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STANDARD COSTS FOR SOWING AND MAINTENANCE WORKS IN VEGETABLE CROPS IN THE PLAIN, HILLY, MOUNTAINS AREA

VLAD MIHAELA CRISTINA¹

Summary: *the paper presents the partial results obtained on the basis of the scientific researches carried out under the project "Specific cost-specific calculations for different types of agricultural holdings and profiles in the context of accessing the support of the NRDP 2014-2020". The project is financed by contract no. 1313 / 2015-2018, by the ADER research program of the Ministry of Agriculture and Rural Development. The standard costs for sowing, fertilizing, pruning, herbicide, phytosanitary treatments, depending on the crop area, type of farm, tractor power, and aggregate are highlighted.*

Key words: *standard costs, agricultural holdings*

JEL Classification: *O13, O38*

INTRODUCTION

The standard costs of the multi-annual research project, which includes standard cost calculations for different types of farm and profile (plain, hill, mountain), meet the need to diversify agricultural production, improve economic performance, and market orientation, application of public policy facilities at the level of small farms, family farms and their associations.

Small holdings are generally decapitalized, can not provide a high degree of mechanization of technologies, growers resorting to services for certain mechanical works, crop maintenance steps being carried out, in most cases, with simple or even manual mechanical means. The labor force is usually represented by family members and sometimes by staff temporarily employed to meet the need for work during peak periods.

Family associations specialized in certain areas of agricultural production have a much higher level of technical means.

In small agricultural holdings two specific categories of agricultural activities are distinguished:

- activities that occupy about ¼ ha, amounting to a large number of crops (vegetables, fruits, aromatic plants) spread over small areas, which are generally placed around the household and are mainly intended for their own consumption;

- activities that may predominantly target the market, on surfaces of minimum 0,3 ha, with a varied structure of crops (wheat, corn, potatoes, trees, vineyards, perennial crops). Due to the low technical level and the lack of specialized knowledge, efficient use of local resources is not ensured.

MATERIALS AND METHODS

In the context of the objectives of the National Agricultural and Rural Development Strategy for 2014-2020 and of the Code of Good Agricultural Practice, starting from Law 37/2015 and the situation of the tractor and agricultural machinery fleet existing on 31.12.2014, it was estimated costs for sowing and maintenance of different crops by types of holdings (subsistence farms, semi-subsistence farms, small farms, medium holdings, large farms) for the plain, hill and mountain area. These were obtained on the basis of a study on: sowing and maintenance works on the main crops (large crops, fodder crops, vegetable crops), in line with the existing technologies at the forests; Aggregate Production and Consumption Standards; mechanic's tariffs; the cost of fuel and lubricants; wear of aggregates. The production rules and fuel consumption have been calculated according to: tractor power, mechanized work, average work speeds, theoretical working widths,

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tractor load, slope. The mechanized tariffs were obtained depending on the degree of difficulty and complexity of the mechanized work.

RESULTS AND DISCUSSIONS

Standard costs for mechanized sowing and crop maintenance work, depending on tractor power, agricultural machinery, type of holding, are highlighted in the following tables:

PLAIN AREA SOW 2-8 CM IN MEDIUM SOIL

Wide powers tractors (HP)	Tractor power (HP)	Agricultural machine	UM	Working capacity (ha/h)	Diesel consumption (l/ha)	Mechanized costs/work	Cost of fuel and lubricants lei/ha	Wear aggregate	Repair costs	Subtotal	Other costs	Total
Subsistence farms												
≤ 45	45	Drill 21 rows	Ha	0,85	5,95	36,47	32,77	3,27	0,30	72,81	3,64	76,45
Semi-subsistence farms												
46 ÷ 80	46	Drill 21 rows	Ha	1,57	5,52	19,75	30,40	3,04	0,28	53,46	2,67	56,13
46 ÷ 80	80	Drill 29 rows	Ha	2,30	7,07	13,48	38,94	3,89	0,35	56,66	2,83	59,49
SMALL holding parcel length <250												
81 ÷ 120	81	Drill 29 rows	Ha	2,42	8,26	12,83	45,50	4,54	0,41	63,29	3,16	66,45
81 ÷ 120	120	Drill 48 rows	Ha	5,38	8,79	5,76	48,42	12,13	0,44	66,75	3,34	70,09
MEDIUM farms 250-500 m long plot												
121 ÷ 200	121	Drill 48 rows	Ha	6,55	9,29	4,73	51,17	12,82	0,46	69,19	3,46	72,64
121 ÷ 200	200	Drill 72 rows	Ha	11,30	10,57	2,74	58,22	16,49	0,53	77,98	3,90	81,88
BIG farms parcel length > 800 m												
201 ÷ 360	201	Drill 72 rows	Ha	15,6	12,09	1,99	1,31	66,59	18,86	0,60	88,04	4,40
201 ÷ 360	360	Drill 120 rows	Ha	27,41	13,08	1,13	1,41	72,04	24,07	0,65	97,90	4,89

Source: own calculations

SOW 2-8 CM IN MEDIUM SOIL

Wide powers tractors (HP)	Tractor power (HP)	Agricultural machine	UM	Working capacity (ha/h)	Diesel consumption (l/ha)	Mechanized costs/work	Cost of fuel and lubricants lei/ha	Wear aggregate	Repair costs	Subtotal	Other costs	Total
Subsistence farms												
≤ 45	45	Drill 4 sections	Ha	1,12	4,51	27,68	24,84	2,30	1,24	56,06	2,80	58,86
Semi-subsistence farms												
46 ÷ 80	46	Drill sections 6	Ha	1,76	2,86	17,61	15,75	1,57	0,79	35,73	1,79	37,51
46 ÷ 80	80	Drill 8 sections	Ha	3,58	4,54	8,66	25,01	2,72	1,25	37,64	1,88	39,52
SMALL farms parcel length <250												
81 ÷ 120	81	Drill 9 sections	Ha	4,49	4,91	6,90	27,04	3,14	1,35	38,44	1,92	40,36
81 ÷ 120	120	Drill 12 sections	Ha	7,53	6,27	4,12	34,54	4,33	1,73	44,71	2,24	46,94
MEDIUM farms 250-500 m long plot												
121 ÷ 200	121	Drill 12 sections	Ha	9,17	6,63	3,38	36,52	4,57	1,83	46,30	2,31	48,61
121 ÷ 200	200	Drill 16 sections	Ha	14,06	8,5	2,20	46,82	4,68	2,34	56,04	2,80	58,84
BIG farms parcel length > 800 m												
201 ÷ 360	201	Drill 18 sections	Ha	20,63	8,64	1,50	47,59	4,75	2,38	56,22	2,81	59,03
201 ÷ 360	360	Drill 24 sections	Ha	30,69	11,68	1,01	64,33	7,48	3,22	76,04	3,80	79,84

Source: own calculations

PHYTOSANITARY TREATMENTS

Wide powers tractors (HP)	Tractor power (HP)	Agricultural machine	UM	Working capacity (ha/h)	Diesel consumption (l/ha)	Mechanized costs/work	Cost of fuel and lubricants lei/ha	Wear aggregate	Repair costs	Subtotal	Other costs	Total
Subsistence farms												
≤ 45	45	sprayer 12 nozzles	Ha	1,07	1,7	28,97	9,36	0,82	0,47	39,62	1,98	41,60
Semi-subsistence farms												
46 ÷ 80	46	sprayer 24 nozzles	Ha	3,56	0,9	8,71	4,96	0,58	0,25	14,49	0,72	15,21
46 ÷ 80	80	sprayer 32 nozzles	Ha	5,27	1,22	5,88	6,72	0,74	0,34	13,68	0,68	14,37
SMALL farms												
parcel length <250												
81 ÷ 120	81	sprayer 32 nozzles	Ha	6,65	1,32	4,66	7,27	0,81	0,36	13,10	0,65	13,75
81 ÷ 120	120	sprayer 40 nozzles	Ha	10,35	1,8	3,00	9,91	0,92	0,50	14,32	0,72	15,04
MEDIUM farms												
250-500 m long plot												
121 ÷ 200	121	sprayer 40 nozzles	Ha	13,31	2	2,33	11,02	1,02	0,55	14,92	0,75	15,66
121 ÷ 200	200	sprayer 56 nozzles	Ha	19,76	2,3	1,57	12,67	1,22	0,63	16,09	0,80	16,89
BIG farms												
parcel length > 800 m												
201 ÷ 360	201	sprayer 60 nozzles	Ha	28,93	2,44	1,07	13,44	1,56	0,67	16,74	0,84	17,58
201 ÷ 360	360	sprayer 72 nozzles	Ha	37,62	3,75	0,82	20,66	2,48	1,03	24,99	1,25	26,24

Source: own calculations

FERTILIZED

Theoretical tractor power (HP)	Agricultural machine for transport	Diesel consumption (l/ha)	Productivity (ha/h)	Mechanized costs/work	Cost of fuel and lubricants	Wear aggregate	Repair costs	Subtotal	Other costs	Total
65	Machine run-time amendments <3000 kg/ha	2,5	3,66	8,470	13,77	1,25	0,69	24,18	1,21	25,39
65	Machine run-time amendments 3000-5000 kg/ha	3,4	3,41	9,091	18,73	1,70	0,94	30,45	1,52	31,98
65	Machine run-time amendments 5000-7000 kg/ha	5,5	3,24	9,568	30,29	2,75	1,51	44,13	2,21	46,33
65	Machine run-time amendments crystallized <200 kg/ha	1	11,62	2,668	5,51	0,50	0,28	8,95	0,45	9,40
65	Machine run-time amendments crystallized 200-300 kg/ha	1,3	10,15	3,054	7,16	0,65	0,36	11,22	0,56	11,78
65	Machine run-time amendments crystallized 300-400 kg/ha	1,6	9,64	3,216	8,81	0,80	0,44	13,27	0,66	13,93
65	Machine run-time amendments granulated <200 kg/ha	0,72	16,6	1,867	3,97	0,36	0,20	6,39	0,32	6,71
65	Machine run-time amendments granulated 200-300 kg/ha	0,85	14,35	2,160	4,68	0,43	0,23	7,50	0,38	7,88
65	Machine run-time amendments granulated 300-400 kg/ha	1,1	12,76	2,429	6,06	0,55	0,30	9,34	0,47	9,81

Source: own calculations

CUTTING AND FERTILIZED

Wide powers tractors (HP)	Tractor power (HP)	Agricultural machine	UM	Working capacity (ha/h)	Diesel consumption (l/ha)	Mechanized costs/work	Cost of fuel and lubricants lei/ha	Wear aggregate	Repair costs	Subtotal	Other costs	Total
Subsistence farms												
≤ 45	45	Growing 1,6 m	Ha	0,51	5,44	55,39	29,96	2,72	1,50	89,57	4,48	94,05
Semi-subsistence farms												
46 ÷ 80	46	Growing 2,3 m	Ha	0,95	4,01	29,74	22,09	2,05	1,10	54,97	2,75	57,72
46 ÷ 80	80	Growing 4,2 m	Ha	2,04	4,06	13,85	22,36	2,19	1,12	39,52	1,98	41,50
SMALL farms parcel length <250												
81÷120	81	Growing 4,2 m	Ha	2,15	4,22	13,14	23,24	2,28	1,16	39,82	1,99	41,82
81÷120	120	Growing 4,5 m	Ha	2,91	6,65	9,71	36,63	3,62	1,83	51,79	2,59	54,37
MEDIUM farms 250-500 m long plot												
121 ÷ 200	121	Growing 4,5 m	Ha	3,13	6,83	9,03	37,62	3,72	1,88	52,24	2,61	54,85
121 ÷ 200	200	Growing 5,6 m	Ha	4,83	9,80	5,85	53,98	8,13	2,70	70,66	3,53	74,19
BIG farms parcel length > 800 m												
201÷360	201	Growing 5,6 m	Ha	5,28	10,41	5,35	57,34	8,64	2,87	74,20	3,71	77,91
201÷360	360	Growing 6,7 m	Ha	6,8	15,86	4,15	87,36	13,48	4,37	109,36	5,47	114,83

Source: own calculations

HILLY AREA SOW 2-8 CM IN MEDIUM SOIL

Wide powers tractors (HP)	Tractor power (HP)	Agricultural machine	UM	The working capacity (ha/h)	Diesel fuel consumption (l/ha)	Mechanized costs/work	Cost of fuel and lubricants lei/ha	Wear aggregate	Repair costs	Subtotal	Other costs	Total
Subsistence farms												
<45	45	Drill 17 rows	Ha	0,8	5,49	38,75	30,24	3,02	1,51	73,52	3,68	77,20
Semi-subsistence farms												
46 ÷ 80	46	Drill 21 rows	Ha	0,97	5,58	31,96	30,73	3,07	1,54	67,30	3,36	70,66
46 ÷ 80	80	Drill 29 rows	Ha	1,38	7,03	22,46	38,72	3,87	1,94	66,99	3,35	70,34
SMALL farms parcel length <250												
81 ÷ 120	81	Drill 29 rows	Ha	1,94	8,60	15,98	47,37	4,73	2,37	70,45	3,52	73,97
81 ÷ 120	120	Drill 48 rows	Ha	4,15	8,85	7,47	48,75	12,21	2,44	70,87	3,54	74,41
MEDIUM farms 250-500 m long plot												
121 ÷ 200	121	Drill 48 rows	Ha	5,47	9,51	5,67	52,38	13,12	2,62	73,79	3,69	77,48
121 ÷ 200	200	Drill 72 rows	Ha	8,66	10,15	3,58	55,91	15,83	2,80	78,12	3,91	82,02
BIG farms 500-800 m long plot												
201 ÷ 360	201	Drill 72 rows	Ha	10,94	10,37	2,83	57,12	16,18	2,86	78,98	3,95	82,93
201 ÷ 360	360	Drill 120 rows	Ha	18,95	11,07	1,64	60,97	20,37	3,05	86,03	4,30	90,33

Source: own calculations

SOW 2-8 CM IN MEDIUM SOIL

Wide powers tractors (HP)	Tractor power (HP)	Agricultural machine	UM	The working capacity (ha/h)	Diesel fuel consumption (l/ha)	Mechanized costs/work	Cost of fuel and lubricants lei/ha	Wear aggregate	Repair	Subtotal	Other costs	Total
Subsistence farms												
<45	45	Drill 4 sections	Ha	0,86	5,15	36,05	28,37	7,78	1,42	73,61	3,68	77,29
Semi-subsistence farms												
46÷80	46	Drill 6 sections	Ha	1,29	5,90	24,03	32,50	3,25	1,62	61,40	3,07	64,47
46÷80	80	Drill 8 sections	Ha	3,49	5,98	8,88	32,94	3,59	1,65	47,06	2,35	49,41
SMALL farms parcel length <250												

81÷120	81	Drill 9 sections	Ha	4,85	6,19	6,39	34,09	3,96	1,70	46,15	2,31	48,46
81÷120	120	Drill 12 sections	Ha	6,98	7,15	4,44	39,38	4,93	1,97	50,73	2,54	53,26
MEDIUM farms												
250-500 m long plot												
121÷200	121	Drill 12 sections	Ha	8,36	7,23	3,71	39,82	4,99	1,99	50,51	2,53	53,04
121÷200	200	Drill 16 sections	Ha	11,62	8,61	2,67	47,42	4,74	2,37	57,20	2,86	60,06
BIG farms												
500-800 m long plot												
201÷360	201	Drill 18 sections	Ha	19,15	8,77	1,62	48,31	4,82	2,42	57,16	2,86	60,02
201÷360	360	Drill 24 sections	Ha	26,33	11,65	1,18	64,17	7,46	3,21	76,01	3,80	79,81

FERTILIZED

Theoretical tractor power (hp)	Agricultural machine for transport	Diesel fuel consumption (l/ha)	Productivity (ha/h)	Mechanized costs/work	Cost of fuel and lubricants	Wear	Repair	Subtotal	Other costs	Total
65	amendments to the standard car administered <3000 kg/ha	2,725	3,111	9,96	15,01	1,36	0,75	27,09	1,35	28,44
65	run-time machine amendements 3000-5000 kg/ha	3,706	3,111	9,96	20,41	1,85	1,02	33,25	1,66	34,91
65	run-time machine amendements 5000-7000 kg/ha	5,995	3,111	9,96	33,02	3,00	1,65	47,63	2,38	50,02
65	run-time machine crystallized amendements <200 kg/ha	1,09	9,877	3,14	6,00	0,55	0,30	9,99	0,50	10,49
65	machine run-time amendements crystallized 200-300 kg/ha	1,417	9,877	3,14	7,80	0,71	0,39	12,04	0,60	12,64
65	machine run-time amendements crystallized 300-400 kg/ha	1,744	9,877	3,14	9,61	0,87	0,48	14,10	0,70	14,80
65	run-time machine granular amendements <200 kg/ha	0,7848	14,11	2,20	4,32	0,39	0,22	7,13	0,36	7,48
65	run-time machine granular amendements 200-300 kg/ha	0,9265	14,11	2,20	5,10	0,46	0,26	8,02	0,40	8,42
65	run-time machine granular amendements 300-400 kg/ha	1,199	14,11	2,20	6,60	0,60	0,33	9,73	0,49	10,22

Source: own calculations

HOEING

Range tractors (HP)	Tractor power (HP)	Agricultural machine	UM	The working capacity (ha/h)	Diesel fuel consumption (l/ha)	The working capacity (ha/h)	Mechanized costs/work	Cost of fuel and lubricants lei/ha	Wear aggregate	Repair	Subtotal	Other costs	Total
Subsistence farms													
<45	45	Growing 2,3 m	Ha	0,56	4,32	1,8	55,36	23,79	2,20	1,19	82,54	4,13	86,67
Semi-subsistence farms													
46 ÷ 80	46	Growing 2,3 m	Ha	0,7	4,48	1,4	44,29	24,68	2,28	1,23	72,48	3,62	76,10
46 ÷ 80	80	Growing 4,2 m	Ha	1,55	4,58	0,6	20,00	25,23	2,34	1,26	48,82	2,44	51,26
SMALL farms													
parcel length <250													
81 ÷ 120	81	Growing 4,2 m	Ha	1,57	4,68	0,6	19,75	25,78	2,39	1,29	49,20	2,46	51,66
81 ÷ 120	120	Growing 4,5 m	Ha	1,94	6,93	0,5	15,98	38,17	3,53	1,91	59,59	2,98	62,57
MEDIUM farms													
250-500 m long plot													
121 ÷ 200	121	Growing 4,5 m	Ha	2,39	7,05	0,4	12,97	38,83	3,60	1,94	57,34	2,87	60,21
121 ÷ 200	200	Growing 5,6 m	Ha	3,71	10,12	0,3	8,36	55,74	5,16	2,79	72,05	3,60	75,65
BIG farms													
500-800 m long plot													
201 ÷ 360	201	Growing 5,6 m	Ha	4,68	10,29	0,2	6,62	56,68	5,25	2,83	71,38	3,57	74,95
201 ÷ 360	360	Growing 6,7 m	Ha	6,11	15,83	0,2	5,07	87,19	8,07	4,36	104,70	5,23	109,93

Source: own calculations

HERBICIDE

Range tractors (HP)	Tractor power (HP)	Agricultural machine	UM	The working capacity (ha/h)	Diesel fuel consumption (l/ha)	The working capacity (ha/h)	Mechanized costs/work	Cost of fuel and lubricants lei/ha	Wear aggregate	Repair costs	Subtotal	Other costs	Total
Subsistence farms													
<45	45	Sprayer 12 nozzles	Ha	1,01	1,6	0,99	30,69	8,81	0,77	0,44	40,71	2,04	42,75
Semi-subsistence farms													
46 ÷ 80	46	Sprayer 24 nozzles	Ha	3,1	0,93	0,32	10,00	5,12	0,45	0,26	15,82	0,79	16,62
46 ÷ 80	80	Sprayer 32 nozzles	Ha	4,74	1,28	0,21	6,54	7,05	0,61	0,35	14,56	0,73	15,29
SMALL farms													
parcel length <250													
81 ÷ 120	81	Sprayer 32 nozzles	Ha	5,75	1,46	0,17	5,39	8,04	0,70	0,40	14,54	0,73	15,26
81 ÷ 120	120	Sprayer 40 nozzles	Ha	9,31	2,03	0,11	3,33	11,18	0,97	0,56	16,04	0,80	16,85
MEDIUM farms													
250-500 m long plot													
121 ÷ 200	121	Sprayer 40 nozzles	Ha	11,86	2,14	0,08	2,61	11,79	1,03	0,59	16,02	0,80	16,82
121 ÷ 200	200	Sprayer 56 nozzles	Ha	17,89	2,49	0,06	1,73	13,71	1,20	0,69	17,33	0,87	18,20
BIG farms													
500-800 m long plot													
201 ÷ 360	201	Sprayer 60 nozzles	Ha	25,86	2,51	0,04	1,20	13,83	1,20	0,69	16,92	0,85	17,77
201 ÷ 360	360	Sprayer 72 nozzles	Ha	33,29	3,83	0,03	0,93	21,10	1,84	1,05	24,92	1,25	26,17

Source: own calculations

MOUNTAIN AREA SOW 2-8 CM IN MEDIUM SOIL

Range Tractors (HP)	Tractor power (HP)	Agricultural machine	UM	The working capacity (ha/h)	Diesel fuel consumption (l/ha)	Mechanized costs/ work	Cost of fuel and lubricants	Wear aggregate	Repair costs	Sub total	Other costs	Total
Subsistence farms												
<45	45	Drill 4 sections	Ha	0,57	5,15	54,39	28,37	2,83	1,42	87,00	4,35	91,35
Semi-subsistence farms												
46 ÷ 80	46	Drill 6 sections	Ha	0,77	5,90	40,26	32,50	3,25	1,62	77,63	3,88	81,51
46 ÷ 80	80	Drill 8 sections	Ha	2,39	5,98	12,97	32,94	3,59	1,65	51,14	2,56	53,70
Small farms												
parcel length <250												
81 ÷ 120	81	Drill 9 sections	Ha	3,47	6,19	8,93	34,09	3,96	1,70	48,69	2,43	51,13
81 ÷ 120	120	Drill 12 sections	Ha	5,21	7,15	5,95	39,38	4,93	1,97	52,23	2,61	54,85
MEDIUM farms												
250-500 m long plot												
121 ÷ 200	121	Drill 12 sections	Ha	6,52	7,23	4,75	39,82	4,99	1,99	51,56	2,58	54,14
121 ÷ 200	200	Drill 16sections	Ha	9,11	8,61	3,40	47,42	4,74	2,37	57,93	2,90	60,83
BIG farms												
parcel length> 500m												
201 ÷ 360	201	Drill 18sections	Ha	0,07	8,77	2,04	48,31	4,82	2,42	57,59	2,88	60,47
201 ÷ 360	360	Drill 24sections	Ha	0,05	11,65	1,48	64,17	7,46	3,21	76,32	3,82	80,13

Source: own calculations

SOW 2-8 CM IN MEDIUM SOIL

Range Tractors (HP)	Tractor power (HP)	Agricultural machine	UM	The working capacity (ha/h)	Diesel fuel consumption (l/ha)	Mechanized costs/work	Cost of fuel and lubricants	Wear aggregate	Repair costs	Sub total	Other costs	Total
Subsistence farms												
<45	45	Drill 17 rows	Ha	0,72	5,49	43,06	30,24	2,80	1,51	77,61	3,88	81,49
Semi-subsistence farms												
46 ÷ 80	46	Drill 21 rows	Ha	0,85	5,58	36,47	30,73	3,07	1,54	71,81	3,59	75,40
46 ÷ 80	80	Drill 29 rows	Ha	1,19	7,03	26,05	38,72	3,87	1,94	70,57	3,53	74,10
SMALL farms												
parcel length <250												
81 ÷ 120	81	Drill 29 rows	Ha	1,49	8,60	20,81	47,37	4,73	2,37	75,27	3,76	79,04
81 ÷ 120	120	Drill 48 rows	Ha	3,31	8,85	9,37	48,75	12,21	2,44	72,76	3,64	76,40
MEDIUM farms												
250-500 m long plot												
121 ÷ 200	121	Drill 48 rows	Ha	4,21	9,51	7,36	52,38	13,12	2,62	75,49	3,77	79,26

Range Tractors (HP)	Tractor power (HP)	Agricultural machine	UM	The working capacity (ha/h)	Diesel fuel consumption (l/ha)	Mechanized costs/work	Cost of fuel and lubricants	Wear aggregate	Repair costs	Sub total	Other costs	Total
201 ÷ 200	200	Drills 72 rows	Ha	6,66	10,15	4,65	55,91	15,83	2,80	79,19	3,96	83,15
BIG farms parcel length > 500m												
201 ÷ 360	201	Drill 72 rows	Ha	8,59	10,37	3,61	57,12	16,18	2,86	79,76	3,99	83,75
201 ÷ 360	360	Drill 120 rows	Ha	14,94	11,07	2,07	60,97	20,37	3,05	86,47	4,32	90,79

Source: own calculations

FERTILIZE

Tractor power (hp)	Agricultural machine transport	Diesel fuel consumption (l/ha)	Productivity (ha/h)	Mechanized costs/work	Cost of fuel and lubricants	Wear aggregate	Repair costs	Subtotal	Other costs	Total
65	amendments to the standard car administered <3000 kg / ha	2,975	2,745	11,29	16,39	1,49	0,82	29,99	1,50	31,49
65	run-time machine amendements 3000-5000 kg / ha	4,046	2,745	11,29	22,29	2,02	1,11	36,72	1,84	38,55
65	run-time machine amendements 5000-7000 kg / ha	6,545	2,745	11,29	36,05	3,27	1,80	52,42	2,62	55,04
65	run-time machine crystallized amendements <200 kg / ha	1,19	8,715	3,56	6,55	0,60	0,33	11,03	0,55	11,59
65	machine run-time amendements crystallized 200-300 kg / ha	1,547	8,715	3,56	8,52	0,77	0,43	13,28	0,66	13,94
65	machine run-time amendements crystallized 300-400 kg / ha	1,904	8,715	3,56	10,49	0,95	0,52	15,52	0,78	16,30
65	run-time machine granular amendements <200 kg / ha	0,8568	12,45	2,49	4,72	0,43	0,24	7,87	0,39	8,27
65	run-time machine granular amendements 200-300 kg / ha	1,0115	12,45	2,49	5,57	0,51	0,28	8,85	0,44	9,29
65	run-time machine granular amendements 300-400 kg / ha	1,309	12,45	2,49	7,21	0,65	0,36	10,71	0,54	11,25

Source: own calculations

HERBICIDE

Range Tractors (HP)	Tractor power (HP)	agricultural machine	UM	The working capacity (ha/h)	Diesel fuel consumption (l/ha)	Mechanized costs/ work	Cost of fuel and lubricants	Wear aggregate	Repair costs	Subtotal	Other costs	Total
Subsistence farms												
<45	45	sprayer 12 nozzles	Ha	0,91	1,77	34,07	9,75	0,85	0,49	45,15	2,26	47,41
Semi-subsistence farms												
46 ÷ 80	46	sprayer 24 nozzles	Ha	2,73	1,01	11,36	5,56	0,65	0,28	17,84	0,89	18,74
46 ÷ 80	80	sprayer 32 nozzles	Ha	3,94	1,34	7,87	7,38	0,82	0,37	16,44	0,82	17,26
SMALL farms parcel length <250												
81 ÷ 120	81	sprayer 32 nozzles	Ha	4,85	1,55	6,39	8,54	0,95	0,43	16,30	0,82	17,12
81 ÷ 120	120	sprayer 40 nozzles	Ha	7,96	2,17	3,89	11,95	1,11	0,60	17,55	0,88	18,43
MEDIUM farms 250-500 m long plot												
121 ÷ 200	121	sprayer 40 nozzles	Ha	10,17	2,27	3,05	12,50	1,16	0,63	17,33	0,87	18,20
121 ÷ 200	200	sprayer 56 nozzles	Ha	14,81	2,58	2,09	14,21	1,37	0,71	18,38	0,92	19,30
BIG farms parcel length > 500m												
201 ÷ 360	201	sprayer 60 nozzles	Ha	21,91	2,62	1,41	14,43	1,68	0,72	18,24	0,91	19,16
201 ÷ 360	360	sprayer 72 nozzles	Ha	27,93	3,96	1,11	21,81	2,61	1,09	26,63	1,33	27,96

Source: own calculations

CONCLUSIONS

Using the standard costs for sowing and maintenance of vegetable crops by agricultural producers wishing to access public funds in the sessions of the National Rural Development Program 2014-2020, it is aimed at: simplifying the access of support to investment measures in the agricultural field and streamlining the use of public funds; modernizing and increasing the viability of agricultural holdings through their consolidation, openness to the market and processing of agricultural products; Encourage rejuvenation of farmers' generations by supporting the setting up of young farmers.

BIBLIOGRAPHY

1. Fodor A, N, (2011), Research on optimizing the maintenance of agricultural tractors, PhD thesis, Braşov
2. Grisso R, (2014), Predicting Tractor Diesel Fuel Consumption, Virginia Cooperative Extension, 442-073 (BSE-175P)
3. Pintilie C, (1985), Agrotehnica, Didactic and Pedagogical Publishing House, Bucharest
4. http://cursuri-imapa.ucoz.ro/_ld/0/41_113478969-Tehno.pdf