

The Use of Marigolds in the Community: A Case Study in the Thon Hong District, Nakhon Si Thammarat Province, Thailand.

Dr.DaychoKhaenamkaew^a

^aLecturer of Program in Community Development, Faculty of Humanities and Social Sciences, Nakhon Si ThammaratRajabhat University, Thailand

Abstract: The objectives of this study were to use of marigolds in the community. There were a total of 19 key informants who were studied using a qualitative approach. The results showed that according to folk wisdom, selecting marigolds of ornamental value can repel insects. Additionally, marigolds can be cooked and consumed. Marigold flowers are also used for various ceremonies, such as ordination, funeral, housewarming, etc. They can be fed to ducks and chickens to get eggs with a dark red yolk. Marigold can be used as a medicine to get relief from dizziness, purify the blood, and cure malnutrition in children. Finally, it can be used to make fabric dyes or can be sold commercially.

Keywords: The use of marigolds, the community, the Thon Hong District

1. Introduction

Marigold is an economically important flower in Thailand. There are many varieties of calendula with white, yellow, gold, and orange flowers, produced by selection; farmers develop and improve the valuable species (Samanon, 1992). Marigold flowers are used as an ingredient in the food industry as food coloring and tea, and in the animal feed industry. For example, they are fed to chickens to get eggs with a dark-colored yolk(Namwong, Puengsamran, &Khamphan, 2017).

For villagers in the Thon Hong Subdistrict, Phromkhiri District, Nakhon Si Thammarat Province. Marigold is sold to decorate government buildings, provincial landmarks, companies, stores, and homes (MThai, 2560). Marigold can also be used as a medicinal plant for the treatment of skin diseases and skin nourishment (Srisopa, 2010).Many families in this subdistrict collectively grow marigold.

Due to the importance of marigolds mentioned above, the researcher was interested in studying marigolds, particularly their cultivation. The study area was at the Thon Hong Subdistrict, PhromKhiri District, Nakhon Si Thammarat Province. The specific aim of the study was to use of marigolds in the community. The findings of this study will help people to recognize the commercial importance of marigolds that are widely available in the local area.

2. Objectives of the Study

To use of marigolds in the community: A Case study in the Thon Hong District, Nakhon Si Thammarat Province, Thailand.

3. Design and methodology

(1) Key informants: consisting of farmers who grew marigolds in the Thon Hong Subdistrict. 16 families and 3 additional people who promoted marigold cultivation and use, the President of Thon Hong Subdistrict Administrative Organization, Agricultural district, and the owner of a horticultural and garden design shop, were involved in this study.

(2) The research methods: consisted of a questionnaire that was used by the researcher to ask questions, keep records of the research objectives, and collect relevant information. A voice recorder was also used during the interviews as a backup. If the interviewee did not wish to record the audio, the recording was stopped. A record form for participatory and non-participatory observations. During participatory observations, the observer engaged

in activities with the study group; observations were made while interviewing the groups. On the other hand, in non-participatory observations, the researcher observed groups outside the interview and did not participate in any activities. They used a mobile phone camera to take photographs for research purposes.

(3) collecting information: certain procedures were followed for collecting information. Initially, the study area, where the community would be interviewed, was surveyed to gather preliminary information. Then, a friendly relationship was built with the local community before interviewing. Information on the cultivation and use of marigolds were obtained by taking appointments from individuals of the date, time, and location. The researcher then collected information on each issue by meeting and discussing it with the target group. If it appeared that the data lacked details, additional information was collected. We analyzed the data obtained from interviews and observations of both participatory and non-participating activities.

(4) Data analysis: we then summarized the important points.(Khaenamkhaew, 2017)

4. Results

The use of marigold in the community: the results of the study showed that marigolds are used for a variety of purposes.

(1) Decoration and beautification: To decorate houses and make garlands for monks.

(2) Insect and pest repellent: Villagers use marigolds as natural insect repellents. Additionally, planting marigolds, along with the main crop, can repel nematodes and some insects. Thus, it is also used as an insecticide and bio-compost.

(3) For eating: Often marigold flowers are fried. They are also used as an ingredient in cooking.

(4) For use in various ceremonies: Marigold is used while worshipping monks and sacred objects. They are also used in various ceremonies, such as ordination, funeral, housewarming, etc.

(5) Animal feed: Dried marigold flowers can be mixed in the food of ducks and chickens to give their eggs an intense reddish yolk.

(6) To make drugs: Calendula flowers can be used as a liver tonic. The flowers (3–10 g) are also used to recover from dizziness. Additionally, the flowers and roots have a cooling effect on the lungs and liver. The flowers and juice from the inflorescence are used as a blood purifier. Dried leaves (5–10 g) are used as a remedy for children suffering from malnutrition.

(7) Making dye: Marigold is a herbaceous plant that is easy to grow, fast-growing, and with yellow inflorescence. Thus, they are used to dye silk threads by the hot dyeing method.

(8) Direct commercial value: Marigold flowers are sold at different price ranges as bouquets by the farmers. The price depends on the size of the flowers being sold (jumbo, big, medium, and small).

(9) Tourism: Marigolds are used as tourist attractions at exhibitions or grown in gardens for photography and to promote eco-friendly tourism.

The use of marigold in the community(Figure 1-6):



Figure1.Direct commercial value



Figure2.Decoration and beautification, grown in gardens for photography



Figure3. Make garlands for monks



Figure4. To make drugs



Figure5. Insect and pest repellent



Figure6. Decoration and beautification

From this study, the list of the uses of marigold can be classified based on the number of families recorded performing them. Up to 16 families used marigolds for decorations and in various ceremonies. Nine families used them as insect repellents, eight families for cooking, six families for tourism, five families for feeding animals, and two families for medicine. Finally, marigold was used in dyeing and was commercially distributed (selling) by only one family each. The results have been summarized in Figure 7.

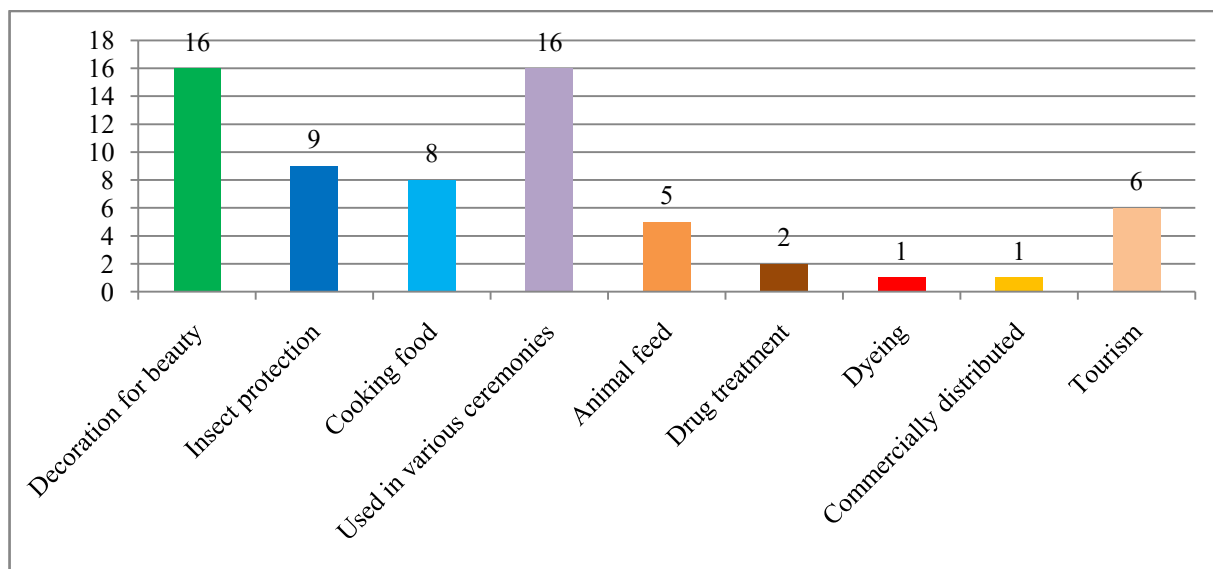


Figure 7. The number of families in the community who use marigolds for various functions. Bar plots show absolute values.

5. Conclusion

The results of the study showed that the flowers can be used for decorative purposes, to protect against insects, for cooking, in various ceremonies, to make animal food, as medicine, to make fabric dye, for sale, and tourist attraction. The uses of marigold mentioned by the people of the Thon Hong Subdistrict are similar to that described in the study by Namwong, Puengsamran, &Khamphan(2017) on the use of leftover marigold flowers for maximum benefit. Additionally, marigolds are also "utilized" by the community in the food industry, for example, in food coloring or the animal feed industry. Results of our study also agreed with those presented in the study by Srisopa (2010) on marigold flower extract from local wisdom to anti-aging innovation, where it was concluded that calendula can be used in various ways since it is a flowering plant well-known to Thai people. It is popular as decorations at the entrance of the house because it is visually attractive. Marigolds are used to make garlands and bouquets. It can also be used as a medicinal plant for the treatment of skin diseases and to nourish the skin. Finally, the results of our study agreed with those mentioned in the study by Ruangram, &Pimchan. (2016), where it was concluded that marigold flowers can be used to decorate, repel insects, sell as garlands and bouquets, and sell to animal feed factories. From the above results, the researcher concluded that the communities in the ThonhongPhromkhiri District Nakhon Si Thammarat Province have a body of knowledge that was established in the form of folk wisdom by the "practice" of growing marigolds. Thus, marigold can be used in a variety of communities for multiple functions.

We suggest some steps for applying the research results. Most of the cultivation and utilization of marigolds is from the "co-thinking, co-working" form of folk wisdom in the community. However, if the government, or the private sector and/or related parties pass on the knowledge regarding the value and utility of marigolds, the ideas may become an "innovation" and be accepted as conventional wisdom in the future.

6. Acknowledgment

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