

The relationship between Kaoliang and Wheat and Orchid Tree

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Team photo



Background Research

After 1949, the National Revolutionary Army moved to Kinmen. In order to solve the problem of people's livelihood of the military. The commander wanted to exchange baijiu he bought from Taiwan every month for rice, and then exchange the rice for civilian Kaoliang. Kaoliang liquor brewed with Kaoliang was launched. In 1952, Kaoliang liquor was brewed. Because it is cheaper than Taiwanese baijiu, the market response is good. So the government encouraged the cultivation of sorghum. It not only solved the people's livelihood problems, but also made Kinmen Kaoliang wine famous all over the world.



Kimen kaoliang liquor INC

Summary

Kaoliang is one of Kinmen's specialties. Farmland in front of the house, sometimes is kaoliang fields, sometimes is wheat fields. In addition to, the most eye-catching view is a row of orchid trees. We guess that there must be a wonderful relationship between the Orchid trees and this patch of farmland! To better understand the relationship between this farmland and

nd the orchid trees, we decided to use photos to document the cultivation of Kaoliang, variation of Wheat and Orchid Trees in this farmland, decade to see how it affected farmers' planting habits.

Research motivation

When we were young, grandparents would always take us out for an outing, walking in the kaoliang fields and playing hide-and-seek with our neighbors. Watching them prepare the land, sow, irrigate, harvest, etc. Day after day, let's have a better cognition of Kaoliang. Therefore, we want to gain a deeper understanding of the relationship between kaoliang and Kinmen. Due to the lack of rainfall, **paddy** could not be grown. The generals stationed encouraged farmers in Kinmen to plant kaoliang in exchange for rice, making it one of the main crops in Kinmen. After maturity it can become the raw material of the Kinmen kaoliang liquor. It is also used in tourism to increase the output value of local tourism.

Research purposes

Observing the relationship between Kaoliang, Wheat, Orchid Tree and monthly precipitation.

Experimental plant

The subjects of this study are Kaoliang, Wheat and Orchid Tree

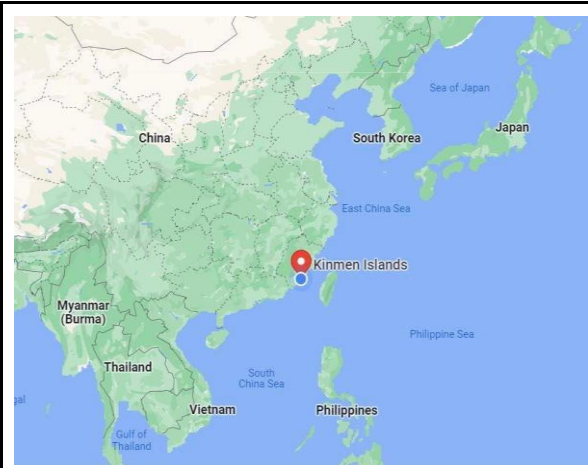

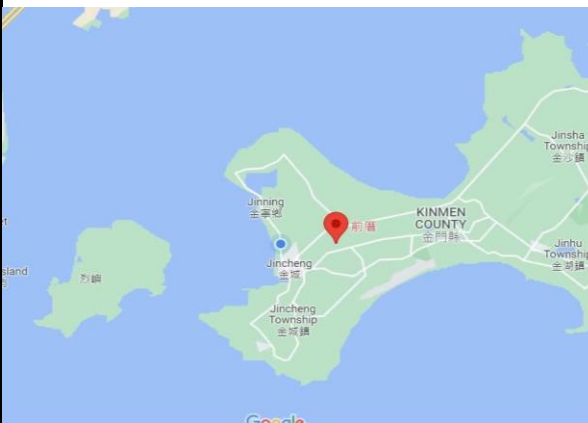
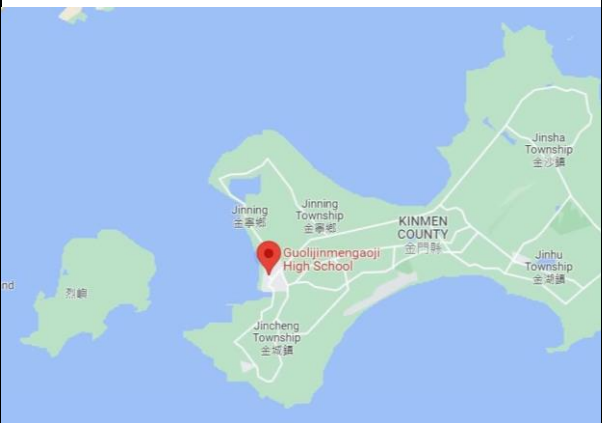
Kaoliang (Scientific name: *Sorghum bicolor*) is also known as two-color Kaoliang. It likes to be in a warm environment, drought resistant, and waterlogging resistant. The seeds are red, white, brown and other colors. Kaoliang grains can be used as food for humans and livestock, and can also be used for wine. Kinmen's autumn Kaoliang is sown from late June to early August, and harvested in October and November.

Orchid Tree (Scientific name: *Bauhinia variegata*) Orchid tree blooms after leaves fall from March to May every year. Their flowers, flower buds, tender leaves, and tender fruits are edible and medicinal, and root bark decoction can cure digestion.

Wheat (Scientific name: *Triticum*) Wheat is a temperate long-day plant with a wide range of adaptation, from 18° to 50° north latitude. The caryopsis of Wheat is one of the staple foods of human beings, which can be made into bread, fried dough sticks, etc. And serve as livestock. Wheat grass can be used as fodder or as roofing material.

Observe location

Absolute position:(24.4430046568622, 118.33427855704112)

	
Asia	Taiwan
	
Kaoliang/Wheat location in Kinmen	Orchid Trees Location in Kinmen

research method

Take pictures at a fixed location to observe its changes and record

Research result

1. We found that when Kaoliang leaves turned yellow, it was time to harvest Kaoliang; when the Orchid Tree leaves fell, the field was ready and Wheat was sown.
2. Farmland record photo



(Picture 1)10/3 Kaoliang ripening



(Picture 2)10/6



(Picture 3)10/14 Kaoliang harvest



(Picture 4)11/5 Remaining kaoliang stalks



(Picture 5)11/11 Clear kaoliang stalks



(Picture 6)11/19



(Picture 7)12/22



(Picture 8)12/29 Soil preparation



(Picture 9)1/4



(Picture 10)1/13 Sow wheat



(Picture 11)1/19



(Picture 12)1/25



(Picture 13)2/8



(Picture 14)2/15

Orchid tree documentary photos



(Picture 15)10/6 Lush foliage



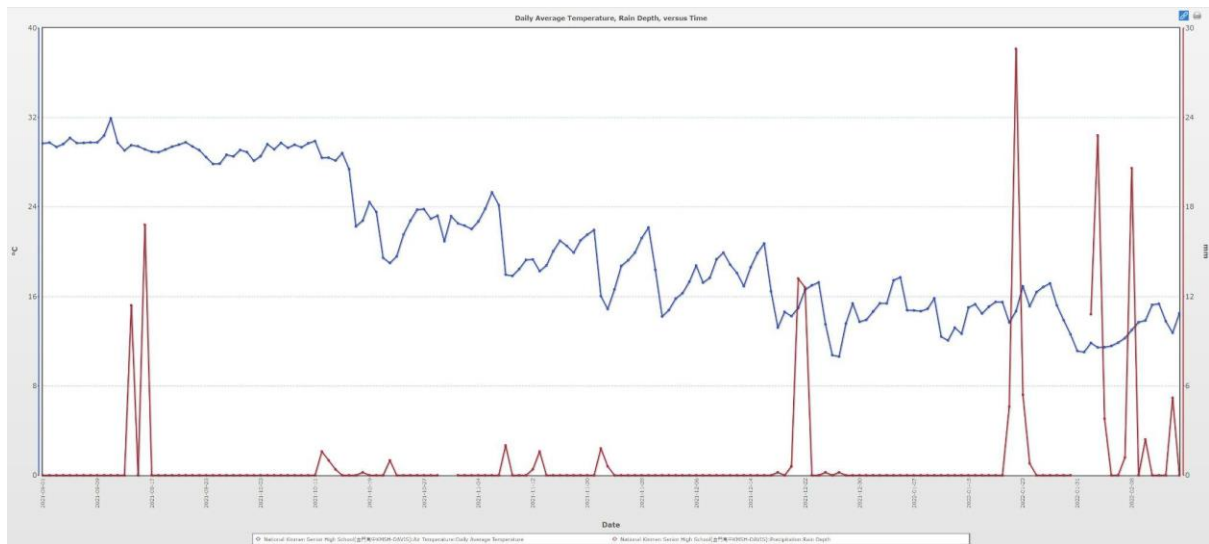
(Picture 16)11/12



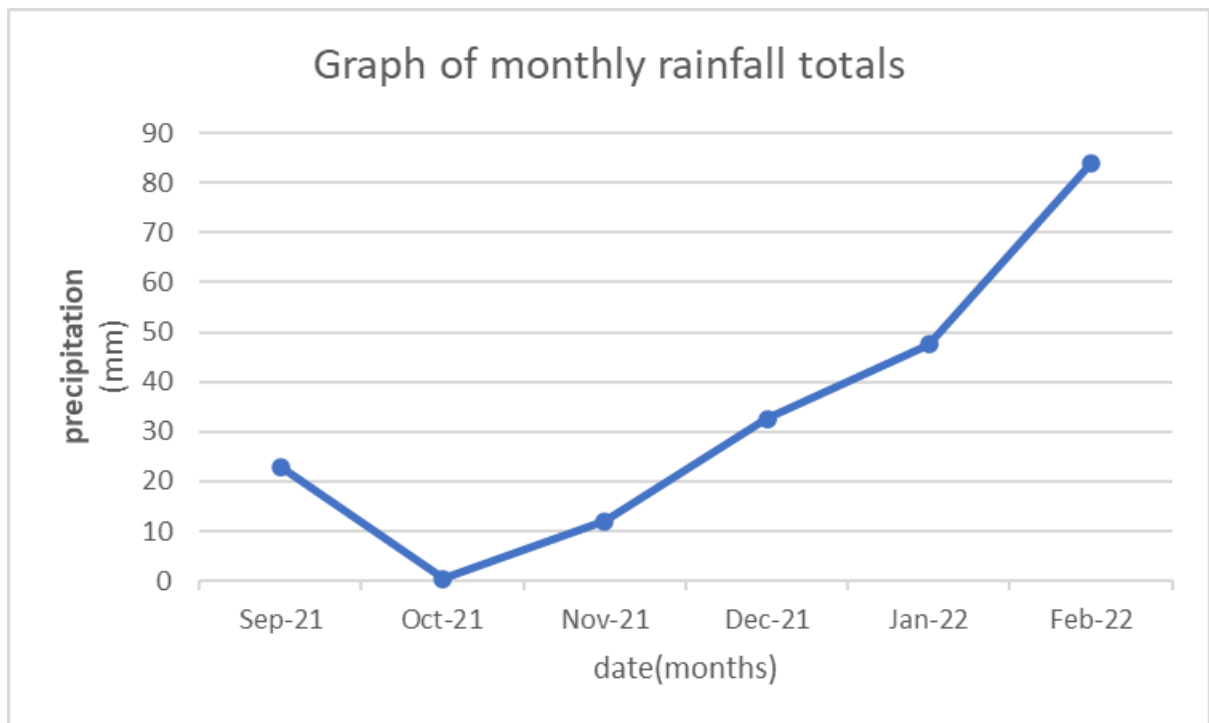
(Picture 17)12/12



(Picture 18)1/9 Withered leaves



(Picture 19)2021 September-2022 February temperature and precipitation



(Picture 20) 2021 September-2022 February temperature and precipitation



Discussion In 2021, affected by extreme weather, the rainfall in Kinmen will be less than 500 mm for two consecutive years, and the water condition will hit a record low, which will seriously affect the harvest of Kaoliang and other crops. We wonder if harvest timing and yields will be different for 2021. That switching to multi grain crops in the fall can save up to 80 percent of irrigation water, so we wondered whether farmers in the field had switched crops to cope with the lack of rainfall in recent years. In the end, we decided to visit local farmers directly to get first-hand information. The design problem is as follows:

1. Rainfall has been markedly insufficient in recent years. What measures are farmers taking? What is the difference?

If replanted:

2. Any difficulties during the planting process?

3. Has the problem improved after replanting? What has been improved?

If not replanted:

1. Approximate harvest and planting time? Is it the same as before?

2. What is the difference between past harvest and this year's harvest?

3. What else affects the harvest besides the rainfall?



Conclusion

According to local farmers, when dealing with rainfall problems, farmers in Kinmen rarely change crops to solve the problem, and still mainly use the original crops. Wheat is the main crop from January to April, and farmers expect a bumper harvest in the future due to sufficient recent rainfall. Therefore, the recent harvest is much better than before due to the high rainfall. But the actual situation this year will wait until Ching Ming Festival, if too wet can make the machine unable to run and miss the best harvest time. Due to the severe lack of rainfall before October 2021, Kaoliang is being planted, resulting in a worsening Kaoliang harvest. On the other hand, the rainfall from October 2021 to February 2022 tends to increase, and the wheat harvest is good. The leaves of the orchid tree began to wither, and it was when the wheat began to be sown.

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