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DETERMINATION OF THE THYME HARVESTING PERIOD ACCORDING TO THE CONTENT OF THE PROTOCROCIN

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Abstract:

Thyme is one-year-old scented grass. It has a great deal of use in the kitchen of various countries, as a spice because it is distinguished by its taste and aroma. Thyme is used in pharmacy, which is caused by the fact that it contains Carotenoid glycosides. Thyme is widely used in the production of alcoholic and non-alcoholic drinks too.

Keywords: Thyme, pharmacy, Proto crocin

Thyme is one-year-old scented grass. It has a great deal of use in the kitchen of various countries, as a spice because it is distinguished by its taste and aroma. Thyme is used in pharmacy, which is caused by the fact that it contains Carotenoid glycosides. Thyme is widely used in the production of alcoholic and non-alcoholic drinks too.

Carotenoid glycosides are widely spread in nature and they occur in many plants. Proto crocin is accumulated in the plant during the growing process. In the end of its physiological development and at the beginning of drying process, Proto crocin begins to decomposition and different compounds are created: Crocin, Picocrocin and Safranal. These compounds are known for high biological activity, so they have a great influence on human body.

If we want to get a large amount of above-mentioned compounds in dried plant, we need correct timing of harvest - during the period of maximum amount of Proto crocin in the plant.

As its known, harvesting thyme for drying or direct using purposes is recommended in June, but the important growth or diminution of the amount of Proto crocin in the plant is possible during the month. We had made experiments in three regions of Georgia: Kakheti, Kartli and Imereti to determine the optimal harvesting period of thyme.

The quantity of some substances in dry and young thyme was determined by using spectrophotometric method.

The results of the analysis are shown in table 1 and diagram 1.

Table 1.
The content of protocrocin in Thyme in June in different regions of Georgia

Kakheti		Imereti		Kartli	
June	Protocrocin mg/100g	June	Protocrocin mg/100g	June	Protocrocin mg/100g
1-10	94,7	1-10	89,7	1-10	97,5
10-20	113,4	10-20	109,6	10-20	124,3
20-25	158,3	20-25	141,3	20-25	152,4
25-30	169,4	25-30	157,5	25-30	161,2

As we see from the table 1 the amount of Proto crocin in the thyme was 94,7 mg/100g during the June in Kaketi region, results are similar in Imereti (89,7 mg/100g) and Kartli (97,5 mg/100g). From the beginning to the end of the month the growth of Proto crocin in these three regions reached 74,7 mg/100g (Kakheti), 67,8 mg/100g (Imereti), 63,7 mg/100g (Kartli). The maximum growth is appeared in the middle of the month in all these regions.

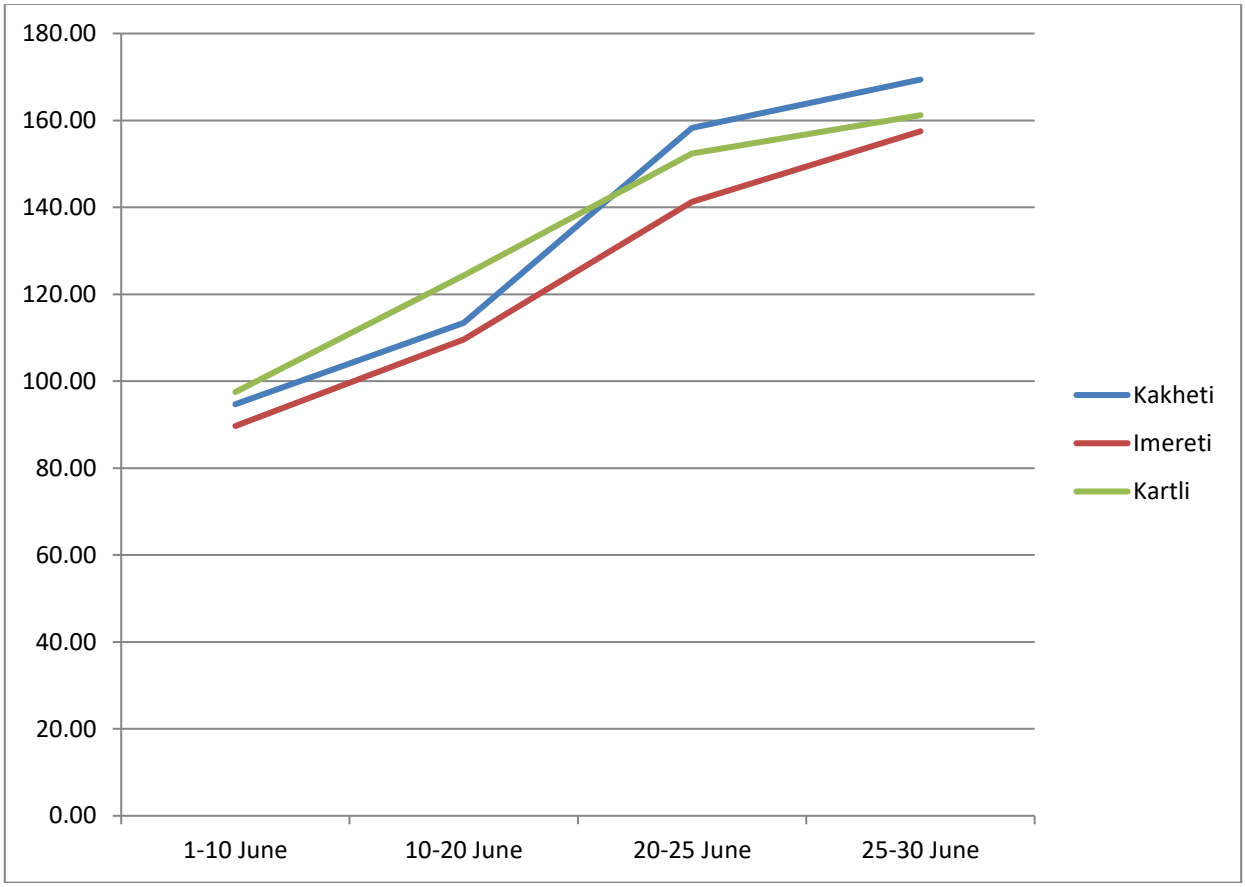

Diagram 1.
The content of protocrocin in Thyme during June in different regions of Georgia

In conclusion, we can say that the best harvesting period for thyme is from the middle to the end of June, but it must be mentioned, that the physiological development and the accumulation and synthesis of the biologically active compounds widely depend on the climate conditions. So, we need to control the chemical composition of thyme in thyme refining industry from the beginning of the month.

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