



## AGRONOMY DEPARTMENT



**The department was founded in 1957.**

**The main directions of research** is increasing the genetic potential of the agricultural plant's productivity and improvement of agro technologies.

**The following results have been achieved for 2009-2012: developed:**

- moisture resource saving technologies of grain cultivation, zonal technology of winter grain cultivation;
  - systems of plant protection on adaptive system of agriculture with using moisture resource saving technologies;
  - technology of cultivation of feed crops in green conveyor system;
  - methods of purposeful management of soil fertility and productivity of crops;
  - technology of production of virus-free seed potatoes;
  - biotechnological methods of accelerated reproduction of planting fruit and berry cultures;
  - theoretical and methodological foundations of optimization and diagnosis of mineral nutrition, methods of purposeful management of soil fertility and productivity of crops;
  - technologies of production of the complex drug-plant growth stimulant on the basis of microorganisms;
  - tillage technology and measures against weeds;
  - technology of cultivation of feed crops in green conveyor system;
- created:**
- new lines of winter wheat, spring wheat, barley and triticale by classical breeding methods;
  - bank sanitized potato varieties in vitro in the field.

**Three monographs and 14 recommendations were published, 5 patents and 14 innovative patents were received.**

**8 works with businesses: Bayer Crop Science, Crop Stockton Protection Switzerland, BASF, SE "National Methodological Center of phytosanitary diagnostics and forecasts" OIG in APC MoA, "Agro Global" Ltd, "Agrochemicals" Ltd, "Isagali" Ltd, "Farmer 2002" Ltd, farm "Sarah Adyr" were done, on production tests of pesticides, the improvement and development of new and effective moisture saving technology of cultivation of spring wheat, by sampling monitoring surveys during the mating and egg mass locusts.**

**Researches for 2012-2014 are realized on:**

- the development of measures against protection of crops from pests;
- the study of systems of forestry management, agro forest landscape and preservation of the gene pool of forest species;
- increasing of the productivity of forage crops on arable land, on the improvement of natural grasslands and pastures for year-round ensuring of the livestock industry with complete food in the steppes of northern Kazakhstan;
- the development of cultivation technology of safflower on the dark chestnut soils of northern Kazakhstan;
- study of species biodiversity of vegetation and the process of transformation;
- virus-free seed and potato immunodiagnosis;
- capacity increasing of agricultural productivity through the use of advanced technologies and methods in plant breeding and biotechnology;
- creation of dietary (special) potato varieties;
- the creation of fundamentally new source material for breeding varieties of barley and oats are well adapted to the conditions of the northern Kazakhstan desert;
- the study of methods of revelation and extermination of Russian century;
- the development of technology of integrated reclamation-fertilizing mixtures (IRFM) by microbiology method from carbonaceous and organic wastes of various industries;
- study of the effect of increased anthropogenic impact on the degradation of soils in rural areas and desertification in the desert;
- ecological assessment of atmospheric air state on the motor transport flow's intensity in the main Astana highway.

**Partners: Siberian Research Institute of Agriculture (Omsk, Russia), "Kazakh Research Institute of forestry" Ltd, "Kazakh Research Institute of agricultural products processing" Ltd, "Agro firm Rodina" Ltd, "Zhassy Aimak" RSE, "Agro firm Aktyk" Ltd and etc.**

**The scientific and educational innovational center of agro biological research was established on the basis of the Agronomy Faculty in 2011.**



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