Institute of Vegetable and Melon growing of the National Agrarian Academy of Sciences of Ukraine

The Institute of Vegetable and Melon Growing coordinates all research work in Ukraine on vegetable and melon growing (founded in 1947).

Main areas of work:

- development of genetic, biotechnological and physiological-biochemical methods of creating highly adapted starting materials for the needs of vegetable and melon plant breeding;
- -creation of competitive, resistant to complex biotic and abiotic factors hybrids and varieties of vegetable and melon plants;
- -development and improvement of technologies for their cultivation and seed production of various directions (intensive, organic, bioadaptive, resource-saving);
- scientific substantiation of the functioning mechanisms of vegetable agrocenoses on the basis of preserving soil fertility and reducing man-made load

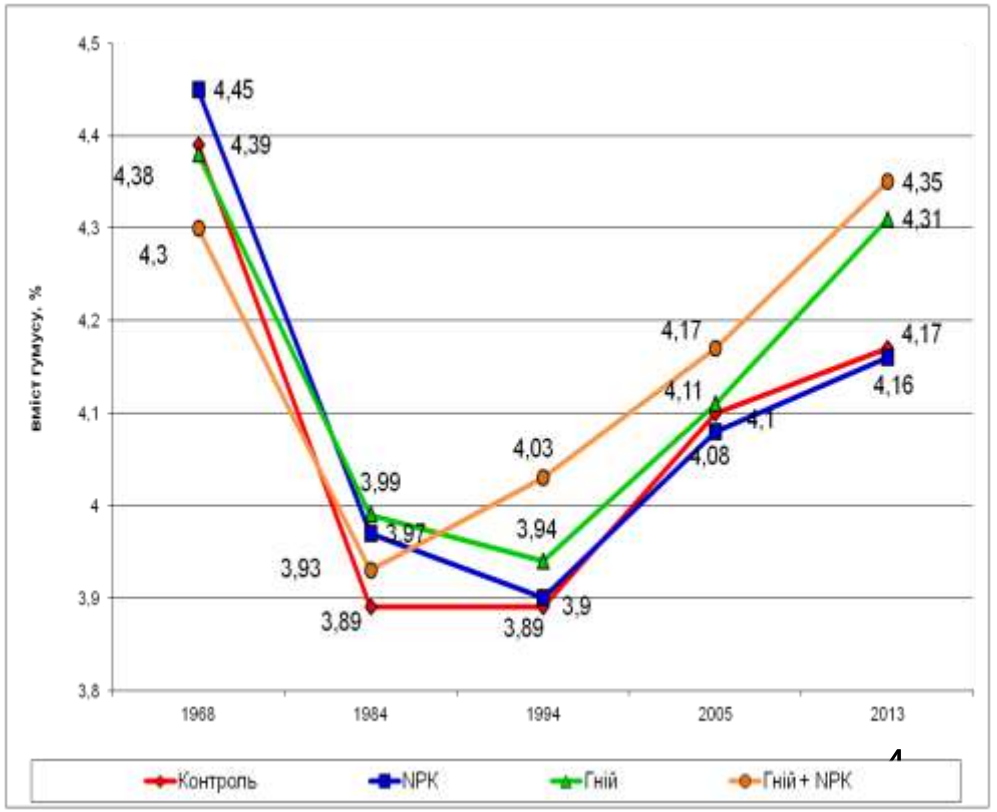
The institution has a number of long-term inpatient studies:

- Study of the dynamics of the soil fertility level and changes in plant productivity in irrigated vegetable-forage crop rotation under different fertilization and irrigation systems (the research was started in 1968);
- Determination of the effectiveness of polycultural agrocenoses with vegetable plants in terms of their impact on soil fertility and ecological stability (started in 1994);
- Establishing the effectiveness of using a complex of microbial preparations to optimize plant nutrition (associative nitrogen fixation, phosphorus and potassium mobilization, destruction of plant remains, increased humus accumulation);
- Research of various types of crop rotations with their saturation with intermediate crops of sideral crops (started in 2006);
- Development of organic technologies for growing vegetable plants in irrigated and rainfed conditions (started in 2013);
- Testing the effectiveness of different types of fertilizers (mineral, complex, humic, organo-mineral) and plant protection products (pesticides, biological preparations). We cooperate with the companies BASF, Corteva, BTU-center;
- Development of technologies for growing vegetable plants using mulching materials (organic, mineral, rapidly decomposing).

The main developments of the institution in this direction:

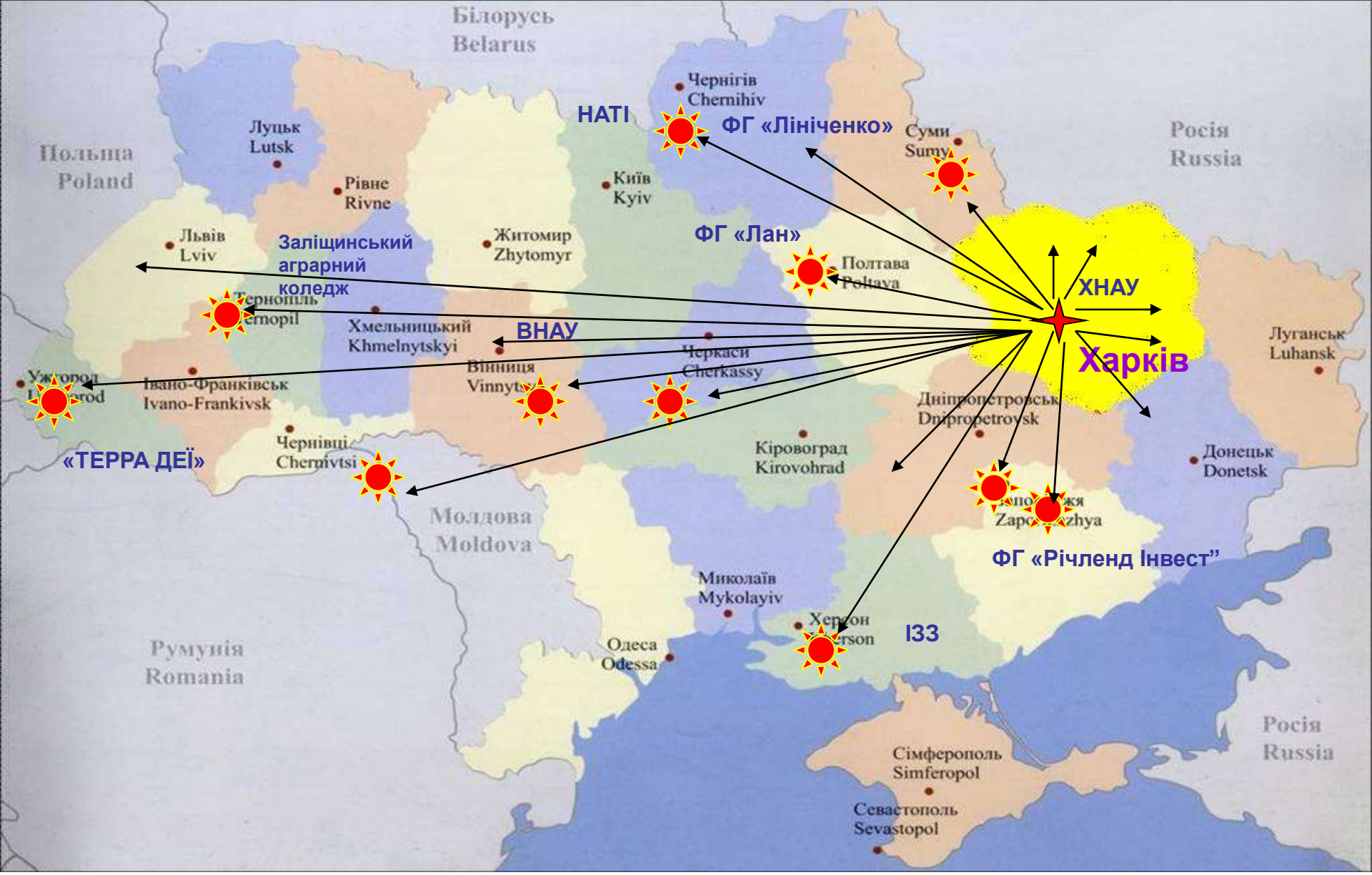
1. Fertilizer systems to increase the productivity of vegetable plants and restore soil fertility (both for irrigation and rainfed conditions);
2. Organic technologies of growing plants using a complex of microbial preparations;
3. The concept of reproduction of soil fertility in vegetable agrocenoses;

4. The technology of growing vegetable plants according to the Mix-Cropp system;
5. Recommendations for growing sideral plants in intermediate crops;
6. Database of influence of different fertilization systems on the agrochemical and microbiological condition of soils.



Material and technical base of the institution:

1. Experimental plots in different crop rotations (with different saturation of vegetable, grain and fodder plants), under irrigation and in rainy conditions;
2. A complex of greenhouses for vegetation research;
3. Scientific laboratories (agrochemical, biochemical, biotechnological, phytopathological, seed quality determination).



The institute has a wide network of subordinate research stations, research farms, demonstration sites, where the main developments are implemented