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«Corn as valuable crop drought
conditions of South Kazakhstan»

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Agrarian policy of Republic of Kazakhstan reoriented to market economy lead to forming many agricultural enterprises which are having unequal logistic support.

Today, in South-Kazakhstan province number of small entrepreneurs reached up to 740 thousand where about 1,5 million people are working

In modern conditions to solve important problems of agriculture of any country depends on international cooperation.

Joint investigations with recognized international centers allow to use world achievements in the field agrarian research.

Research site and brief description of economy characterization

- Arys district, population is 65,9 thousand
- Kazakh - 95,0 %, Russian -3,1%.
- Arys river - 378 км.
- Meat production - 3,9%
- Milk - 21%
- Cotton cultivation - 1,0%
- vegetables (1,1%), melon crops (6,1%).

- Volume of gross production of agriculture of the district is 3498,0 mln tenge or 23,32 mln USD dollars.
- Area of Arys district is 539110 ha, none irrigated land 16514 ha, out of them irrigated land is 5326 ha.
- Arable land is 13,2 thousand ha
- Cereal and legume crops are dominating - 60,6%, industrial crops - 12,9 %, vegetables potato and melon crops -17,4%

- 2,4 % of cattle of the South Kazakhstan province is located in the Arys district including head of cows – 2,1, sheep and goat 6,1%, horse – 3,6%, camel - 6,0%.

On farm improved forage production options.

- Development and introduction of rational systems of forage production and on farm feeding animals with reference to local conditions of stockkeeping.
- Research tasks: study corn growth and development in the irrigated conditions of community and farms

Corn seed from Tashkent



Results

Table 1. Effect seeding rate on productivity corn

Years	Farm and household name	Area, ha	Sown rate, kg/ha	Yield q/ha
2007	Kasymbay	10	25,0	140
2007	Yusup	0,5	20,0	110
2007	Oraz	0,3	18,0	90
2008	Kasymbay	5	30	110
2008	Duysen	2	25	95
2008	Oraz	0,3	25	140
2008	Oraz	0,3	30	110
2008	Oraz	0,3	40	115
2008	Abdukerim	1	25	90
2008	Abdukerim	0,5	27	100
2008	Abdukerim	0,5	30	90
2009	Kasymbay	5	30	120
2009	Duysen	2	30	115
2009	Bakhitjan	1	25	110
2009	Abdukerim	1	30	100
2009	Abdukerim	0,5	15	120
2009	Abdukerim	0,5	20	90

Effect of seeding date on productivity of corn

Years	Farm and household name	Area	Planting date	Replication	Plant height, m	Yield, q/ha
2008	Oraz	0,3	12.04.08.	1	2,1	140
2008	Oraz	0,3	20.04.08.	2	1,5	110
2008	Oraz	0,3	25.04.08.	3	1,7	115
2008	Abdukerim	1	11.04.08.	1	3,1	90
2008	Abdukerim	0,5	21.04.08.	2	2,9	100
2008	Abdukerim	0,5	30.04.08.	3	1,7	90
2009	Abdukerim	1	23.04.09.	1	3,2	100
2009	Abdukerim	0,5	30.04.09.	2	2,8	120
2009	Abdukerim	0,5	10.05.08.	3	1,9	90

Corn copes at farm Abdukerim



Economic efficiency of corn cultivation at farm, Akdala village

Cost of inputs per hectare (local market prices tenge):

Cost items per hectare	Количество кг	стоимость 1 кг/л	общая стоимость
1. Seed	25,0	320,0	8000,0
2. Fertilizer			
Ammphous	40,0	40,0	1600,0
3. Herbicides	0,8	1200,0	960,0
4. Engine oil	3,0	150,0	450,0
5. Diesel	156,0	51,0	7956,0
6. Salary	38,06	113,6	4324,0
7. Irrigation water	3000,0	0,25	750
8. Total			24040,0
9. Depreciation cost (8%)			1923,0
Grand total cost			25963,0



- Average corn grain yield in this region is less than 7-8 tones per hectare. Expenses on 1 hectare is in average 3250 tenge. Taking into account rental fee the expenses will be increased up to 3700 tenge per tonnes.
- Using improved varietie's seed can be increased the corn grain yield by 40-45% and at the same time can be decreased cost of corn production per ton by 2200 tenge

Пути внедрения и распространения результатов проекта

- Project results will be published in local and regional news papers on Russian and Kazakh languages
- A brochure will be published with description of project farmers Duysen, Kasymbay, and Abdikerim on corn cultivation in the irrigated conditions.
- Local TV will be made a film about the work of Kasymbay, Duysen and Abdikerim
- District and Regional level meetings will be demonstrated results of the project with leading other farmers with На совещаниях района и области будет рассказан опыт ведущих фермерских хозяйств Дуйсен, Касымбая и Абдикарима по методике ИКАРДА.