ECONOMIC REVIEW OF PRODUCTION POSSIBILITIES AND PRODUCTION COSTS OF RICE IN "İPSALA – KARPUZLU – MERİÇ" REGION

İpek Atılgan Helvacioğlu[1*], Tuna Şener[2], Cem Tokatli[1], Alpay Balkan[3]

[1]Trakya University, İpsala Vocational School, Department of Laboratory Technology, Edirne, Turkey

[2]Trakya University, İpsala Vocational School, Department of Foreign Trade and Marketing, Edirne, Turkey

[3]Namık Kemal University, Faculty of Agriculture, Department of Agronomy, Tekirdağ, Turkey

Abstract

Thrace Region is one of the most important agricultural regions of Turkey with its land condition and water resources. As it is known that Thrace Region is the largest rice – growing area and makes the greatest contribution to production of rice in Turkey. In the present study, production costs of rice producers living in Edirne Province were investigated by using some systematic data collection techniques and an economic assessment was provided in the region by using the detected data from rice producers.

Key words: *ipsala district, meriç district, karpuzlu town, rice production, economic assessment*

1. INTRODUCTION

Rice (*Oryza sativa*) is being grown on every continent except Antarctica in the world between the latitudes of 53' north and 35' south. However, the highest yield is obtained in the temperate climate zone of the world, where the Turkey is located on it. Turkey has great agricultural production potential thanks to its favorable ecological and conditions, climate and land resources. Rice areas of Turkey varies between 50,000 - 60,000 ha from year to year depending on available irrigation water and market price. Total milled rice production is about 450,000 tons per year, which is much higher than the world average. But it is not enough for domestic consumption. Therefore, some milled rice should be imported to meet total domestic consumption. Although the rice yield of Turkey is much higher than the world average, 20 – 25% of rice needs in Turkey are provided from USA, Italy, Egypt, Pakistan and Australia because of much higher consumption rates than production in Turkey. The Marmara – Thrace Region is the largest rice – growing area and makes the greatest contribution to production, followed by the Black Sea Region (IRRI, 1995; TARI, 1982 to 1995; Sürek, 1990; TZOB, 2003; http://www.fao.org/).

In the present study, production costs of rice producers living in İpsala District, Meriç District and Karpuzlu Town were investigated by using some systematic quantitative data collection techniques and aimed to provide an economic assessment in the region by using the detected quantitative data from rice producers.

2. MATERIAL AND METHOD

İpsala District, Meriç District and Karpuzlu Town are located in the west side of Edirne City almost in parallel with the border of Greece (Figure 1).

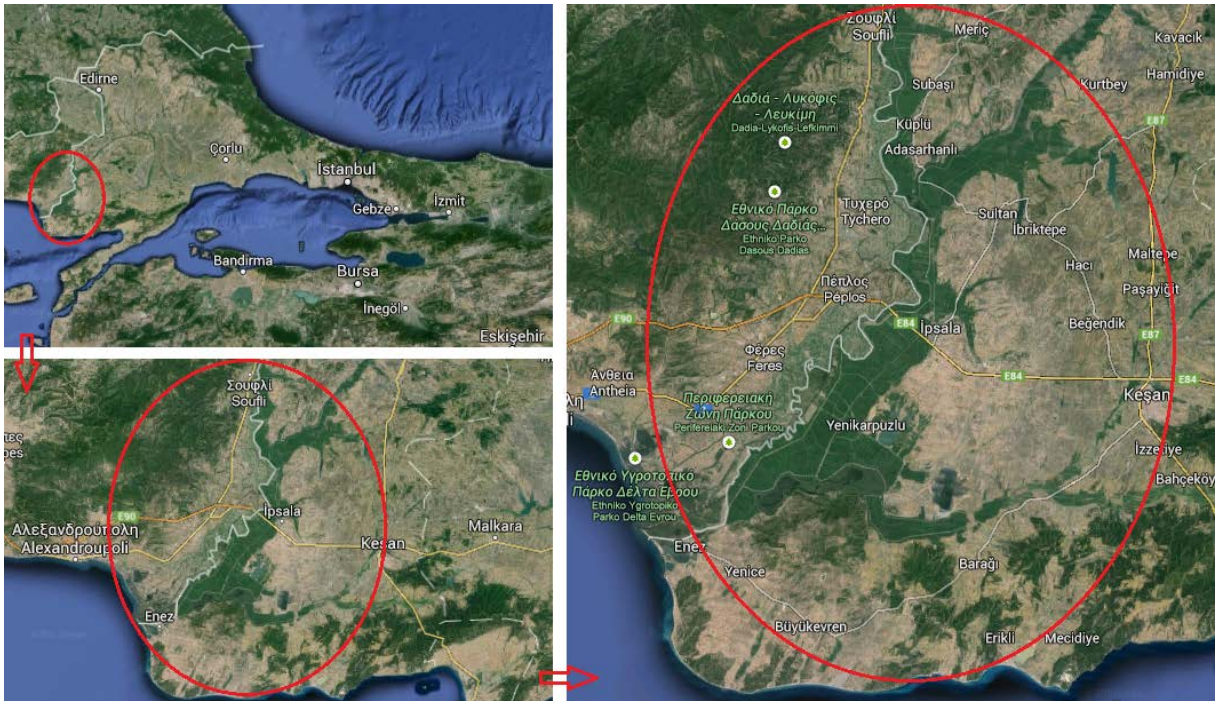


Figure 1. Study area

Survey technique, which is widely used and one of the most effective systematic quantitative data collection techniques, was used to assess the production costs and preferences of rice producers regarding on marketing in three important rice producing regions in Edirne City including İpsala District, Meriç District and Karpuzlu Town. In order to ensure the objectivity of the results, total of 134 rice producer dispersed uniformly as much as possible in terms of investigated different regions (41 people form İpsala District, 33 people from Karpuzlu Town, 60 people from Meriç District) were used in the present application.

3. RESULTS AND DISCUSSION

Questions directed to the rice producers living in İpsala District, Meriç District and Karpuzlu Town are given in Table 1 and the results of the quantitative data collection technique are given in Figure 2 – 10.

Table 1. Questions directed to the rice producers

No. of questions	**Questions**
1. Question	How long have you been doing paddy cultivation?
2. Question	Where does your knowledge on paddy cultivation come from?
3. Question	How do you finance the purchase of pesticides?
4. Question	How much money do you spend for pesticides?
5. Question	How much is the seasonal price of human workforce per decare?
6. Question	How much is the total cost per decare except the fee of rent for land?
7. Question	How do you provide the workforce supply?
8. Question	Do you have any problem about the low efficiencies in marketing the crop?
9. Question	If you have problems, what could be the reasons?

Starting with the first question, we can see the frequencies of answers in Figure 2 below. When we analyse the answers, we can see that most of the answerers have been doing paddy cultivation for long years. The percentage of those saying 20-30 years is %26,1 whereas the percentage of those saying more than 30 years is approximately % 43,3. That means, in total, % 69,4 of the answerers have been doing paddy cultivation for 20 or more years. This is really a great percentage that indicates the people of our selected region are working on paddy cultivation for long years, which makes us think about the traditional family effect.

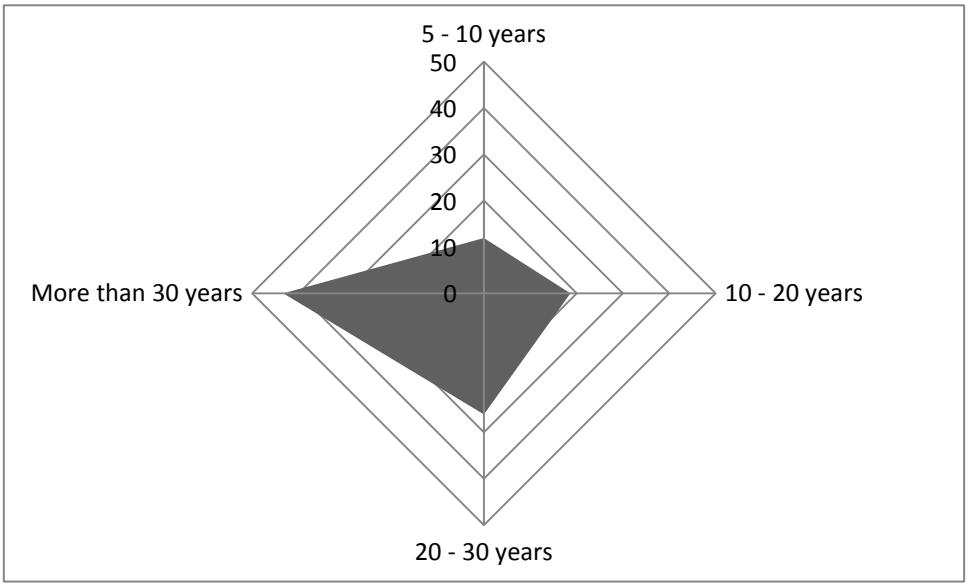


Figure 2. Frequencies of the answers on 1. question

As a matter of fact, we can see the consequences of this traditional family effect in the second question, as listed below in Figure 3. % 83,6 of the answerers (very significant amount) declares that their knowledge on paddy cultivation is coming from the family, not any other professional side. Those taking support from Provincial Agriculture office is only % 9,7 whereas those hiring an agricultural engineer is even worse, just % 1,5. These are important datas, unfortunately makes us getting anxious about the professionalism of paddy cultivation in our selected region.

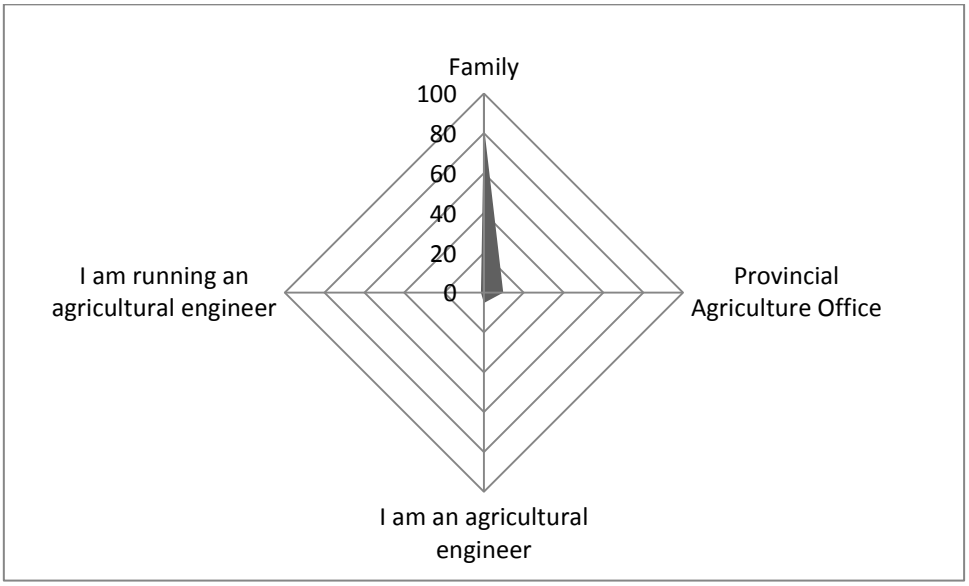


Figure 3. Frequencies of the answers on 2. question

In the third question, we asked the attendants how they financed the purchase of pesticides. And as seen in Figure 4 below, most of the answerers (% 45,5) declared that they finance the purchase of pesticides by cash, while % 41 declared they finance by credit. % 45,5 is quite significant number that shows us the financial conditions of our farmers are relatively good that they do not need any credit or any other financial support while purchasing pesticides. Of course, this situation is mainly about the relatively high profit potential of rice planting that allows rice planters enhance their financial conditions.

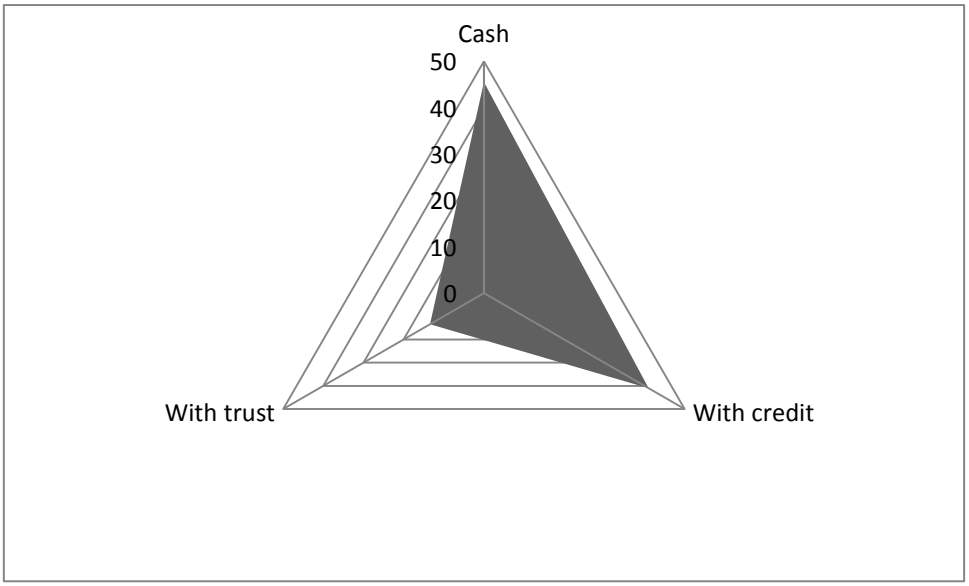


Figure 4. Frequencies of the answers on 3. question

In Figure 5 below, you can see the frequencies of the answers of the question asked “How much money do you spend for pesticides?”. The answers indicate the costs per decare in Turkish Liras. Most of the answerers (% 49,2) declared that they spend more than 30 Turkish Liras for pesticides per

decare. To see the real effect, let's assume a farmer has 100 decare of rice plant. And let's fix the cost of pesticides at 30 Turkish Liras per decare. In that case, a farmer should spend 100 x 30 = 3000 Turkish Liras just for the pesticides. This may seem a big number, but of course, it should be never forgotten that, all costs should be analysed in comparison with returns.

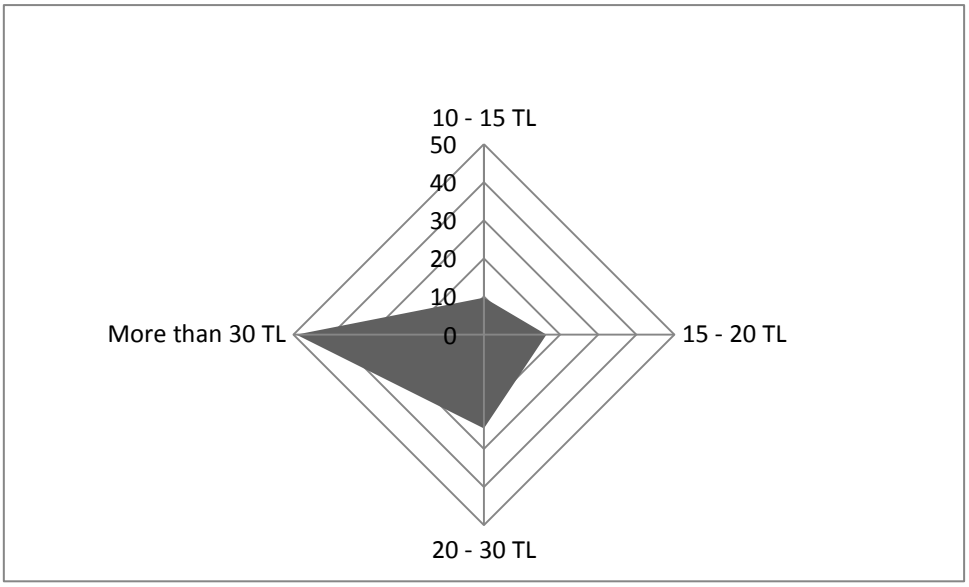


Figure 5. Frequencies of the answers on 4. Question

Our fifth question is about the seasonal price of human workforce per decare and the frequencies of the answers are listed in Figure 6 below. Most popular answers are "More than 100 Turkish Liras" (by % 44) and "Between 75 and 100 Turkish Liras" (by % 27,6). That means % 71,6 of the answerers are paying more than 75 Turkish Liras for seasonal human workforce per decare. Likewise the assumption above for Figure 5, let's assume a farmer has 100 decare of rice plant and let's fix the seasonal price of human workforce at 75 Turkish Liras per decare; that means a farmer should pay 100 x 75 = 7500 Turkish Liras for seasonal human workforce. This is quite expensive number and may be, the best way to avoid such a big cost is to have a big family and share the workforce within the family by including all adult members in agricultural activity.

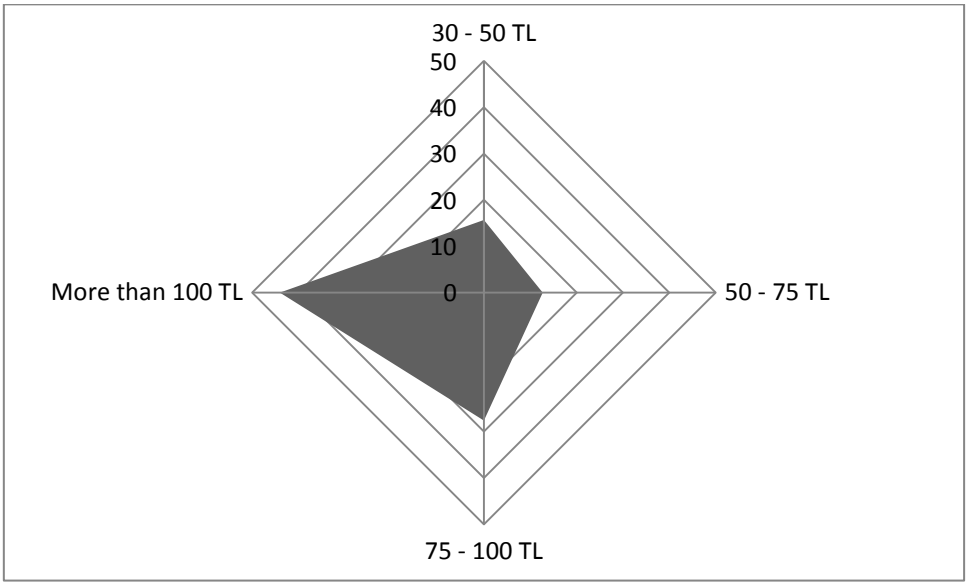


Figure 6. Frequencies of the answers on 5. question

Sixth question is possibly the most important question on the cost side since it examines the total cost per decare except the fee of rent for land. And as seen in Figure 7 below, the most noticeable answer is "350-400 Turkish Liras" with the percentage of % 41,8. However, in this question, we can see that there is no big difference between the answers. The most popular answer has % 41,8 percentage as stated above, whereas the less popular answer has % 27,6 percentage with the answer "300-350 Turkish Liras". There is a balance between the answers and if we take the most popular option (and also the one in the middle) as reference and assume the total cost 375 Turkish Liras per decare, this means our farmer should afford 375 x 100 = 37 500 Turkish Liras for a 100 decare of rice plant area in aggregate. And this number is achieved under the assumption that farmer is the owner of the land since it does not include any fee of rent for land.

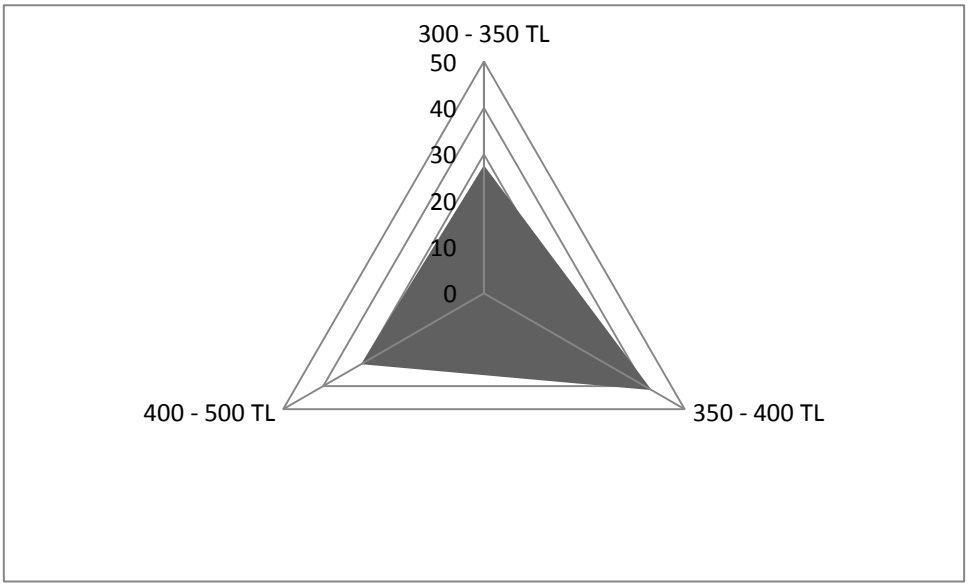


Figure 7. Frequencies of the answers on 6. question

In the seventh question, answerers were asked how they provided the workforce supply and the results are shown in Figure 8 below. Answerers were wanted to choose between just family, workers or both the family and workers; and the most noticeable answer is "Both the family and workers" by a significant percentage of % 56. Another attractive data is those saying "just family" is only % 14,9 and this means % 85,1 of the answerers are hiring seasonal workers. This result is increasing the importance of the fifth question that examines the seasonal price of human workforce per decare. Because, we can see that % 85,1 of the rice producers are hiring seasonal workers and this increases the importance of evaluating human workforce costs.

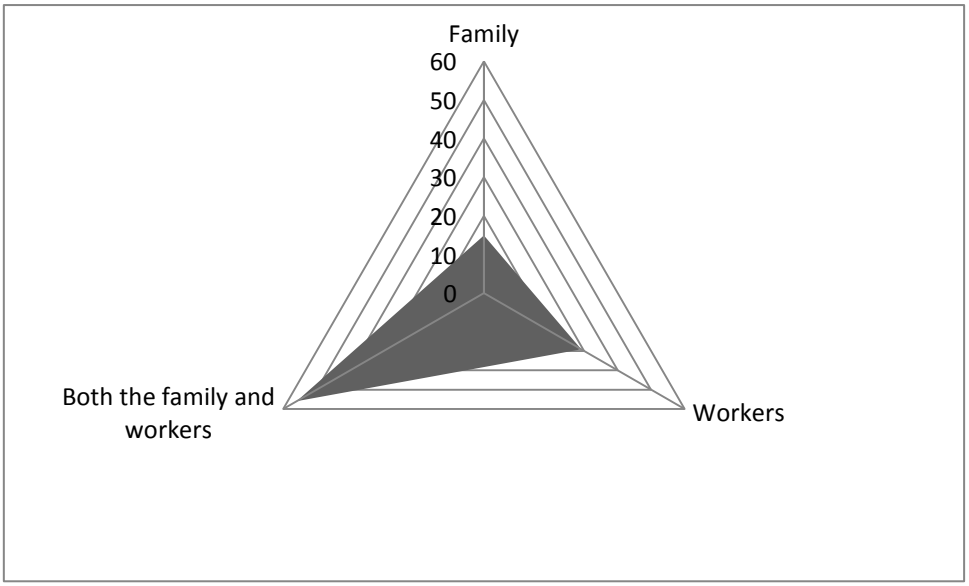


Figure 8. Frequencies of the answers on 7. question

As seen in Figure 9 below, % 73,1 of the answerers think that they have problems about the low efficiencies in marketing the crop. That means, most of the answerers are not satisfied with the amount of production and they think they lose a certain amount of crop because of low efficiencies.

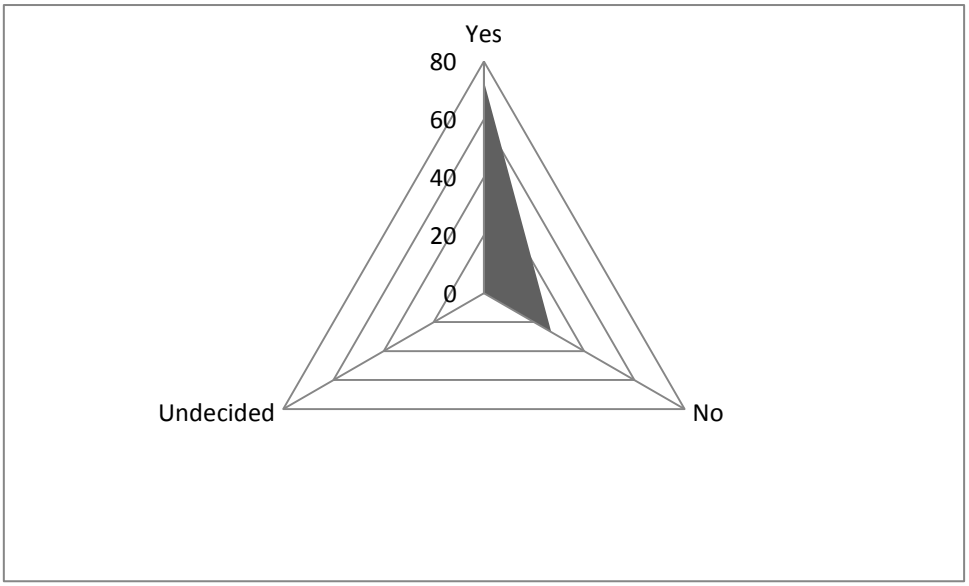


Figure 9. Frequencies of the answers on 8. question

In the eighth question, the answerers were asked whether they had any problem about the low efficiencies in marketing the crop. And now in the ninth question, those replied "yes" were asked what the reasons could be. As we can remember, % 73,1 of the answerers were thinking that they have problems about the low efficiencies. In Figure 10 below, these farmers comment on the reasons of this situation and we can see the results and frequencies. % 2,3 of the answerers think that the problem is because of providing low efficiency of crops. Other % 2,3 of the answerers think that the problem is because of incorrect implementation of the drying process. % 17,5 of the answerers think that the main problem is diseases and pests, whereas % 26,3 think that the main problem is the failure during the harvest period. But of course, most noticeable answer is "All of them" with a big percentage of % 50,9.

What's interesting in those answers is, some of them have too small percentages like % 2,3. When we analyse those answers, we can see that one of them is about incorrect implementation of the drying process. That means, our answerers, in general, do not think that there is a problem in the implementation of the drying process. If we consider that, this drying process is generally implemented by the farmer itself, that means our farmers (answerers) think that they are not doing anything wrong. And this is again showing us the traditional family effect on paddy cultivation. Our answerers generally think that they learned all the necessary informations from their family, and these informations cannot be wrong. They possibly think that, informations coming from the family are experimental informations, and experiences never tell a lie.

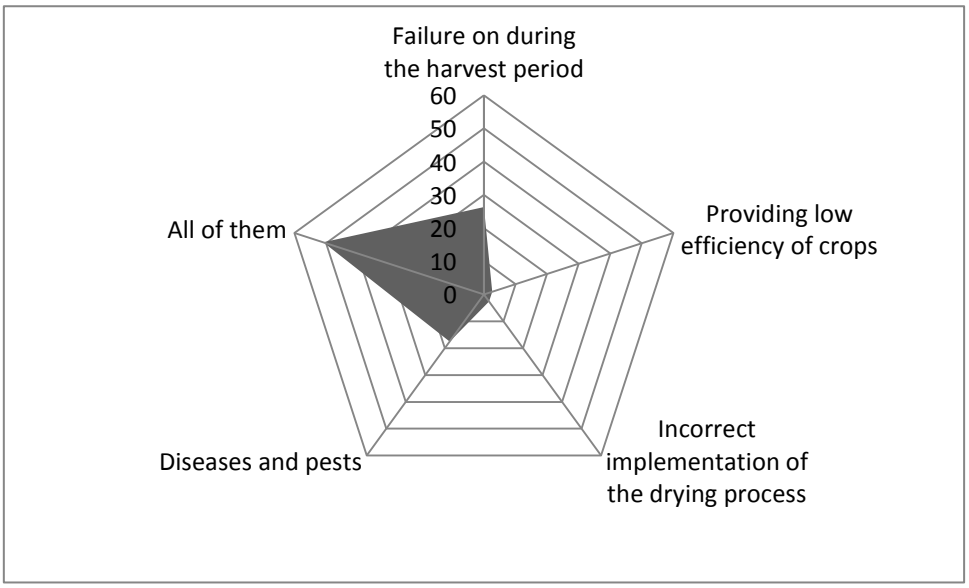


Figure 10. Frequencies of the answers on 9. question

4. CONCLUSION

Thrace region of Turkey is known with fertile lands and wide natural water resources. With these properties, especially with the help of wide natural resources, Thrace region is also known as the largest rice – growing area of Turkey. And rice production of Thrace region is mostly implemented in İpsala – Meriç – Karpuzlu triangle which contains İpsala and Meriç Districts and Karpuzlu Town in it. In this study, in order to examine rice production possibilities and production costs, some questions were asked to the producers who live in this region and it was also tried to analyse the agricultural behavior of the producers.

In the first two questions, as stated in previous sections, it was understood that answerers are under the effect of traditions coming from the family. Most of the answerers declared that their knowledge on

paddy cultivation is coming from the family and they are not taking any professional support, neither from Provincial Agriculture office nor from an agricultural engineer. Is it because professional support is so expensive? Possibly not because of this. Because financial conditions of rice producers are generally quite well and they do not have such problems. Unfortunately, the reason is different. Most of the answerers believe that experiences are the best way to learn, so there is no need to take any professional support, experiences coming from the family will get enough. Of course, this is a big mistake. The importance of experiences cannot be ignored, but if the subject is modern agricultural methods, if the subject is innovations in agricultural cultivation and harvest; experiences will never come enough and there is always need to take scientific and professional support. Despite wide natural water resources and large fertile lands, this is why production level of rice in Thrace region is not at desired category yet.

According to the answers given, it is understood that the cost of pesticides and especially the cost of seasonal human workforce are important cost items for the rice producers. But, it will be more appropriate to talk about the opportunity cost. Because, as stated above, generally it is not preferred by the producers to take any professional support. And this brings up some saving from fees that will be paid to agricultural engineers, academicians, etc. But unfortunately, the opportunity cost of *saving* from that kind of fee is *losing* the product with low efficiencies, incorrect implementation of the drying process, diseases, pests, etc. Other opportunity costs are low quality product, which means low marketing possibilities, no opportunity to create a well-known brand, as a result no possibility to export the product despite the region exists in the border with Greece and Bulgaria. It is clear that, paddy cultivation and all production process of the rice plant should be implemented within the collaboration of producers and agricultural professions. Otherwise, the production and marketing numbers of rice will never be able to come to the desired levels.

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