Whole farm revenue insurance as a new model of risk management in agriculture

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Summary: Since agricultural production takes place under the open sky and it is largely unprotected, the risk of occurrence of some harmful event (hail, flood, drought, cold, storm, fire, etc.) increases. In addition to natural and climatic factors, financial, market and institutional factors have a strong effect on agricultural production. The crop and fruit insurance is certainly the most effective risk management instrument in crop production in the open air. The aim of the paper is to present an entirely new insurance model that began to apply in 2015 in the United States of America. By its application, each farm ensures its expected total revenue that can be endangered by the effects of both natural and climate, as well as market risks, which are manifested through fluctuations in market prices. This way, all crops on the farm are insured from all kinds of risks under just one insurance policy. Analyzed farm has experienced revenue loss due to drought, therefore it has indemnity right in the amount of € 2,500. Premium cost borne by farmer amounts to € 330.

Keywords: crops, farms, insurance, one policy, risks, total revenue

Introduction

Insurance is a financial arrangement that reallocates the costs of unexpected losses (Dorfman, 2007). Insurance of crops and fruits, as a contemporary form of protection of the production is the best risk management instrument in crop production (Kokot et al., 2017). The emergence of modern risk management in agriculture is increasingly becoming focused on ensuring total farm revenue (Turvey, 2012), considering that thus eliminating the disadvantages of traditional insurance systems, like adverse selection and moral hazard. The aim of the whole farm insurance is to unite all the risks that threaten farm under one insurance policy.

Whole-farm revenue protection (WFRP), as the latest model of the whole farm insurance, provides protection against loss of revenue that farmer expects to earn or will obtain from commodities (crops, fruits, livestock, etc.) produced or purchased for resale during the insurance period. WFRP protects against revenue loss due to any unforeseen natural phenomena that cause a decrease in

yield, or due to market fluctuations that cause the revenue loss during the insurance year (Stokes Nayda and English, 1997; Zhu et al., 2008; Johnson et al., 2008).

Risk Management Agency (RMA), which is located within the Ministry of Agriculture of the United States, began to apply WFRP under the Farm Bill in 2014. WFRP is the successor of Adjusted Gross Revenue (AGR-Lite), which also represents a model of the whole farm insurance (Shields, 2012). Benefits of WFRP compared to AGR-Lite are: a wider range of coverage level, increased maximum amount of coverage (from \$ 1 to 8.5 mil.), replant coverage, higher government subsidies and coverage of the market readiness costs (Chalise et al., 2017; Shields, 2015).

Whole farm insurance provides more efficient coverage than ensuring each commodity with particular insurance policy (Bielza Maria and Garrido, 2009). The ratio of this insurance model is based on a simple diversification and portfolio management. For example, if a farmer grows two crops, A and B, the insurance policy based on the total farm revenue will be cheaper than the sum of the premiums for two individual insurances for crops A and B, which provides the same expected revenue. Saving is inversely proportional to the correlation between revenue from the analyzed crops (Hennessy et al., 1997).

On the other hand, WFRP has an important positive side for insurance companies because the negative financial result, which the farmer realizes in one product can be offset with the positive financial result of another product. In this way there is no significant reduction in total farm revenue, therefore insurance companies will not have to compensate the damage.

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The aim of this study was to present the theoretical basis of the WFRP, as the most modern insurance model in agriculture, and to analyze the possibility of applying this model in Serbia based on a practical example.

Material and Methods

For the purposes of research, information was obtained from the private farm located in the northern part of Serbia, Province of Vojvodina, data of Statistical Office of the Republic of Serbia, Commodity Exchange in Novi Sad and Ministry of Agriculture of the United States of America. Information was analyzed within the period of five years (2010-2014). Various professional references were used for the creation of the theoretical part of the paper. Practical implementation of WFRP is shown in the case of the aforementioned farm.

When projecting the expected farm revenue in the insurance year (Table 2), the data on average realized revenue in the period from 2010 to 2014 are used. The expected revenue (R) is calculated as the product of the total area sown (a), the expected yield (y) and the commodity price (s).

$$R = a \cdot s \cdot y \quad (1)$$

The amount of insurance premium (P) that farmers have to pay to an insurance company, as compensation for the transfer of risk, is the product of the insured revenue (R_o) and premium rate (p), whereby the insured revenue is obtained as a product of the approved revenue (Table 2) and the selected level of coverage:

$$P = R_o \cdot p \quad (2)$$

The level of premium rate depends primarily on the diversification factor, which is determined based on the number of commodities on the farm and the Weighted Commodity Rate. Risk Management Agency (RMA) allows all farmers to calculate themselves how much insurance policy will cost them. Namely, the Cost Estimator, located on the RMA website, where each farmer will, by entering the appropriate parameters, receive the amount of the premium to be paid.

If the farmer generates revenue at the end of the year equal to or greater than the guaranteed revenue, it can be concluded that the insured event did not occur, and consequently there is no need for an indemnity. On the other hand, in the event of failure to achieve guaranteed revenue (Table 7), the farmer is entitled to indemnity (I_n) which is calculated as the difference between the insured revenue (R_o) and the realized revenue (R_p).

$$I_n = R_o - R_p \quad (3)$$

Results of research

Basic characteristics of WFRP

WFRP is the only insurance model in agriculture which is available at the national level respectively in all 50 USA states. This model represents a product that is based on revenue. In this way, protection of total farm revenue is provided with one insurance policy. In other words, this policy represents an "umbrella policy". A trigger level forms within the policy, and if realized revenue falls below that level, indemnity right will be acquired.

WFRP protects the farm from the loss of revenue that is expected to be earned from:

- Commodities produced during the insurance period, regardless of whether they are sold or not
- Commodities purchased for resale during the insurance period
- All commodities on the farm, except timber, forest and forest products, or animals for sport and show or pets.

Farmer should choose the appropriate coverage level of the insured revenue when applying for the WFRP insurance program. WFRP provides coverage levels ranging from 50 to 85% of the farm insured revenue. It is necessary to have an expressed diversification of production if certain farm wants to be qualified for the highest coverage levels. It practically means that at least 3 commodities must be on the farm (for example, wheat, corn and sunflower), which each individually contributes significantly to the total revenue in order to farm qualifies for coverage level of 80 and 85%.

The diversification level is very important for WFRP and is measured by the number of commodities on the farm. Higher production diversification except allowing a higher percentage of coverage, it also allows a higher subsidy amount in order to pay lower premiums. This is because the higher diversification reduces the risk of total farm revenue decrease. In addition to product diversification, there are also spatial diversification, diversification of business, diversification by employment outside farm and diversification by association in cooperatives, as ways to diversify the risks that farmers are exposed to (Pejanović and Njegomir, 2011).

Insurance period is based on the fiscal year. If the farmer is a tax filer who pays tax on the basis of the calendar year, the insurance period is from January 1 to December 31.

There are certain documents that must be submitted to the insurance agent when concluding policy, and which are related to farm operation in the last five years (the so-called historic period):

- a) WFRP application
- b) Whole-Farm History Report
 - c) Tax form Schedule F for all the previous 5 years of historic period
 - d) Allowable Revenue Worksheet for all the previous 5 years of historic period
 - e) Allowable Expenses Worksheet for all the previous 5 years of historic period
- f) Farm Operation Report
- g) Beginning Accounts Receivable and Accounts Payable Report (if applicable)
- h) Market Animal and Nursery Inventory Report.

Furthermore, these and all other documents that must be submitted when concluding the insurance contract and during the insurance year will be explained through a practical example of the implementation of WFRP insurance.

WFRP implementation in the case of analyzed farm

A farm located in the northern part of Serbia, province of Vojvodina, was analyzed in this particular case. The farm has a total of 28 ha of arable land that is deployed on four plots of 3, 5, 8 and 12 hectares and is engaged solely in crop production. In all years of the analyzed period, spring wheat, corn, soybean and sunflower were represented in the sowing structure. The first step was to draft the Whole-Farm History Report (Table 1).

Whole-Farm History Report is a report that documents allowable revenue and allowable expenses for each tax year that is used in determining the whole farm historic average of revenue and expenses (WFRP Pilot Handbook, 2016). Historic period covers five consecutive tax years prior to the tax year immediately before the insurance year (lag year). Particularly, it is necessary to provide copies of tax forms for the period from 2010 to 2014 for the insurance year 2016.

Table 1. Whole-Farm History Report (Insurance year 2016)

Whole-Farm History Report		
1. Tax year	2. Allowable revenue (€)	3. Allowable expenses (€)
2010	30,700	20,198
2011	28,587	18,807
2012	25,882	17,028
2013	28,778	18,933
2014	30,600	19,999
4. Total	144,547	94,965
5. Whole farm historic average	28,910	18,993

Table 2. Farm Intended Operation Report

Farm Operation Report						
1. Commodity name	2. Measurement unit	3. Yield (t ha ⁻¹)	4. Expected Value (€ x t ⁻¹)	5. Expected Revenue (€) (8x9)	6. Intended area (ha)	7. Total Expected Revenue (€) (5 x 6)
Spring wheat	ha	4.74	161	763	12	9,156
Corn	ha	8.62	142	1,224	3	3,672
Soybeans	ha	3.42	353	1,207	5	6,035
Sunflower	ha	2.98	295	879	8	7,032
8. Total at sales closing date						25,895
9. Total Expected Revenue at sales closing date (SCD)						25,895
10. Whole-Farm Historic Average Revenue (Item 5 from Table 1)						29,344
11. Approved Revenue (Lesser of item 9 and 10)						25,895
16. Approved Expenses (Approved Revenue/item 5 from Table 1 for revenue x item 5 from Table 1 for expenses)						17,012

The next step was filling Intended Operation Report, which represents a form on which the insured provides all necessary information in relation to all crops that he plans to produce during the insurance year and expect to earn revenue from during the insurance period. In particular, it is necessary to enter data about how many hectares certain crop was produced on, the total expected production, expected selling price per commodity unit, and the total value of each commodity.

Table 3. Schedule F tax form

1.	Gross farm revenue (€)	37,544
2.	Gross farm expenses (€)	38,662
3.	Net farm profit / loss (1-2) (€)	-1,118

The approved revenue amount is determined on the basis of Farm Operation Report and represents a lower amount of: (1) Farm Expected Revenue in the insurance year, or (2) Whole-Farm Historic Average Revenue (Table 1).

In this specific case, as stated above, the analyzed farm was engaged solely in crop production, and it was planned to grow 12 ha of spring wheat, 3 ha of corn, 5 ha of soybeans and 8 ha of sunflower in the insurance year. Total expected revenue at the farm level is calculated on the basis of formula (1) and amounts € 25,895, which in this case also represents the value of the approved revenue, while the value of approved expenses is € 17,012.

Table 4. Allowable Revenue Worksheet

Allowable Revenue Worksheet		
Schedule F amount (Gross revenue) (€)	Adjustment revenue amount (€)	Allowable revenue for tax year (€)
1	2	3 = 1 - 2
37,544	18,034	19,510

At the end of production year, it is necessary to complete Schedule F, which represents a tax form that is most commonly used for the application of the federal farm tax. This means that the actual realized revenue and expenses during the production (insurance) year are determined on the basis of Schedule F. Copies of the applicable tax forms of Internal Revenue Service (IRS), such as Schedule F, must be submitted to the insurance company for each tax year within the farm historic period (2010-2014). In the abbreviated Schedule F, which follows, we can see the total revenues and expenses realized by the analyzed farm during the insured (2016) year.

Based on the data from Schedule F on realized revenues and expenses during the production year, the

Allowable Revenue Worksheet (Table 4) and Allowable Expenses Worksheet (Table 5) are compiled. Allowable revenue is the revenue derived from farm's commodities produced within the farm operation, or from commodities that are purchased in order to continue its growth and development on the farm. In short, the allowable revenue includes revenue from all insured commodities.

All items that make up the allowable revenue are correctly listed in Tax Form Schedule F, and therefore can be directly transferred from that form to the Allowable Revenue Worksheet. Filling in the Allowable Revenue Worksheet is required to show which revenue can be insured under the WFRP policy, and which adjustments should be made to eliminate those revenue that cannot be insured.

Allowable revenue excludes: (1) Revenue from any post-production operations, (2) Net gain from commodity hedging or speculation, (3) Revenue from custom hire and rental activities, (4) Revenue earned as an animal contract grower, (5) Revenue from wages, salaries, tips and cash rent, (6) Revenue from government agricultural programs, etc.

Adjustment amount used in Tables 4 and 5 includes amounts of revenue i.e. expenses that are not considered allowable revenue and allowable expenses for the WFRP purposes. Allowable expenses specifically exclude any expenses related to post-production operations or commodities in which farmer has no insured interest. Adjustment amount is also calculated on the basis of information from Schedule F.

As already stated, along with the Allowable Revenue Worksheet, it is necessary to submit the Allowable Expenses Worksheet. Also, these two reports must be completed for each year within the historical period of the entire farm.

In general, the only role of expenses in WFRP model is to correct (reduce) the value of the insured revenue if expenses during the insurance year are not at the level of at least 70% of the approved expenses (Table 2). This basically means that if farm production has no expenses during the insurance year in the amount of at least 70% of approved expenses, the insured amount of revenue will be reduced by 1% for each percentage point of approved expenses which fall below 70% of the approved expenses. In this way, the possibility of moral hazard is also neutralized. In the

Table 5. Allowable Expenses Worksheet

Allowable Expenses Worksheet		
Schedule F amount (Total expenses – column 33) (€)	Adjustment revenue amount (€)	Allowable revenue for tax year (€)
1	2	3 = 1 - 2
38,662	10,181	28,481

Table 6. Calculation of the premium amount borne by the insured

Approved Revenue (€)	Coverage level (%)	Premium Rate (%)	Subsidy amount (%)	Premium amount (€)
1	2	3	4	$5 = (1 \times 2 \times 3) - (1 \times 2 \times 3 \times 4)$
25.895	85	3,2	56	310

Source: www.ewebapp.rma.usda.gov

analyzed case the allowable expenses are higher than the approved expenses, so it is not necessary to make adjustment (reduction) of the insured revenue amount.

Based on tables 4 and 5 it can be seen that Allowable revenue for tax year 2017 amounts € 19.510, while Allowable expenses amount to € 28.481.

By insurance, the farmer transfers the risk of loss to the insurer and undertakes to pay an insurance premium for that (Berg, 2005). In other words, insurance premium is the amount of money which in this case farmer pays to the insurance company as a service for risk transfer. It can be represented as a price risk and cost of insurance (Marković, 2013). The premium is directly proportional to the size of the risk, the value of the insured sum and duration of insurance (Petrevska Miroslava et al., 2010).

Formula (2) is used to calculate premium to be paid by farmers to the insurance company. The total amount of the premium consists of functional (net) premium and administrative fees, which in this model of insurance amounts € 20. Administrative fees include the costs of

concluding the insurance contract, the costs of collection of premiums, salaries and other administrative fees. Also, it should be noted that depending on the number of crops produced on the farm, U.S. Department of Agriculture subsidizes certain percentage of WFRP insurance premium (www.rma.usda.gov). In Serbia, the Ministry of Agriculture, Forestry and Water Management subsidizes insurance premiums in the amount of 40% of the total, but the maximum area on which the right to return can be realized is limited to 20 ha.

Irrespective of the realized revenue at the end of the year, the farmer has an obligation towards insurance company in the amount of € 330, which is the amount of insurance premium when value of administrative costs is added.

In this model of insurance, losses occur in a situation where allowable revenue (Table 4), obtained from commodities produced during the insurance year, fall below the insured revenue which is calculated as the product of the approved revenue and selected coverage level (Table 7).

Table 7. Claim for indemnity form

Claim For Indemnity Form											
1. Insurance Year: 2016	2. State/County: Serbia/Vojvodina	3. Insured information: N.N. Insured Vojvodina, Serbia Phone: xxx xxx SSN: xxxxxxxx		4. Agency information: N.N Agent Vojvodina, Serbia Phone: xxxxxx Agent Code: XX Policy: xxx		5. Companion Policy(s): NONE					
6. Date of Damage: July 2016	7. Cause of Damage: Drought		8. Primary Cause (100%): 100		9. Date(s) of Notice: 01.08.2016.						
Calculation Of Claim											
10. Allowable Expenses for Insurance Year (Table 5) (€)	11. Approved expenses (Table 2) (€)	12. Expense Percentage (10/11)	13. Expense Reduction Factor	14. Approved Revenue (Table 2) (€)	15. Expense Reduction Amount (13x14) (€)	16. Approved Revenue Adjusted for Expenses (14 – 15) (€)	17. Coverage Level (%)	18. Insured Revenue (16x17) (€)			
28,481	17,012	1.67	0	25,895	0	25,895	85	22,010			
19. Allowable Revenue for Insurance Year (Table 4) (€)	20. Inventory Adjustment (€)	21. Accounts Receivable Adjustment (€)	22. Market Animal and Nursery Adjustment (€)	23. All Other Adjustments (€)	24. Revenue-to-count (19+20+21+22+23) (€)	27. Revenue Loss (18-24) (€)					
19,510	0	0	0	0	19,510	2,500					
28. Narrative: Items 20, 21, 22 and 23 are not filled because analyzed farm has no stored commodities, nor due Accounts receivable and due Accounts payable, nor livestock.											

In addition to submitting the appropriate tax return, the insured is obliged to submit the Allowable Revenue Worksheet and the Allowable Expenses Worksheet when submitting a Claim for Indemnity to the insurer.

Due to unfavorable weather conditions (drought) in the production year 2016, the analyzed farm achieved below-average revenue in the amount of € 19,510. Considering that value of realized revenue is less than value of insured revenue, it can be concluded that there was an occurrence of the insured event in the current year. Insurance company is obliged to pay to the farmer, i.e. farm owner, indemnity in the amount of € 2,500, based on the formula (3).

Conclusions

Agricultural production, as one of the most important industries, is faced with many production risks. This is reflected in direct dependence on the achieved results and the weather (non)conditions. Different insurance systems are the most efficient in managing weather risks. Whole-Farm Revenue Insurance is one of the newer models, which is still only available in the United States. The emergence of modern risk management in agriculture is increasingly becoming focused on farm revenue insurance. The aim of this insurance system is to combine all farm risks under one policy, while achieving numerous advantages over traditional insurance.

Unlike traditional insurance, there are no problems of moral-hazard and adverse selection with whole farm revenue insurance, which can be seen in the case of the analyzed farm. Whole farm revenue is determined at the end of the production year and, if the revenue is below a threshold level (insured revenue), the insurer is obliged to pay indemnity to a farmer. In the analyzed case, due to the fact that value of realized revenue is lesser than insured revenue, the insurer is obliged to pay indemnity to the farmer in the amount of € 2,500. On the other side, a farmer who cultivates 28 hectares of land, has monetary obligation towards insurance company in the amount of € 330, which amount includes premium and administrative fees. That is certainly not a large amount, if taken into account that whole farm is completely insured from all natural and price risks.

One of the insurance companies operating in the territory of the Republic of Serbia in 2014 has developed a product that can insure crops from risk of loss or decrease in revenue. Revenue insurance covers the difference between guaranteed insured revenue and actual realized revenue. Under this insurance model, insured case represents a reduction in the insured guaranteed revenue that incurred under the influence of one of the contracted natural risks or the price change risk. The insurer is obliged to compensate the insured (farmer) for damage if the realized insured revenue is less than the contracted revenue and if at least one insured risk has occurred.

The Republic of Serbia does not have a system of market interventions, unlike most other countries. For example, in the USA, the market intervention system is based on PLC and ARC systems, while in the EU countries there is a system of private storage and market interventions. This results in the fact that Serbian farmers do not have the guaranteed minimum purchase prices of their products, so the analyzed type of insurance, which also has a component of ensuring the unfavorable movement of market prices, would have additional significance.

A clear strategy on the state level, by establishing a legal framework and financial incentives, analyzed insurance model could be successfully implemented in other parts of the world, and thus insure a large number of farmers, especially those who perform their activity in climatically unstable counties.

References

- Berg E. (2005). Integriertes Risikomanagement: Notwendigkeit und Konzepte für die Landwirtschaft, s.4.
- Bielza Maria and Garido A. (2009). Evaluating the potential of whole-farm insurance over crop-specific insurance policies, *Spanish Journal of Agricultural Research*, Vol. 7, No.1, p. 3-11.
- Chalise, L., Coble, K. H., Barnett, B. J., & Miller, J. C. (2017). Developing Area-Triggered Whole Farm Revenue Insurance. *Journal of Agricultural and Resource Economics*, 42(1), 27-44.
- Dorfman M.S. (2007). *Introduction to Risk Management and Insurance*, ISBN13: 9780132242271, Prentice Hall, New Jersey, p.2.
- Hennessy, D. A., Babcock, B. A., & Hayes, D. J. (1997). Budgetary and producer welfare effects of revenue insurance. *American Journal of Agricultural Economics*, 79(3), 1024-1034.
- Johnson, J. B., Hewlett, J., & Griffith, D. (2008). Adjusted Gross Revenue-Lite: A Whole Farm Revenue Insurance Available in Wyoming. *Agricultural Marketing Policy Paper*, (24).
- Kokot, Ž., Marković, T., & Pajić, N. (2017). Risk management in crop production based on the regional index. *Ratarstvo i povrtarstvo*, 54(1), 13-18.
- Marković T. (2013). *Vremenski derivati i upravljanje rizikom u poljoprivredi*, Poljoprivredni fakultet, Novi Sad.
- Petrevska Miroslava, Toscano B. and Milošev D. (2010). *Osiguranje biljne proizvodnje*, Bruno Toscano, Beograd.
- Pejanović, R., & Njegomir, V. (2011). Problemi upravljanja rizicima u poljoprivredi. *Ekonomika poljoprivrede*, 58(1), 91-103.
- Shields, D. A. (2012). "Federal Crop Insurance for Specialty Crops: Background and Legislative Proposals." CRS Report for Congress R42813, Congressional Research Service, Washington, DC. Available online at <http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R42813.pdf>.
- Shields, D. A. (2015). "Federal Crop Insurance: Background." CRS Report for Congress R40532, Congressional Research Service, Washington, DC, 2015. Available online at <http://www.fas.org/sgp/crs/misc/R40532.pdf>.
- Stokes, J. R., Nayda, W. I., & English, B. C. (1997). The pricing of revenue assurance. *American Journal of Agricultural Economics*, 79(2), 439-451.
- Turvey, C. G. (2012). Whole farm income insurance. *Journal of Risk and Insurance*, 79(2), 515-540.
- United States Department of Agriculture and Federal Crop Insurance Corporation (2016). *Whole-Farm Revenue Protection Pilot Handbook*, USDA, SAD.
- United States Department of Agriculture and Federal Crop Insurance Corporation (2016). *Whole-Farm Revenue Protection Pilot Policy*, USDA, SAD.
- Zhu, Y., Ghosh, S. K., & Goodwin, B. K. (2008). Modeling Dependence in the Design of Whole Farm Insurance Contract, A Copula-Based Model Approach. In annual meetings of the American Agricultural Economics Association, Orlando, FL (pp. 27-29).

Osiguranje vrednosti proizvodnje celog gazdinstva kao novi model upravljanja rizikom u poljoprivredi

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Sažetak: Budući da se poljoprivredna proizvodnja odvija pod otvorenim nebom i da je uglavnom nezaštićena, povećava se rizik nastupanja nekog štetnog događaja (grad, poplava, suša, mraz, oluja, požar i sl.). Pored prirodnih i klimatskih, na poljoprivrednu proizvodnju snažno dejstvo imaju i finansijski, tržišni i institucionalni faktori. Osiguranje useva i plodova svakako predstavlja najefikasniji instrument upravljanja rizikom u poljoprivredi. Cilj ovog rada je da predstavi jedan potpuno novi model osiguranja useva koji se počeo primenjivati od 2015. godine u SAD. Njegovom primenom svako gazdinstvo osigurava svoj očekivani ukupni prihod koji može biti ugrožen delovanjem kako prirodnih i klimatskih, tako i tržišnih rizika, koji se ispoljavaju kroz fluktuacije tržišnih cena. Na ovaj način svi usevi na gazdinstvu osigurani su od svih vrsta rizika sa samo jednom polisom. Analizirano poljoprivredno gazdinstvo je usled suše imalo gubitak prihoda, te je na taj način ostvarilo pravo na naknadu štete u iznosu od 2.500 €. Cena polise osiguranja koju snosi poljoprivredni proizvođač iznosi 330 €.

Ključne reči: osiguranje useva, ukupni prihod, gazdinstvo, jedna polisa, rizik

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