during this time the mold contaminate the products thus why even when stored in open container the mold start to develop easily.

drying through electric dryer is more fast than sun. fast drying do not allow the mold to develop thus why it can be stored more longer than those drying on slow dryer.



### Conclusions

From the experiment it shown that the toxic fungi in food products can be reduced by drying the crops more fast than taking too long for the crop to dry.

### Acknowledgments

we thanks our teachers for their support especially Mr. B. SUTTA and our parents for allowing us to participate in this project competition