

Economic impact of several variants of additional direct payments for the years 2005 and 2006 on Czech agriculture

Ekonomické dopady několika variant doplňkových přímých plateb pro roky 2005 a 2006 na zemědělství ČR

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Abstract: This paper follows previous papers published by the authors. All the papers are concerned with standard direct payments, the system of administration of direct payments approved for 2004 and their impact on the economy of agricultural enterprises farming in different production areas. The impact of different ways of using additional payments for the years 2005 and 2006 are compared in this report. Attention is mostly paid to ways of the maximum adaptation to the Reform of Common Agricultural Policy.

Key words: standard direct payments, single area payment, sector differentiation, Reform of Common Agricultural Policy

Abstrakt: Příspěvek navazuje na několik předchozích příspěvků publikovaných autory, které se týkaly standardních přímých plateb, schváleného systému administrace přímých plateb pro rok 2004 a jejich dopadů na ekonomiku zemědělských podniků hospodařících v různých výrobních oblastech. V příspěvku jsou porovnávány dopady různých možností aplikace doplňkových plateb pro roky 2005 a 2006. Pozornost je věnována především možnosti maximálního přizpůsobení Reformě společné zemědělské politiky.

Klíčová slova: standardní přímé platby, jednotná platba na plochu, sektorová diferenciacie, Reforma společné zemědělské politiky

INTRODUCTION

In 2002, the analysis was simulated on the state of 152 agricultural enterprises farming in all production areas at the altitude of 200–820 metres. The amount of 7 048 620 thousand CZK from the EU was promised to be paid as direct payments in 2005 while in 2006 the amount would rise to 8 461 994 thousand CZK. The top-up from the state budget was considered to be 5 300 000 thousand CZK (A-variant matches approximately the amount of 2004) and 7 300 000 thousand CZK (B-variant matches the top-up to 30% of the EU payments) (MZe ČR 2003c).

Unit payment per hectare was calculated (direct payments from the EU divided by 3 652 028 hectares of the used area) which makes 1 930 CZK/ha in 2005

and 2 317 CZK/ha in 2006. Additional payments (from national funds) were divided in the same way, i.e. per hectare of used area (SAPS – Single Area Payment Scheme) and in the way of 2004, i.e. keeping sector differentiation and the third way is very similar to the Reform of Common Agriculture Policy (CAP) authorized in the Council by the Ministers of Agriculture in Luxembourg on 26 June 2003 under the participation of the Ministers of candidate countries (Council of EU 2003).

At the end, the most endangered areas in the Czech Republic, concerning the direct payments, are pointed out. One district has been set as a basic area for comparison. It represents the smallest area for which comparable data necessary for direct payment calculation is available.

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Table 1. Comparison of simplified system to standard direct payments

Production area	Maize-growing	Beet-growing	Potato-growing	Potato and oat-growing	Mountain
Standard direct payments in CZK/ha of agricultural land					
2005 (60% of the EU payments)	4 051	3 834	3 717	3 398	2 565
2006 (65% of the EU payments)	4 388	4 154	4 027	3 681	2 779
Simplified payments – considering sector differentiation as it is in 2004 in CZK/ha					
2005 (60% of the EU payments)	4 078	4 185	4 046	3 899	3 570
2006 (65% of the EU payments)	4 465	4 572	4 433	4 286	3 957
2005: standard direct payments	101	109	109	115	139
2006: standard direct payments	102	110	110	116	142
System of single payment per area in CZK/ha					
2005 (60% of the EU payments)	3 929	3 929	3 929	3 929	3 929
2006 (65% of the EU payments)	4 316	4 316	4 316	4 316	4 316
2005: standard direct payments	97	102	106	116	153
2006: standard direct payments	98	104	107	117	155
Comparison (single payments per area : payments in 2004) in %					
2005	96	94	97	101	110
2006	97	94	97	101	109
Main HRDP measures in CZK/ha					
Top-up to LFA	0	61	725	1 108	2 308
Maintenance of permanent pastures	32	137	470	663	1 317
Organic agriculture	0	0	11	0	47
Total in CZK/ha	32	198	1 206	1 771	3 672

Source: Own survey of 152 agricultural enterprises

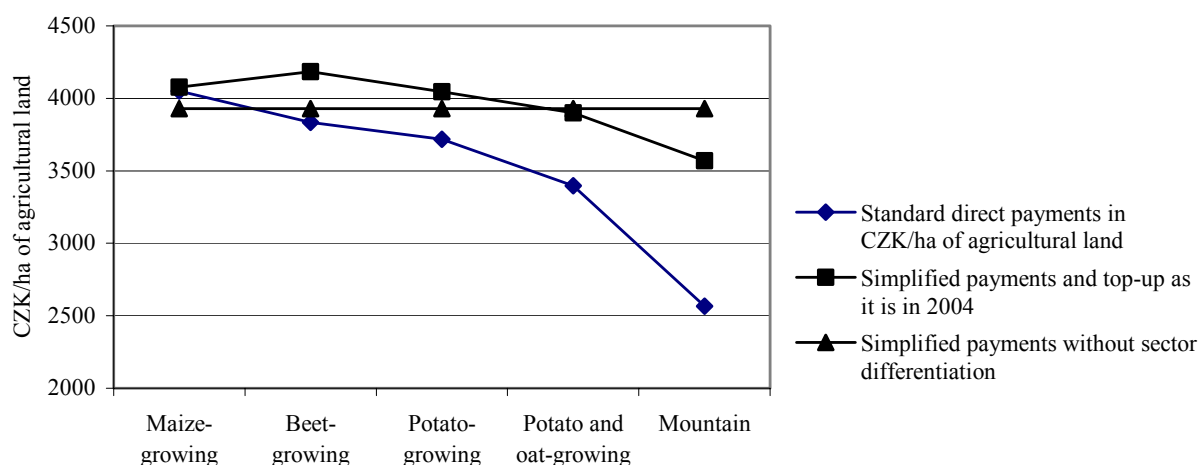


Figure 1. Comparison of simplified system with standard direct payments in 2005

ECONOMIC ANALYSIS OF IMPACTS OF ADDITIONAL PAYMENTS – SIMPLIFIED (AS SAPS)

In each case, all means of direct payments are divided by area and the payments are the same in all enterprises (converted per hectare of agricultural land) and do not decline in less favoured areas which occurred using standard direct payments (Table 1).

Comparing single area payments in an average agricultural enterprise in the set production area to standard direct payments, then in 2005 the means will transfer from favoured to less favoured areas, considering the top-up of 60% (Figure 1).

Single area payments do not depend on the production set for the enterprise. Profitability and demand for products become the criteria for the production set. As a result, production of commodities of sub-

standard efficiency may be limited (suckler cows, hops, milk, potatoes etc.)

ECONOMIC ANALYSIS OF THE IMPACT OF ADDITIONAL PAYMENTS – CONSIDERING SECTOR DIFFERENTIATION AS IT IS IN 2004

Considering sector differentiation of additional payments as it is in 2004, 67% of enterprises would get payments, converted per hectare of agricultural land, higher than in case of single area payments. In maize-growing production area it would be 7 out of 8 enterprises (87.6%), in beet-growing production area 38 out of 41 enterprises (92.7%), 40 out of 59 enterprises in potato-growing area (67.8%), 11 out of 24 enterprises in potato and oat-growing area (45.8%) and only 6 out of 20 enterprises in mountain area (30%).

Table 2. Direct payments in 2005–2006 in CZK/ha of agricultural land

Production areas	Maize-growing	Beet-growing	Potato-growing	Potato and oat-growing	Mountain
<i>Number of enterprises</i>	8	41	59	24	20
<i>Acreage of agricultural land in ha</i>	1 881	1 870	1 868	1 396	1 347
Single payment per ha in 2004 (25%)	1 561	1 561	1 561	1 561	1 561
Single payment per ha in 2005 (30%)	1 930	1 930	1 930	1 930	1 930
Single payment per ha in 2006 (35%)	2 317	2 317	2 317	2 317	2 317
<i>Additional payments in CZK/ha of agricultural land</i>					
Hops	0	9	0	0	0
LU cattle	183	281	388	416	442
Suckler cows	1	15	90	105	285
Sheep, goats	0	0	0	0	12
Arable land A	1 296	1 286	1 080	955	594
Arable land B	1 963	1 949	1 637	1 447	901
<i>Payments in 2005, 2006 considering sector differentiation in CZK/ha</i>					
2005 proposal A (5.3 mld.)	3 410	3 522	3 489	3 407	3 263
2005 proposal B (7.3 mld.)	4 078	4 185	4 046	3 899	3 570
2006 proposal A (5.3 mld.)	3 797	3 909	3 876	3 794	3 650
2006 proposal B (7.3 mld.)	4 465	4 572	4 433	4 286	3 957
<i>Single payments without sector differentiation in CZK/ha</i>					
2005 proposal A (5.3 mld.)	3 381	3 381	3 381	3 381	3 381
2005 proposal B (7.3 mld.)	3 929	3 929	3 929	3 929	3 929
2006 proposal A (5.3 mld.)	3 768	3 768	3 768	3 768	3 768
2006 proposal B (7.3 mld.)	4 316	4 316	4 316	4 316	4 316

Source: Own survey of 152 agricultural enterprises

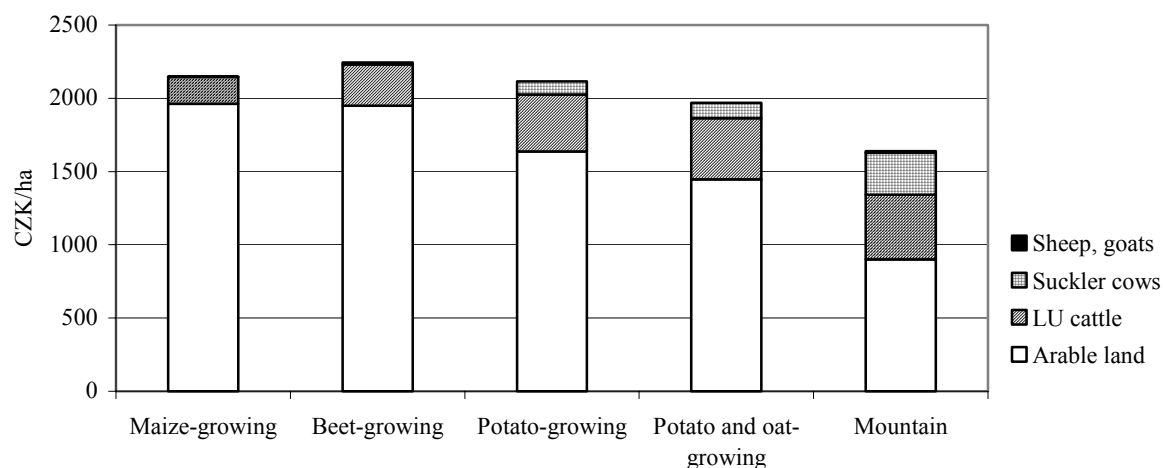


Figure 2. Division of additional payments in 2005 followed those in 2004

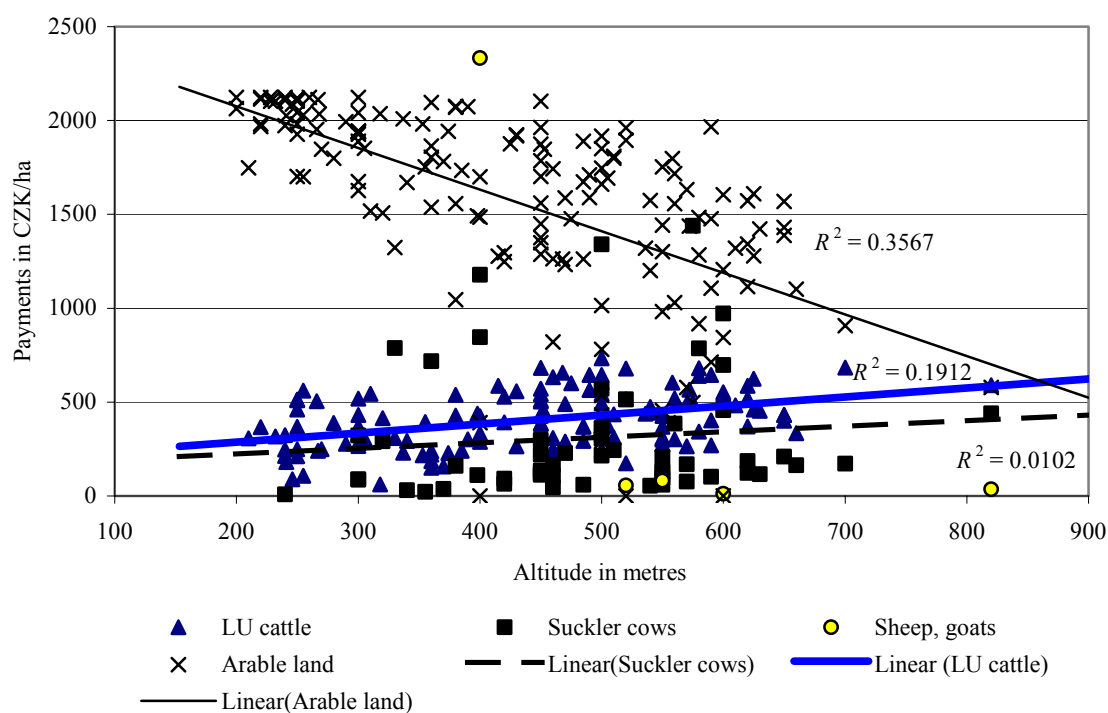


Figure 3. Payments per single commodities at different altitudes

As a result of this analysis, considering the system used in 2004, the funding per hectare of agricultural land decreases in the worse production areas. So the areas with a high share of arable land would receive a greater funding (Table 2).

In case there is the amount of 7.3 billion CZK to top-up the direct payments available in 2005, then the additional payment CZK/ha per agricultural land will make 2 000. As is apparent from Figure 2, this system would be more favourable for enterprises farming in potato and oat-growing and mountain production

areas as these enterprises do not reach 2 000 CZK using sector differentiation.

No doubt the advantage of this system is a support for uneconomic commodities, mainly suckler cows, cattle, sheep and goats (Figure 3). In case financial means are divided per area for a longer period, the commodities mentioned above will be reduced which does not correspond to the present state agricultural policy.

Further advantage of this system could be seen in dividing all the funding (with no remains) intended for direct payments.

Table 3. Enterprises of different share of permanent pastures on agricultural land

	Share of permanent pastures on agricultural land (%)										
	0	up to 10	10–20	20–30	30–40	40–50	50–60	60–70	70–80	80–90	90– 100
Number of enterprises	12	40	26	22	22	8	6	4	6	3	3
Average altitude	252	321	426	479	528	538	545	537	586	483	507
Average acreage of agricultural land	1 190	2 028	2 311	1 821	1 333	1 325	1 314	1 198	1 319	1 404	690
Average acreage of arable land	1 146	1 911	1 944	1 364	854	753	609	461	324	188	0
Average acreage of permanent pastures	0	85	344	445	466	572	704	737	988	1 207	690
Single payment for agricultural land	1 561	1 561	1 561	1 561	1 561	1 561	1 561	1 561	1 561	1 561	1 561
Payment for arable land	1 349	1 320	1 178	1 049	898	796	650	539	344	188	0
Hops	0	9	0	0	0	0	0	0	0	0	0
Suckler cows	1	8	45	63	127	125	172	514	422	520	570
Cattle	141	260	388	418	448	485	506	502	391	386	199
Sheep and goats	0	0	0	0	0	0	0	0	1	9	14
Total direct payment	3 053	3 158	3 172	3 091	3 035	2 967	2 889	3 116	2 719	2 665	2 344
LFA	0	52	345	822	1 261	1 626	1 905	2 480	3 030	3 425	4 370
Permanent pastures	0	80	284	511	753	892	1 132	1 576	1 640	2 021	2 571
Organic agriculture	0	0	0	17	0	0	170	194	111	855	1 022
HRDP total	0	132	628	1 350	2 014	2 518	3 208	4 250	4 782	6 301	7 963

Source: Own survey of 152 agricultural enterprises

Enterprises divided according to the share of permanent pastures in agricultural land

In the set of 152 agricultural enterprises, an average enterprise can be characterized as an enterprise of average acreage of 1 726 ha, having 59.4% of LFA (Less Favoured Areas, in the Czech Republic it is 58.7%), with 25.2% of permanent pastures (22.5% in CR) and with stocking rate of 0.43 LU/ha (0.28% in CR). Direct payments will be 3 087 CZK/ha in the average enterprise in 2004 and payments within HRDP (Horizontal Rural Development Plan) will be 1 200 CZK/ha.

Enterprises with no permanent pastures

Dividing the enterprises surveyed into the groups of the same share of permanent pastures, then the enterprises with no permanent pastures farm only in production areas (maize-growing and beet-growing production areas) and only 1 out of 12 enterprises farms in less favoured area. Stocking rate of these

enterprises is 0.11 LU/ha of agricultural land on average. The amount of subsidies in these enterprises depends on the financial rate for arable land, i.e. on the financial amount from national funds to top-up the direct payments. Direct payments per hectare of agricultural land will be on average in these enterprises (99%) and are 3 053 CZK/ha of agricultural land. This amount includes the payment for arable land of 1 349 CZK/ha, payments in livestock production (suckler cows, cattle, sheep) of 142 CZK/ha. Within the surveyed HRDP measures these enterprises will not be entitled to ask for the subsidies (Table 3).

Enterprises with the share of permanent pastures up to 10%

This is the most numerous group of enterprises, 40 of the total number (Figure 4). They are mostly enterprises farming in maize-growing and beet-growing areas although 9 enterprises farm in potato-growing

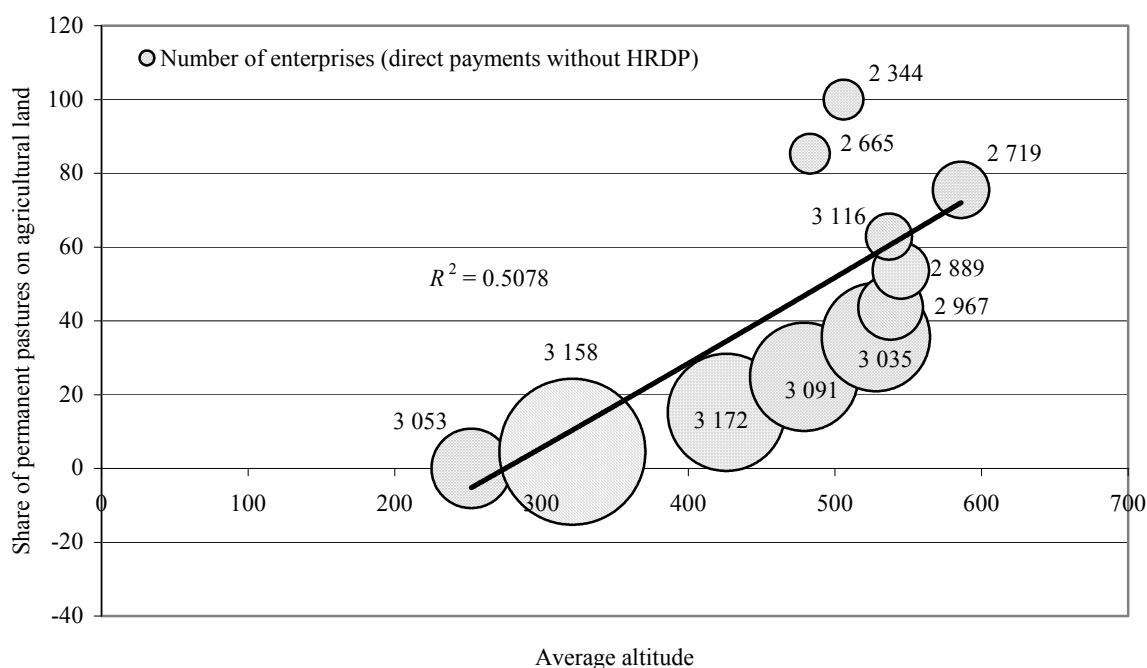


Figure 4. Enterprises of different shares of permanent pastures in agricultural land

areas, two of them are 100% in LFA and 10 enterprises farm partly in LFA. Average stocking rate is 0.32 LU (Livestock Unit)/ha. The amount of subsidies will depend on the financial rate for arable land as it is with the enterprises lacking permanent pastures. However, direct payments will be higher as they are mostly enterprises breeding cattle. Direct payments represent the average of 3 158 CZK/ha including payment for arable land of the average of 1 320 CZK/ha and payments in livestock production (suckler cows, cattle, sheep) of 268 CZK/ha.

Payments within the HRDP will be insignificant in these enterprises (11% of the average) compared to those with higher share of permanent pastures. Concerning the enterprises of this group, the remarkable difference in payments depends only on stocking rate as the rate of cultivated land is rather high in all enterprises.

Enterprises with the share of permanent pastures in the range 10–20%

Enterprises with the share of permanent pastures in the range 10–20% are mostly those farming in potato-growing and beet-growing areas, 3 enterprises farm in potato and oat-growing area. Only 6 enterprises out of 26 farm totally in the LFA, most enterprises have, at least, a part of their acreage in LFA. As a result of the lower share of cultivated land, the payment for arable land decreases. However, this loss is

compensated by payment per cattle (average stocking rate in these enterprises is 0.44 LU/ha) and total direct payments are higher than in other groups of agricultural enterprises (102.8% in average) and are 3 172 CZK/ha of agricultural land including payment for arable land an average of 1 178 CZK/ha and payments in livestock production (suckler cows, cattle, sheep) of 433 CZK/ha. Payments from HRDP 628 CZK/ha (52.4% of the average) have an unimportant influence on total subsidies.

Enterprises with the share of permanent pastures in the range 20–30%

Enterprises with the share of permanent pastures in the range 20–30% farm mainly in potato and potato and oat-growing areas, 2 enterprises farm in beet-growing area. The acreage of most enterprises includes LFA, usually 70–100%. As a result of a lower share of cultivated land, payment for arable land decreases, payment for cattle goes up (average stocking rate in these enterprises is 0.50 LU/ha) so total direct payments equal the average (100.1%) and are about 3 091 CZK/ha of agricultural land including again payment for arable land of 1 049 CZK/ha in average and payments in livestock production (suckler cows, cattle, sheep) of 481 CZK/ha. Payments within HRDP of an average of 1 350 CZK/ha (112.5%) are above average and much higher than those in the groups with lower rate of grassing.

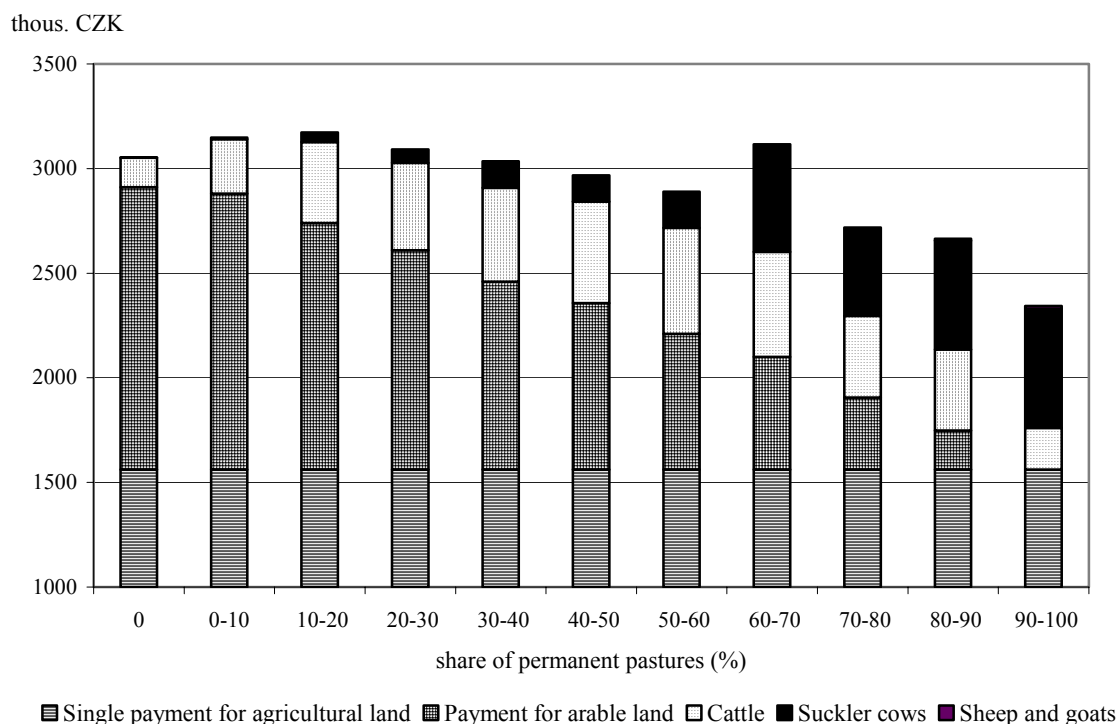


Figure 5. Development of different payments according to share of permanent pastures

Enterprises with the share of permanent pastures in the range 30–40%

Enterprises with the share of permanent pastures in the range 30–40% mostly farm in potato-growing and potato and oat-growing areas, 4 enterprises farm in mountain area. Except for 2 enterprises (95% of LFA), all enterprises farm totally in LFA. Payment for arable land is again lower than in the previous group but payments per cattle increase more slowly (average stocking rate is 0.55 LU/ha) so the total direct payments of 3 035 CZK/ha are slightly below average. Within these payments, payment for arable land is 898 CZK/ha on average; payments in livestock production (suckler cows, cattle, sheep) are 575 CZK/ha (Figure 5). Payments within HRDP of 2 014 CZK/ha (167.8% of average) play an important role.

Enterprises with the share of permanent pastures in the range 40–50%

Enterprises with the share of permanent pastures in the range 40–50% farm by 97% in LFA and most enterprises farm totally in LFA. They are mostly enterprises farming in potato-growing and potato and oat-growing areas at an average altitude of 538 metres. Direct payments of 2 967 CZK/ha are 4% lower than the average. Within this amount, payment for arable land is 796 CZK/ha on average and payments in

livestock production (suckler cows, cattle, sheep) are 610 CZK/ha. It means commodity payments cannot compensate the loss caused by higher share of permanent pastures, even if the stocking rate is 0.53 LU/ha.

Enterprises with the share of permanent pastures in the range 50–60%

Enterprises with the share of permanent pastures in the range 50–60% have an average share of the acreage in LFA 96% and an average stocking rate 0.6 LU/ha. Average direct payments per hectare are 2 889 CZK/ha of agricultural land which is 6.4% lower than the average. Within these payments, payment for arable land is 650 CZK/ha on average and payments in livestock production (suckler cows, cattle, sheep) are 678 CZK/ha. Payments within the HRDP per hectare of agricultural land are 11% higher than direct payments. So subsidies within the HRDP can have an outstanding importance for enterprises with the share of permanent pastures exceeding 50%.

Enterprises with the share of permanent pastures in the range 60–70%

There are only 4 enterprises with the share of permanent pastures in the range 60–70% having significant share of suckler cows and 98% share of acreage in

LFA. Average direct payments of 3 116 CZK/ha are slightly above average due to payments per suckler cow and cattle (101%). Within these payments, payment for arable land is 539 CZK/ha in average and

payments in livestock production (suckler cows, cattle, sheep) are 1 016 CZK/ha. Payments within HRDP are 4 250 CZK/ha in average so total subsidies are 72% higher than the average.

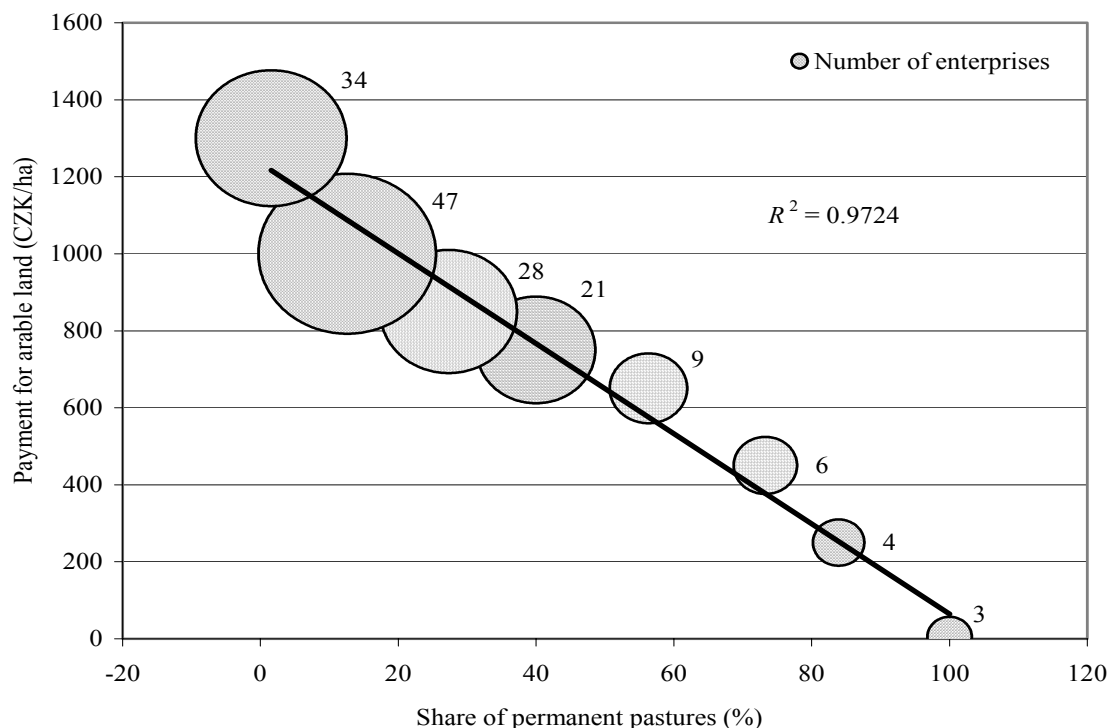


Figure 6. Enterprises with different payments for arable land depending on permanent pastures

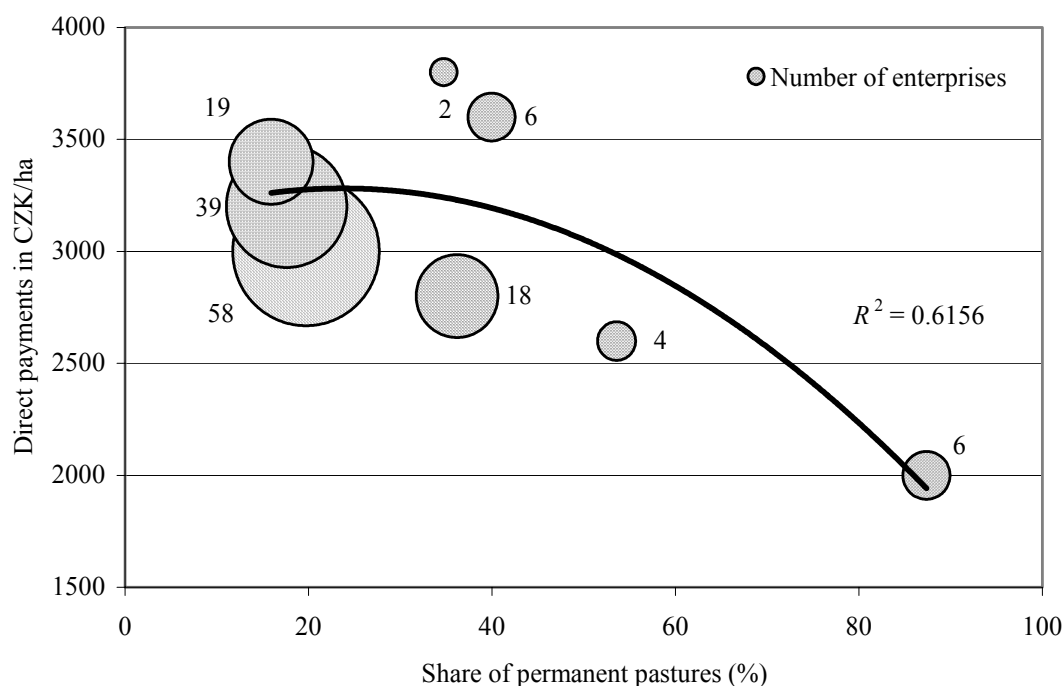


Figure 7. Enterprises according to direct payments and share of permanent pastures

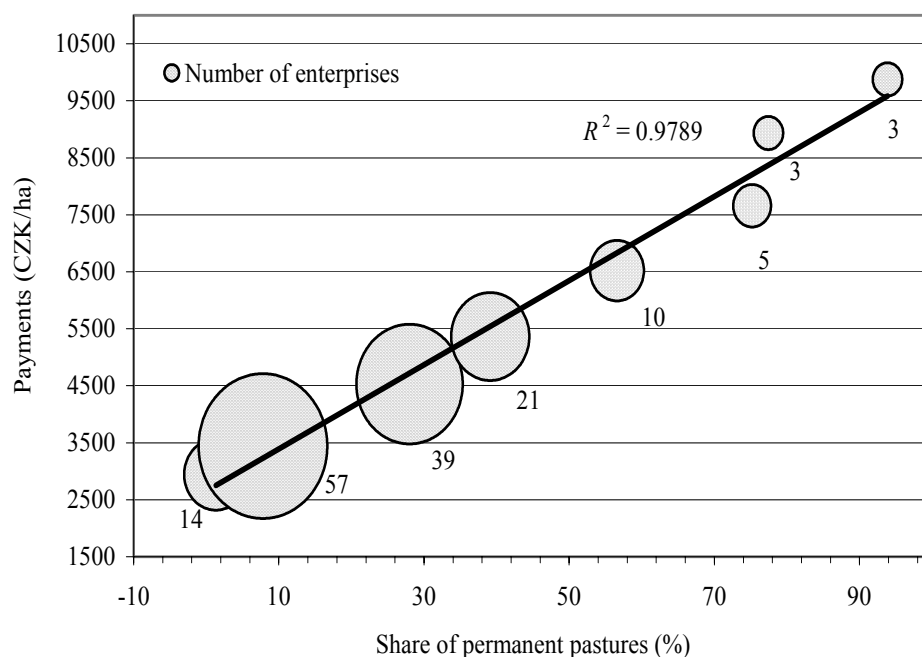


Figure 8. Enterprises according to amount of payments (including HRDP) and share of permanent pastures

Enterprises with the share of permanent pastures in the range 70–80%

There are 6 enterprises in this group farming hundred per cent in LFA, e.i. in potato-growing, potato and oat-growing and mountain areas. Stocking rate is 0.50 LU/ha and payments for cattle are not as high as in the previous group, payment for arable land decreases, so direct payments reach only 88% of the average at the amount of 2 719 CZK/ha of agricultural land. Within these payments, payment for arable land is 344 CZK/ha in average and payments in livestock production (suckler cows, cattle, sheep) are 814 CZK/ha. Average payments within the HRDP are 4 782 CZK/ha of agricultural land.

Enterprises with the share of permanent pastures in the range 80–90%

This group of enterprises also farms 100% in LFA, mostly in mountain area. Three enterprises can be found in this group, stocking rate of which is 0.49 LU/ha. Payment for arable land is really insignificant and equals to 188 CZK/ha, stocking rate is almost the same as in previous groups so direct payments decrease to 2 665 CZK/ha of agricultural land. Payments in livestock production (suckler cows, cattle, sheep) are 906 CZK/ha. Payment per suckler cow is really significant, it is 520 CZK/ha of agricultural land.

Enterprises with the share of permanent pastures of 100%

Further 3 enterprises do not have arable land and direct payments are made only by single area payment and payments in livestock production. Stocking rate is rather low in these enterprises due to low grassing (0.45 LU/ha) and the highest payment is that per suckler cow (570 CZK/ha) although this payment is also quite insignificant. Direct payments of 2 344 CZK/ha reach only 76% of the average including payments in livestock production are 783 CZK/ha and single area payment makes the rest. These enterprises will depend on payments within the HRDP as these subsidies have to compensate not only unfavourable impact of differential rent but significant decrease of direct payments as well.

Together with higher rate of cultivated land, both payments for arable land (Figure 6) and total direct payments (Figure 7) decrease. In only some enterprises they are compensated by higher payments in livestock production, mostly by payments for suckler cows.

Altitude and acreage share in LFA grows in dependence on rising share of permanent pastures. As shown in Figure 8, in line with it, total subsidies rise as well thanks to main measures of the HRDP. The results are just approximative, because the watched set of farms with the share of permanent pastures higher than 60% is not representative.

Enterprises according to their share of LFA compared with total acreage of agricultural land

The share of LFA compared with agricultural land is 59% on average, almost the same as in the CR as a whole (58.7%).

Enterprises farming in LFA which represents more than 90% of their acreage

The share of LFA in 74 out of 152 surveyed enterprises exceeds 90% (Figure 9). Due to the high share of permanent pastures in these enterprises which is

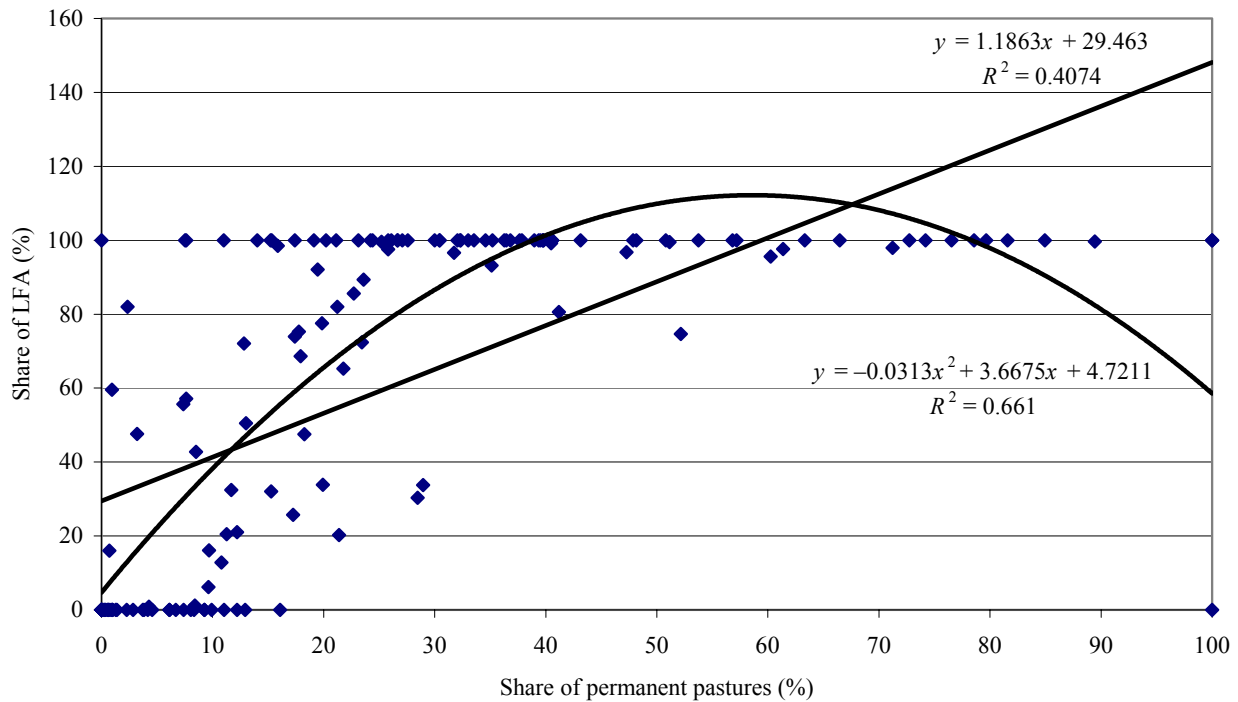


Figure 9. Share of LFA in dependence on the share of permanent pastures

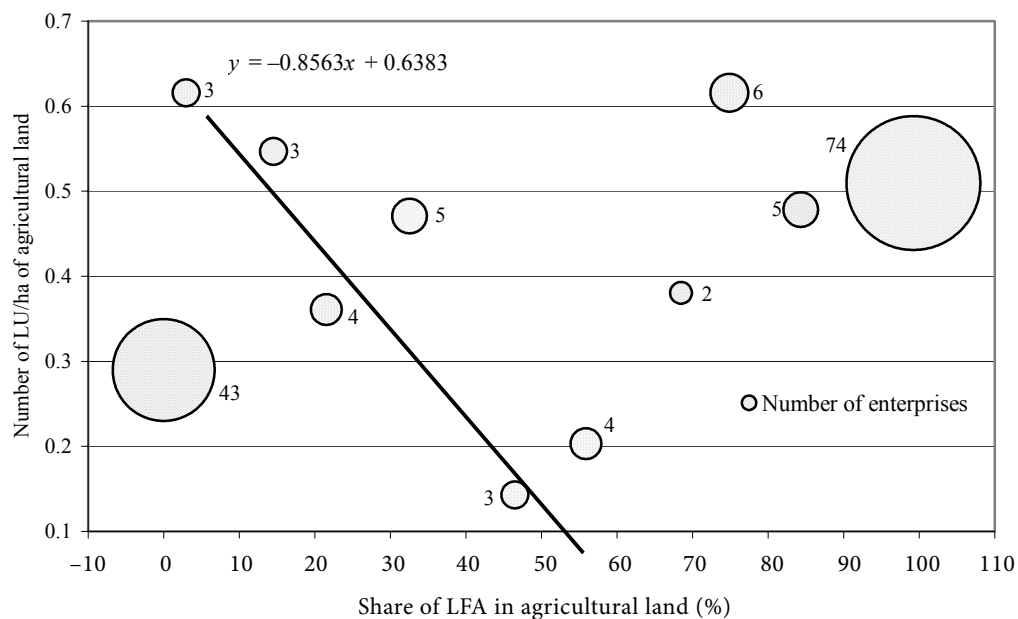


Figure 10. Enterprises divided according to LFA and stocking rate

Table 4. Enterprises according to acreage share in LFA compared to total acreage of agricultural land

	Share LFA/agricultural land (%)										
	0	up to 10	10–20	20–30	30–40	40–50	50–60	60–70	70–80	80–90	90– 100
Number of enterprises	43	3	3	4	5	3	4	2	6	5	74
Average altitude	279	328	458	313	352	326	481	480	466	436	527
Average acreage of agricultural land	1 701	1 781	1 553	2 932	2 978	2 213	3 897	1 906	2 103	1 647	1 428
Average acreage of arable land	1 598	1 655	1 411	2 307	2 463	1 980	3 621	1 561	1 654	1 255	894
Average acreage of permanent pastures	67	125	111	478	515	195	262	345	443	354	553
Single payment per agricultural land	1 561	1 561	1 561	1 561	1 561	1 561	1 561	1 561	1 561	1 561	1 561
Payment for arable land	1 316	1 302	1 273	1 102	1 158	1 254	1 302	1 147	1 102	1 068	853
Hops	10	0	0	0	0	0	0	0	0	0	0
Suckler cows	10	0	0	45	37	0	0	44	117	48	167
Cattle	246	523	465	307	400	122	173	323	523	407	433
Sheep and goats	0	0	0	0	0	0	0	0	0	0	1
Total direct payments	3 143	3 386	3 298	3 015	3 157	2 936	3 036	3 076	3 303	3 083	3 015
LFA	0	69	52	229	458	146	214	534	611	653	1 485
Permanent pastures	83	146	143	346	312	148	103	390	428	435	847
Organic agriculture	0	0	0	0	46	0	0	0	0	0	84
Total HRDP	83	215	195	576	815	294	317	924	1 039	1 088	2 416

Source: Own survey of 152 agricultural enterprises

39% of the (republic average is 22.5%), direct payments in these enterprises are slightly substandard (97%) at the amount of 3 015 CZK/ha. Stocking rate is rather high (0.51 LU/ha) so the payments for cattle are quite significant (601 CZK/ha). Total payments per hectare of agricultural land equal 5 430 CZK/ha in average including payments within HRDP of 44.5%.

If this group of enterprises is divided according to their share of permanent pastures:

- Direct payments equal 3 152 CZK/ha in the enterprises with the share of permanent pastures to 30% including payment for arable land of 1 118 CZK/ha, payments in livestock production (suckler cows, cattle, sheep) of 473 CZK/ha payments within HRDP equal 1 148 CZK/ha.
- Direct payments equal 3 006 CZK/ha in enterprises with the share of permanent pastures 30–70%. Payment for arable land is on average 810 CZK/ha, payments in livestock production (suckler cows, cattle, sheep) are 636 CZK/ha. Payments within HRDP are 2 514 CZK/ha.

– Direct payments equal 2 649 CZK/ha in enterprises with the share of permanent pastures above 70%. Payment for arable land is 248 CZK/ha on average, payments in livestock production (suckler cows, cattle, sheep) are 840 CZK/ha. Payments within HRDP are 5 700 CZK/ha.

Enterprises farming in favourable areas

On the contrary, there are 43 enterprises farming in favourable areas with no share of LFA (Table 4). Direct payments in these enterprises exceed the average by 2% (3 143 CZK/ha) and payments within measures of the HRDP are insignificant on average (2.6%). They are mostly enterprises farming in beet-growing and maize-growing areas including 3 enterprises farming in potato-growing area two of which have a low share of permanent pastures, substandard stocking rate and their payment structure equals that in beet-growing area, i.e. direct payments exceed the average but payments within the HRDP are low and total payments

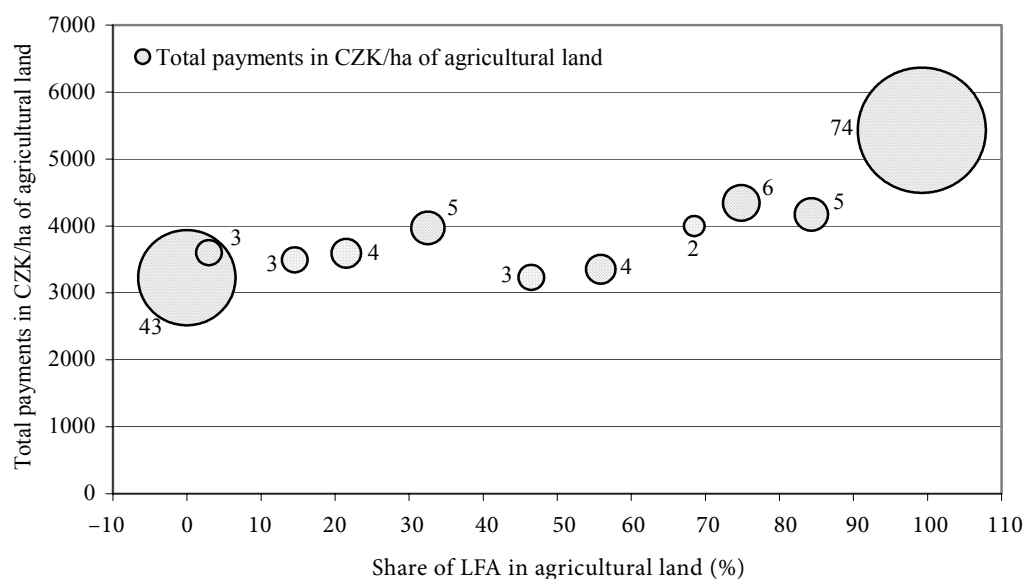


Figure 11. Enterprises according to share of LFA and payments in CZK/ha

reach only 75% of average payments of all surveyed enterprises. On the contrary, the third enterprise, although farming out of LFA, has a high share of permanent pastures and above-average stocking rate and its payments exceed the average by 14%. The other groups are less important in numbers and their total payments appear in the average range.

As obvious from Figures 10 and 11, enterprises can be divided into 3 groups where:

- First group share of LFA is up to 30% of their acreage. Average direct payments in this group equal 3 200 CZK/ha including payment for arable land at the amount of 1 230 CZK/ha, payments in livestock production (suckler cows, cattle, sheep) are 407 CZK/ha on average and payments within the HRDP 376 CZK/ha.

- Enterprises with the share of LFA exceeding 60%. Their direct payments equal 3 119 CZK/ha on average including payment for arable land 1 043 CZK/ha, payments in livestock production (suckler cows, cattle, sheep) on average 516 CZK/ha and payments within the HRDP 1 367 CZK/ha on average.
- The most endangered enterprises because of their less favourable conditions for farming and quite low payments can be pointed to as those with the share of LFA in the range 40 to 60%. Direct payments of 2 986 CZK/ha are substandard (95–98%), payment for arable land is 1 278 CZK/ha, payments in livestock production (suckler cows, cattle, sheep) are on average 147 CZK/ha. Payments within the HRDP of 305 CZK/ha reach 25% of the average. They are mostly enterprises with low share of permanent pastures,

Table 5. Rates corresponding to Third reform of the CAP in CZK/unit

Commodity	Results of negotiations	Rate in CZK		Total CZK	
		2005	2006	2005	2006
Arable crops (ha) 25%	2 253 598	1 191	1 290	2 684 035 218	2 907 141 420
Suckler cows (head) 100%	90 300	3 600	3 900	325 080 000	352 170 000
Special payment for cattle (head) 75%	244 349	2 835	3 071	692 729 415	750 395 779
Slaughter payment-cattle (head) 100%	483 382	576	624	278 428 032	301 630 368
calves (head) 40%	27 380	360	390	9 856 800	10 678 200
Slaughter payment-cattle (head) 100%	483 382	1440	1560	696 070 080	754 075 920
calves (head) 100%	27 380	900	975	24 642 000	26 695 500
Sheep (head) 50%	66 733	189	205	12 612 537	13 680 265

about 8%, farming in potato-growing area with low stocking rate, 0.2 LU/ha on average. Low share of permanent pastures cause low payments within the HRDP (only 9% of total payments). Total payments including the HRDP in these enterprises are 3 291 CZK/ha and reach the payments of enterprises farming in favourable conditions.

ECONOMIC ANALYSIS OF IMPACT OF ADDITIONAL PAYMENTS – MAXIMUM ADAPTATION TO THIRD REFORM OF CAP

The Third reform of the Common Agricultural Policy was discussed at the meeting of Council of Ministers of Agriculture in Luxembourg on 26 June 2003. All ministers of candidate countries participated in trying to shift a great deal of direct payments to single payments. This proposal did not receive enough support as the apprehension of breaking stability in production exceeded its advantages. So member states are entitled to use some alternatives of direct payments as followed:

- up to 25% of direct payments per crop of arable land fixed on production or 40% of additional payments per wheat crop
- up to 50% of direct payments fixed on production with sheep and goats including payments per LFA
- up to 100% of suckler cow bonus and 40% of slaughter bonus (all other payments of cattle breeding will become a part of single payment) – variant I

or

- up to 100% of slaughter bonus – variant II

or

- 75% of special bonus per oxen and bulls.

Caculation:

For the years 2005 and 2006, the rates for commodities mentioned above were set as a percentual share of maximum rate (based on standard direct payments, i.e. 60% in 2005 and 65% in 2006) on condition the rest of total amount was divided for area 3 652 028 ha (Table 5).

As a total financial amount, all means planned for the EU direct payments were considered, i.e. 7 048 620 thous. CZK in 2005, 8 461 994 thous. CZK in 2006 and top-up payments from national funds, i.e. 7 300 000 thousand CZK (top-up of 30% of the EU payments).

Variant I

A member state can decide to keep 25% of direct payments for arable crops, 50% of direct payments for sheep and goats, 100% of bonus for suckler cows and 40% of slaughter bonus. Other means become a part of single area payment.

Following the calculation, the rate of single payments for area would be 3 023 CZK/ha in 2005 and 3 334 CZK/ha in 2006.

Compared to single area payment, payments in surveyed enterprises range from 81% to 114%. In 56% of enterprises the payments are lower when using single payments for area (Table 6).

- *Enterprises with the payment lower than SAPS by 0–10%*

In 79 enterprises, payments calculated in this variant will reach 90–100% of single payments which is 3 800 CZK/ha of agricultural land on average.

- *Enterprises with the payment lower than SAPS by more than 10%*

Six enterprises farming mostly in mountain area get lower payments calculated in this variant than they would get through single area payment by more than 10% which is 3 369 CZK/ha of agricultural land. The rate of cultivated land in these enterprises is below 50% and their stocking rate below 0.05 LU/ha.

- *Enterprises with the payment higher than SAPS by 0–5%*

Payments in this variant range from 100 to 105% of the average in 45 enterprises farming in all production areas and equal 4 017 CZK/ha of agricultural land in 2005.

- *Enterprises with the payment higher than SAPS by more than 5%*

Direct payments in 22 enterprises farming mostly in potato-growing and beet-growing areas exceed single area payments by more than 5% and equal on average 4 244 CZK/ha of agricultural land. They are mainly enterprises with the rate of cultivated land more than 80% or enterprises with significantly above-average rate of suckler cows.

Variant II

A member state can keep 25% of direct payments for arable crops, 50% of direct payments for sheep and goats and 100% of slaughter bonus. The other means become a part of single area payment.

Calculated in the above way, the rate of single area payment would be 2 993 CZK/ha in 2005 and 3 302 CZK/ha in 2006.

Payments in this variant range from 80.6% to 126.5% of single area payment in the enterprises and they exceed single area payment in 74 enterprises (49%).

- *Enterprises with the payments higher than SAPS by 5%*

In 19 enterprises (12.5%) farming mostly in potato-growing, beet-growing and maize-growing areas the payments in this variant are 5% higher and equal 4 263 CZK/ha of agricultural land on average. These enterprises are characterized by

Table 6. Enterprises divided according to payments adapted to the Reform of CAP in 2005 compared to SAPS

Difference from SAPS (%)	Lower by 10% and more	Lower by 0–10%	Higher by up to 5%	Higher by more than 5%
<i>Variant I</i>				
Number of enterprises	6	79	45	22
Stocking rate (LU/ha)	0.531	0.462	0.408	0.303
Rate of cultivated land (%)	26	72	82	76
Payment for arable land	235	672	841	821
Payments in livestock production	111	105	153	400
Total direct payments	3 369	3 800	4 017	4 244
<i>Variant II</i>				
Number of enterprises	19	59	55	19
Stocking rate (LU/ha)	0.513	0.430	0.389	0.432
Rate of cultivated land (%)	29	73	87	83
Payment for arable land	284	693	857	892
Payments in livestock production	135	82	167	379
Total direct payments	3 413	3 768	4 018	4 264
<i>Variant III</i>				
Number of enterprises	20	71	48	13
Stocking rate (LU/ha)	0.552	0.439	0.376	0.341
Rate of cultivated land	31	72	89	93
Payment for arable land (CZK/ha)	293	691	894	964
Payments in livestock production (CZK/ha)	24	79	116	254
Total in CZK/ha	3 318	3 771	4 011	4 219

Source: Own survey of 152 agricultural enterprises

high rate of cultivated land and (or) above-average stocking rate. The rate of cultivated land is 87.2% and stocking rate 0.86 LU/ha in the enterprise with the highest payment per hectare.

– *Enterprises with the payment higher than SAPS by 0–5%*

Payments of 4 017 CZK/ha on average are in this variant 0–5% higher in 55 enterprises farming in all production areas.

– *Enterprises with the payment lower than SAPS by 0–10%*

Lower payments than using single area payment can be seen in 78 enterprises (51%). The payments in 59 of them farming in all production areas are lower maximum by 10%. The average payment per hectare is 3 767 CZK/ha of agricultural land.

– *Enterprises with the payment lower than SAPS by more than 10%*

The payments are more than 10% higher in 19 enterprises (12.5%). These enterprises are characterized

by low rate of cultivated land and they are mainly enterprises farming in potato and oat-growing and mountain areas. Payment per hectare of agricultural land is on average 3 412 CZK/ha.

Variant III

A member state decides to keep 25% of direct payments for arable crops, 50% for direct payments for sheep and goats and 75% of special bonus for bulls. The other means become a part of single area payment.

The rate of single area payment according to the above calculation is 3 001 CZK/ha in 2005 and 3 311 CZK/ha in 2006.

Payments according to this variant range from 77% to 119.1% of single area payment in the enterprises. These payments are higher than single area payment in 61 enterprises (40%) and lower than single area payment in 91 enterprises (60%).

– *Enterprises with the payment higher than SAPS by more than 5%*

In thirteen enterprises (8.6%) payments are more than 5% higher and equal 4 061 CZK/ha of agricultural land on average. These enterprises farm in beet-growing, maize-growing and potato-growing areas, with the rate of cultivated land more than 85% but their stocking rate in these enterprises is very different – ranging from 0 to 0.86 LU/ha.

– *Enterprises with the payment lower than SAPS by more than 10%*

Twenty enterprises (13%) despite high stocking rate (0.5 LU/ha on average) have more than 10% lower payments, which equal on average 3 318 CZK/ha of agricultural land. These enterprises farm mostly in mountain and potato and oat-growing areas with a low rate of cultivated land. The enterprise reaching only 77% of single area payment (3 023 CZK/ha of agricultural land) farms in mountain area on permanent pastures and deals with sheep and suckler cows breeding. This enterprise did not reach single area payment even in previous variants.

Comparing the results of the three mentioned variant analyses, it is obvious that enterprises dealing with the production of granted commodities will be disadvantaged most when compared with the

single area payment (Figure 12). The payments of all variants almost equal standard direct payments although the differences in payments converted per hectare of agricultural land in the enterprises are evened out by dividing all the income for area. All three variants work analogous to the system approved for 2004.

Distinct advantage can be seen in the preparation of both farmers and payment agencies for the system used in EU member states if the state decides to keep a partly granted production.

A disadvantage of this variant is the much more demanding administration approaching that of standard direct payments. Co-essential disadvantage is poorly granted sheep and cattle breeding which cannot match with the grants for arable crops so the enterprises dealing with production of these commodities would prefer the system of single area payment. So the question is if the payments drawn like that can motivate farmers to keep present livestock population. These enterprises farm mostly in LFA and will be granted within the HRDP and motivated to keep grassing and breed minimum livestock population. However, livestock population can decrease, as direct grants for cattle and sheep breeding are low and do not compensate high expenses as well as unfavourable conditions of sales.

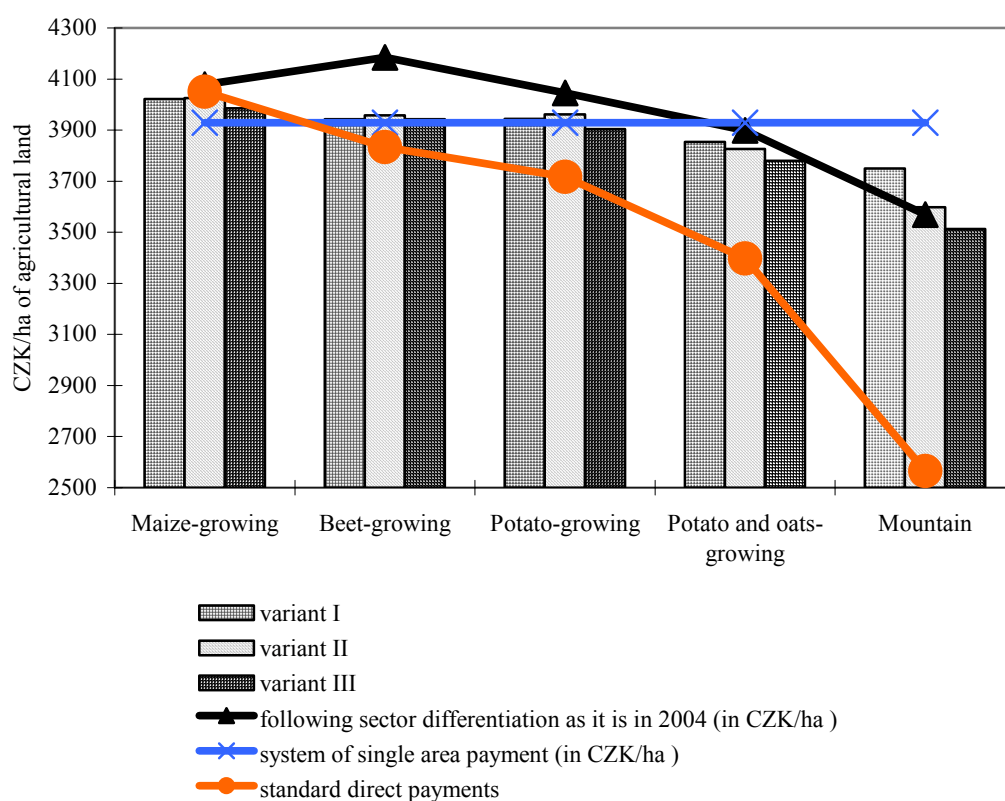


Figure 12. Payments adapted to the reform of CAP in 2005 in CZK/ha

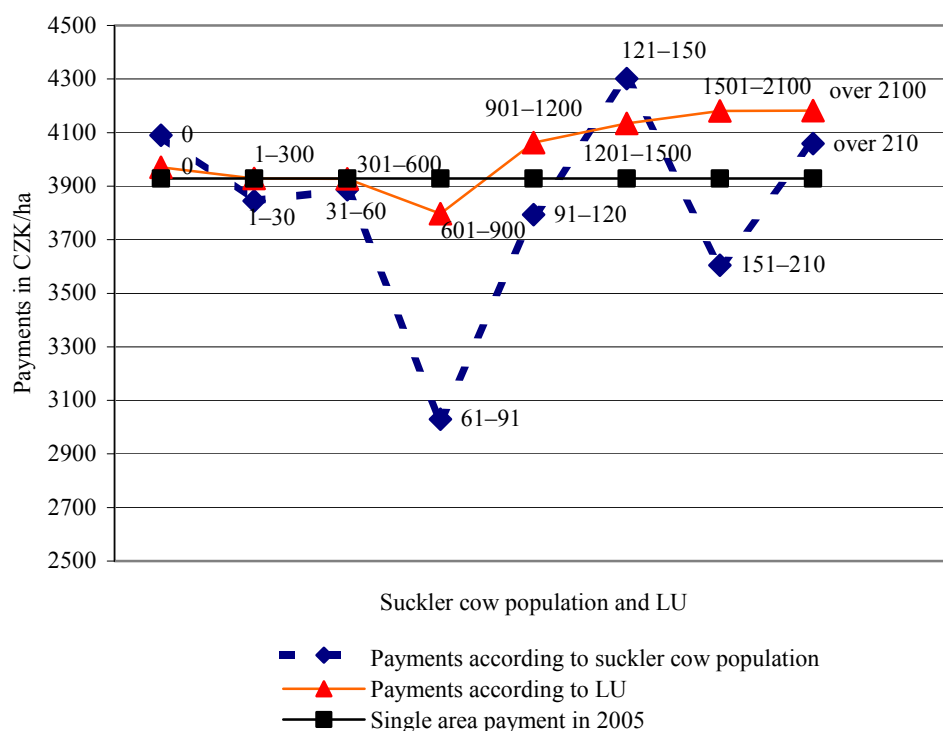


Figure 13. Payment dependence on suckler cow population and LU

The impact of all variants on agricultural enterprises will be comparable. Upland area is the only exception with the enterprises with low rate of cultivated land and rather high suckler cow rate. Variant I is unambiguously applicable in this area, i.e. keeping 100% of

grant for suckler cows and 40% of grant for slaughter bonus (Figure 12).

Enterprises according to suckler cow population and LU and direct payment development are figured in Figure 13. As seen from this graph, payments will

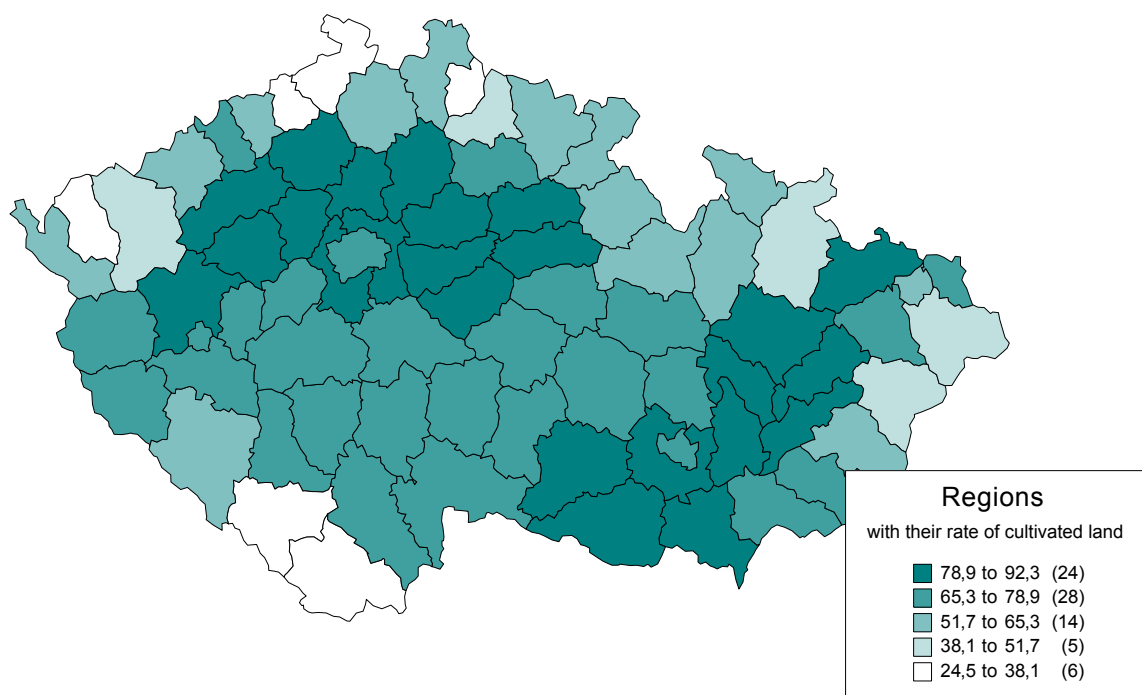


Figure 14. Rate of cultivated land in Czech regions

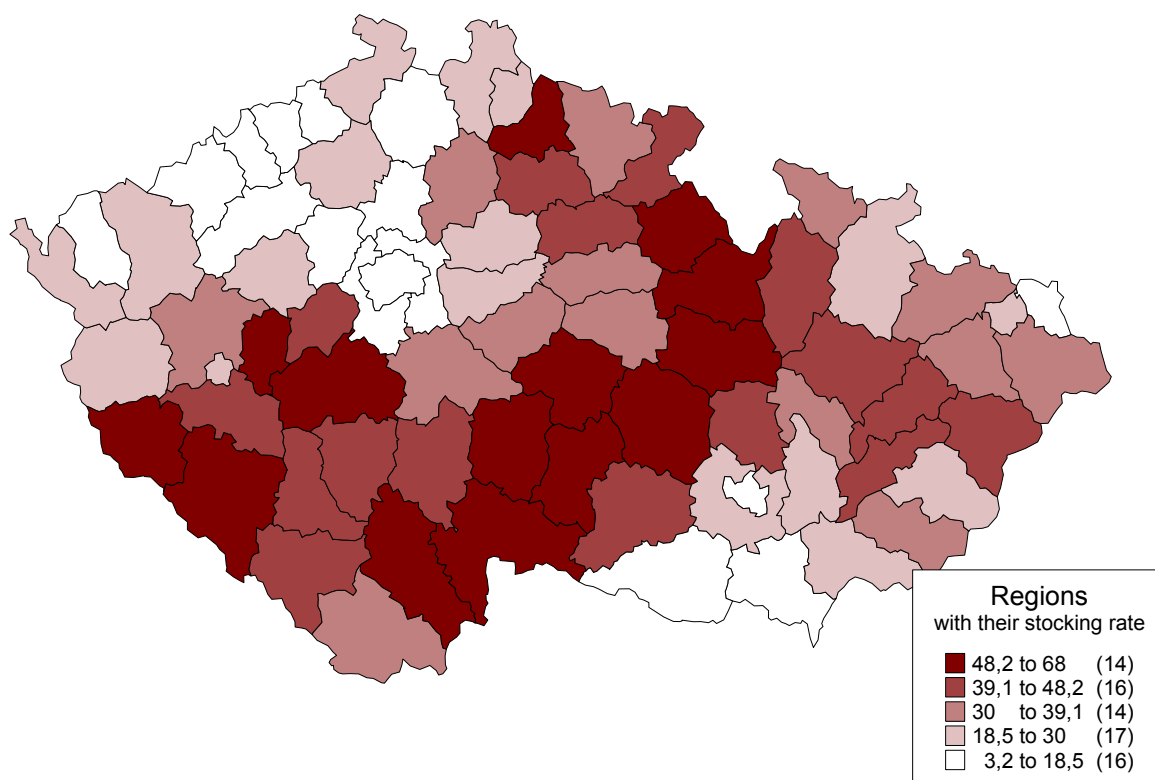


Figure 15. Stocking rate in Czech regions

depend on LU, not on suckler cow population. 900 LU is the turning point from which direct payments in CZK/ha will increase.

ECONOMIC ANALYSIS OF IMPACT OF ADDITIONAL PAYMENTS – USING REGIONAL PRINCIPLE WITHIN THE CAP

All variants mentioned above work in a similar way, it means their impact in endangered regions is similar when regional differentiation is used. When the higher share of funding is divided for area the lower differences occur.

As seen in Figures 14 and 15, the most endangered area is the North-West of our republic due to low rates of cultivated land and low stocking rate (regions Karlovarský, Ústecký a Liberecký). Badly endangered areas are: a part of South Bohemia (regions of Prachatice and Český Krumlov) and the regions of Trutnov, Bruntál, Vsetín, Frýdek-Místek, Karviná.

The most endangered areas

In case sector differentiation equals that in 2004, the probable funding in CZK/ha of agricultural land will be the lowest in regions of Jablonec nad Nisou, Ústí nad Labem and Sokolov. These regions are known for

their low stocking rate (30 head/100 ha) and low rate of cultivated land. Direct payments in these regions will range from 70% to 77% of the republic average (Table 7).

Badly endangered areas

Concerning direct payments, Karlovarský and Liberecký regions will belong to quite endangered regions as the payments will range around 85% of the republic average due to low rate of cultivated land (below 50%) and low stocking rate. Other badly endangered regions are Český Krumlov, Prachatice, Bruntál, Vsetín, Frýdek-Místek a Karviná. Direct payments are lower than 90% of republic average, average rate of cultivated land is 49% and stocking rate is maximum 50 head/100ha.

Regions with substandard payments

Direct payments in CZK/ha of agricultural land in these regions will not probably reach republic average as their average rate of cultivated land is 67% and stocking rate is below 50 head/100ha. They are the regions of Praha-západ, Klatovy, Plzeň-město, Cheb, Most, Náchod, Rychnov nad Kněžnou, Trutnov, Chrudim, Blansko, Břeclav, Hodonín, Jeseník, Šumperk, Zlín and Ostrava-město.

Table 7. Regions of CR and their payments in 2005 (payments as they are in 2004)

Difference in comparison with average	Lower by			Higher by	
	20–30%	10–20%	0–10%	5%	more than 5%
Number of regions	3	14	16	30	13
Average acreage of agricultural land in ha	17 405	41 727	46 317	67 315	66 287
Rate of cultivated land in %	27	47	66	78	84
Cattle in head/100ha	17.32	29.71	33.92	39.03	41.65
Suckler cows in head/100ha	4.50	4.59	2.48	1.34	1.03
Sheep in head/100ha	4.60	3.81	2.74	1.88	0.83
Payments in CZK/ha in 2005 using sector differentiation (as they were in 2004)					
SAPS	1 930	1 930	1 930	1 930	1 930
Payment for arable land	567	1 057	1 404	1 652	1 784
Payment for cattle	153	222	267	322	348
Payment for suckler cows	171	157	105	54	43
Payment for sheep	29	24	18	13	6
Total in CZK/ha	2 851	3 390	3 717	3 971	4 111

Source: Calculation based on data from the Czech Statistic Office

Regions with above-average payments

Most regions will reach average or slightly substandard payments per hectare of agricultural land.

Regions with direct payments higher by more than 5% in comparison with the average are Mladá Boleslav, Nymburk, Domažlice, Plzeň-sever, Hradec Králové, Pelhřimov, Třebíč, Vyškov, Olomouc, Prostějov, Přerov, Kroměříž a Opava. They are regions with average rate of cultivated land 84% and stocking rate between 40 and 70 head/100ha of agricultural land.

CONCLUSION

The present agricultural policy of the Czech Republic has supported funding of grassing in potato-growing, potato and oat-growing and upland areas. However, the situation with milk and dairy markets as well as beef and meat markets has turned farmers to a decreasing stocking rate. It has resulted in a higher grassing not correspond stocking rate.

If we follow the share of grassing in single decimals together with stocking rate then two significant tendencies can be seen. If the share of permanent pastures equals 10–60%, then stocking rate, ranges between 0.4–0.6 LU/ha. If the share of permanent pastures

equals 60–100% then stocking rate goes down to 0.6–0.45 LU/ha.

This development shows that all variants of direct payments (standard direct payments, simplified direct payments plus top-up as it is in 2004, additional direct payments adapted to the third reform of the Common Agricultural Policy) are reliant on the growing share of permanent pastures on agricultural land decrease. The growing share of permanent pastures correspond to production areas which means that direct payments per hectare of agricultural land decrease from maize-growing to upland areas. Only single area payment is the same, no matter the rate of grassing or production area.

Direct payments differ just only in the fact how they decrease in dependence on worse production areas. The fastest decrease can be seen in standard direct payments, slower in simplified direct payments and the slowest decrease is in the first variant of adapted payments. This variant supposes keeping 25% of direct payments for arable crops fixed on production, 50% of direct payments fixed on goat and sheep production including payments for less favoured areas, 100% of payments for suckler cows and 40% of slaughter bonus. All other payments in cattle breeding will become a part of single area payment. As the highest payments, simplified system of direct payments as it is in 2004

dominates. The share of simplified direct payments is lower only in upland area. Whatever system of direct payments will be applied, it is necessary to say that agrarians farming in less favoured areas will depend on further grants, especially on measures of the HRDP.

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