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KNOWLEDGE AND ACCEPTANCE RESEARCH OF USE OF VINE-BRANCH IN MICRO REGION OF GYÖNGYÖS

Gonda Cecilia

*Károly Róbert College – Institute of Agroinformatics and Rural Development
3200 Gyöngyös, Mátrai út 36*

Abstract: Significant quantity of renewable plant biomass comes into existence in Hungary year by year. Nowadays there are different well-know possibilities for utilization. However these methods are not widely accepted. The most important obstacle is frequently caused by lack of knowledge of farmers. Without the necessary information the farmers become distrustful, and in many cases significantly decrease the efficiency of reclamation.

Targeted communication method should be used to improve the rates of utilization. It should include appropriate content to their knowledge. This study research the knowledge and the acceptance of vine-branch utilization circle of wine-grower in micro region of Gyöngyös by questionnaire survey.

We will know why the use of by-products has not spreaded yet circle of wine-grower and where they get their information from. The typically fragmented farms do not utilize because they do not know the process for doing or other people cultivate their vine-yard so they have not necessary machine. The questionnaire ask the farmers they want to offer their vine-branch a user factory. The questionnaires was completed by personal request. The reason of methods was the bigger rate of query. The questionnaire include question about the farm, the use of vine-branch and data of farmers. The villages were asked the rates of wine-grower.

The aim of the research the rational utilize of by-product by wine-growers year by year. With the results of questionnaire survey we can inform the farmers with the appropriate method about the necessary knowledge.

Key words: renewable energy resources, vineyards, use of by-products, social acceptance

Introduction

Hungary imports more than 77 percent of the fossil energy. This is excessively negative from energy security and climate protection considerations. The renewable energy production is very low. It was only 4,1 percent in the full energy consumption in 2005 and the way was environmentally unsustainable to this (NÉS 2005). In the meantime, significant amounts of renewable energy sources, within plant biomass can be obtained as a by-product of agricultural activity.

Today's agriculture is much more than a simple commodity production. Due to multifunctionality the nature conservation and the agricultural sector must work together and the agriculture will have regard to environmental and conservation aspects. However, this can only be achieved if farmers are interested in complying with rules (Nemzeti Környezetvédelmi Program 2004).

The current recovery is not significant, most of the procedures limited to only a few reference plant. Bigger utilize assumes ecological, technical and economic conditions (Kacz and Neményi 1998). But it is untenable, that the agriculture is exclusively energy-consuming. Energy

producer agriculture should have created. After this new period open in the power generation (Az agrárgazdaság, A vidékfejlesztés és a területfejlesztés stratégiája 1999).

In the other micro regions of Hungary is along different regional and economic conditions different cultures are grown in higher rates. After this have mapped we should specify the possible utilize methods. Then we should examine the rate of acceptance of farmers.

Materials and methods

The micro region of Gyöngyös is at the southern foot of the Matra. The specific agriculture sector is the vine-growing. Resultant from vine growing is the waste of energy, because the vine-growers do not utilize the vine-branches. We can see some initial efforts to utilize but these are not current. Before the new method elaboration we should know the wine-grower circle, their farm conditions and machine supply (Baros 2004; Patkós and Baros 2004). These information and the different utilize method were asked by questionnaire survey.

The questionnaires was completed by wine-grower in wine-region of Matra. It happened the rates of wine-grower.

The questions were in three themes: farm data, use of vine-branch and private data of farmers. The answers were evaluated by rate calculation in Microsoft Excel.

Three reason are why the farmers do not utilize the vine-branch and it was important to emphasized. The most basic, they have never heard of this possibility. But possible that contractor growing the vine-yard of farmers. In this case they have not machines. It is also possible that they have bad experience. After the further possibilities analysis, context were had to analyze between the machines and the size of vine-lands. The applied method were to analyze the strenght of relationship:

- Pearson Chi-square,
- Probability Ratio,
- Linear relationship.

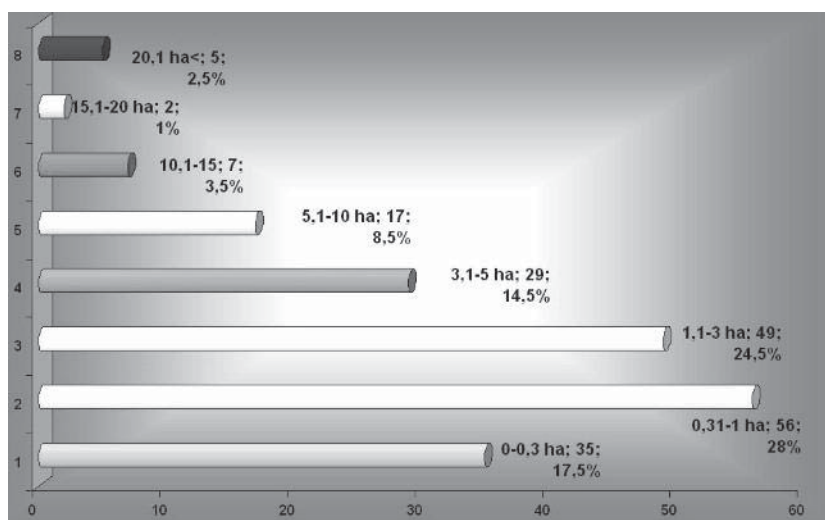
The applied program was the SPSS.

Results and discussion

In the micro region of Gyöngyös the men are in higher rates (60%) than the women. The younger generation is not typical, the ageing age structure is observable in the age breakdown. Most people aged between 40 and 69 and within that the highest ratio of 50-59 year olds (24,5%). In contrast the 20-29 year olds represent only 5 percent.

The structure of land is fragmented and this is prevent the new technologies dissemination in full circle. In the most cases one man have between 0-5 hectares vine-lands. This is 28 percent of farmers only between 0,3-1 hectare.

Today these farmers after the cutting in the biggest rates (51,5) burn the vine-branch at the end of vineyard while they are polluting the environment. At similar rates they return it



1. figure: Size of vineyard of responders
Source: Own editing based on questionnaire survey.

to the soil with extra cost. Minimal rates of responders (4,5%) put aside without annihilation, because they do not want to pollute the environment and they think that the return it to the soil is harmful.

In the region the mechanical works of vine are done by local service in many cases (141 people). But only a few service annihilation the vine-branch so remains the responsibility to the farmers. As a result, the small areas are in vulnerable situation.

You can see the examine of relationship between available machine and the size of vine-lands In table 1.

1. table: Chi square test

	Value	Various factor	Significance level
Pearson Chi- square	26,286(a)	2	,000
Likelihood ratio	24,898	2	,000
Linear relationship	26,084	1	,000
Valid number of cases (N)	200		

Source: Own editing based on questionnaire survey.

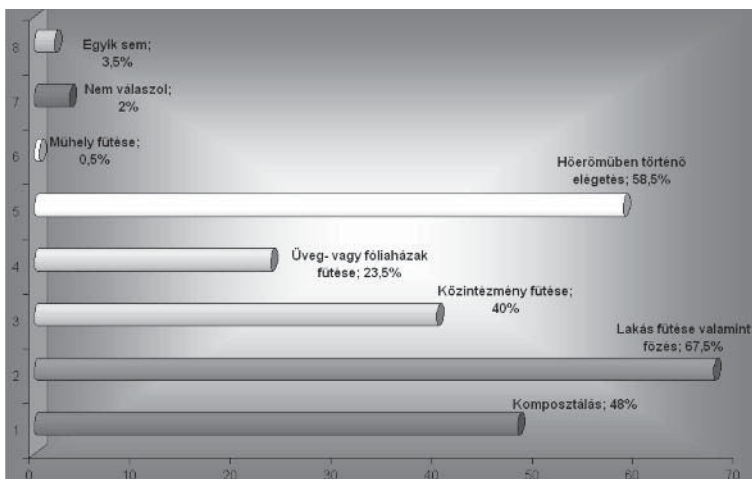
So the larger the size of the economy, the greater the likelihood that they have agricultural machinery. This fact can be explained by over 10 hectares the machine cost is too high and it is not worth buy new machine to utilize. On the other hand the areas increasing with the expend time increases proportionally. Therefore it must provide permanent employment opportunities for the farmers.

The result of their knowledge research about the use of vine-branch that 96 percent of the respondents have heard about use of vine-branch. In most cases, home heating connection (67,5%).

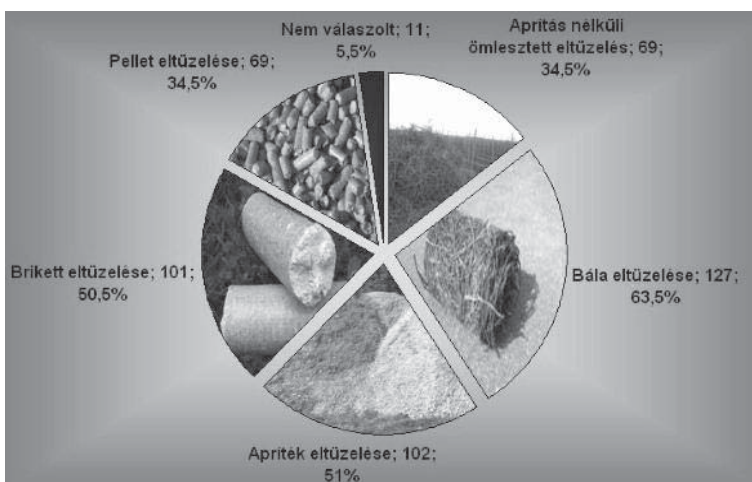
58,5 percent of respondents have heard, that vine-branch was burned in power station. 40 percent were aware that the use of them in public institutions. This result is due to different information (TV, radio, printed media). Glass or film house heating only 23,5 percent have heard. One respondent chose other uses, he ticked the garage heating.

In many cases the respondents despite they don not know how can they use the vine-branch, they know that somebody collect it or get to other status. For example 63,5 percent of farmers heard about vine-branch balers. In some wine-growing villages were baler dealers and they tried to baler and the farmers were invited there. The questionnaire result can be explained by this. Nearly 50 percent are aware that chips, briquette and pellet production. The pellet was ticked by only 35 percent.

After the survey about their knowledge the questionnaire asked their opinion about the vine-branch utilize. Most people associated it with the environment (68,5 %) and they think it is cheap energy and maybe it will be opinion for local energy production (57 %). About 45 percent of respondents think, that it is demand high investment and the technology is still



2. figure: The level of knowledge of uses of vine-branch
Source: Own editing based on questionnaire survey.



3. figure: The level of awareness about method of Vine-branch utilize
Source: Own editing based on questionnaire survey.

unformed (39,5 %). They think that the government should support for this implementation (43 %). Some farmers think that it will provide employment but the policy decisions are not found necessary.

The acceptance level was analyzing at the end of the questionnaire survey. The question was the following: „If there is a factory where utilize the vine-branch would you offer it?”. 84 percent of the respondents would give it. Significantly fewer people, 4,5 percent would like to use it themselves in the future.

Some farmers would hand over the vine-branch in that case if it does not mean additional cost. They considered to important that they take away the vine-branch from the vineyard as soon as possible. Otherwise they can not start the necessary spring work.

The results of study show that the most of the farmers belong to older age group. Despite this typically they are well-informed and open to new things. At the same time as you can see that most of them have only a few areas and it is cultivated by service. So not worth develop a machine park for utilize the vine-branch. Overall they are not averse to. The problem is the organization and the additional cost of achieving.

From the point of view of logistics expedient to look at the number of farms and the size of farms in one hand because very important to find the polarity. Accordingly in the future make the plan of the steps of realization of utilize.

If the bigger parts of areas are only some farmers hand in that case they can collect their vine-branch with their own machines on their own vineyard. So only some area missing from the collecting which are own by some small-holder. They are easily accessible as in person.

If the vine-lands consist of small farms then one bigger service has to organize and solve the task. In this case the farmers can be informed by posting of flyers, using a loudspeaker and information evenings.

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