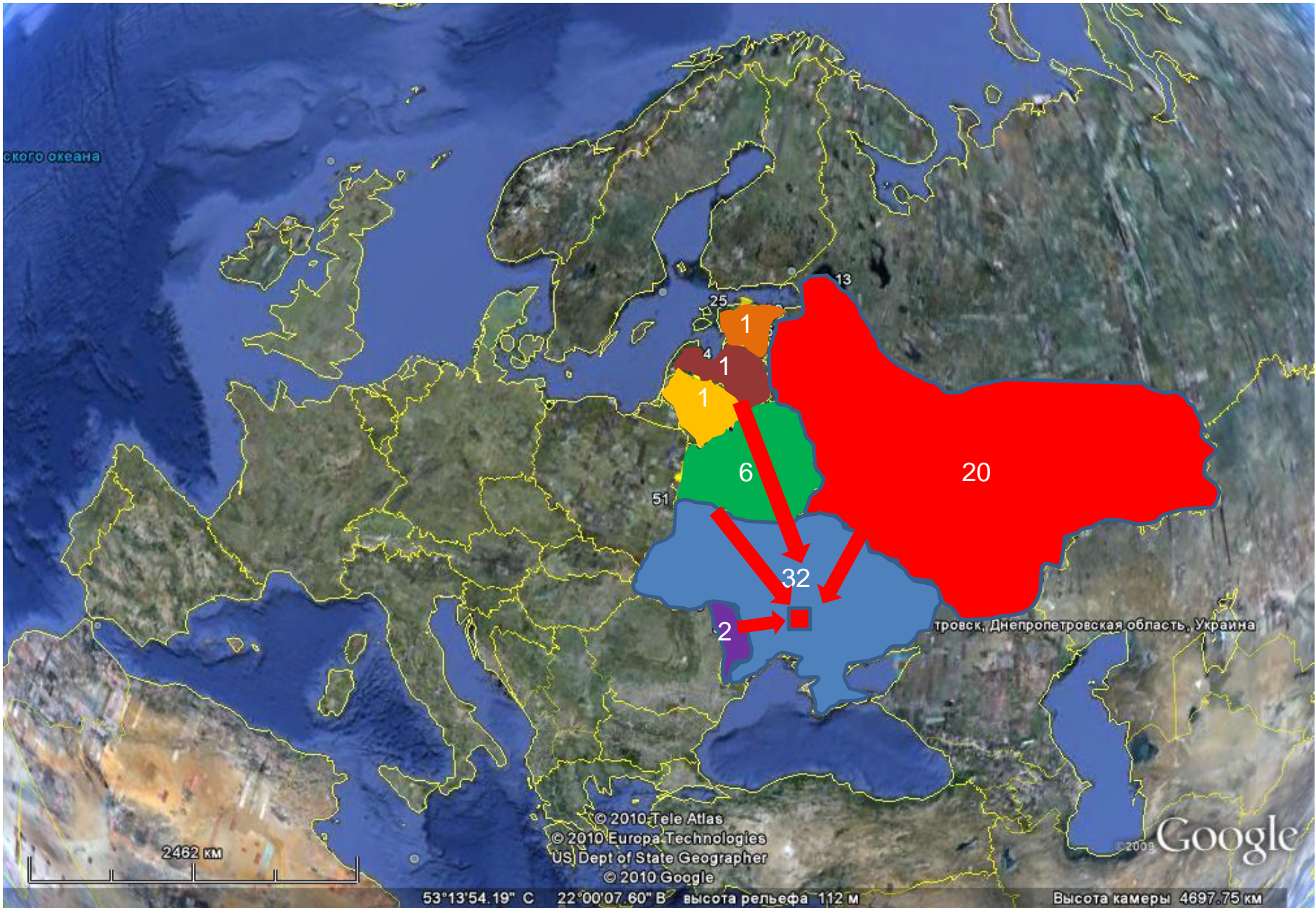


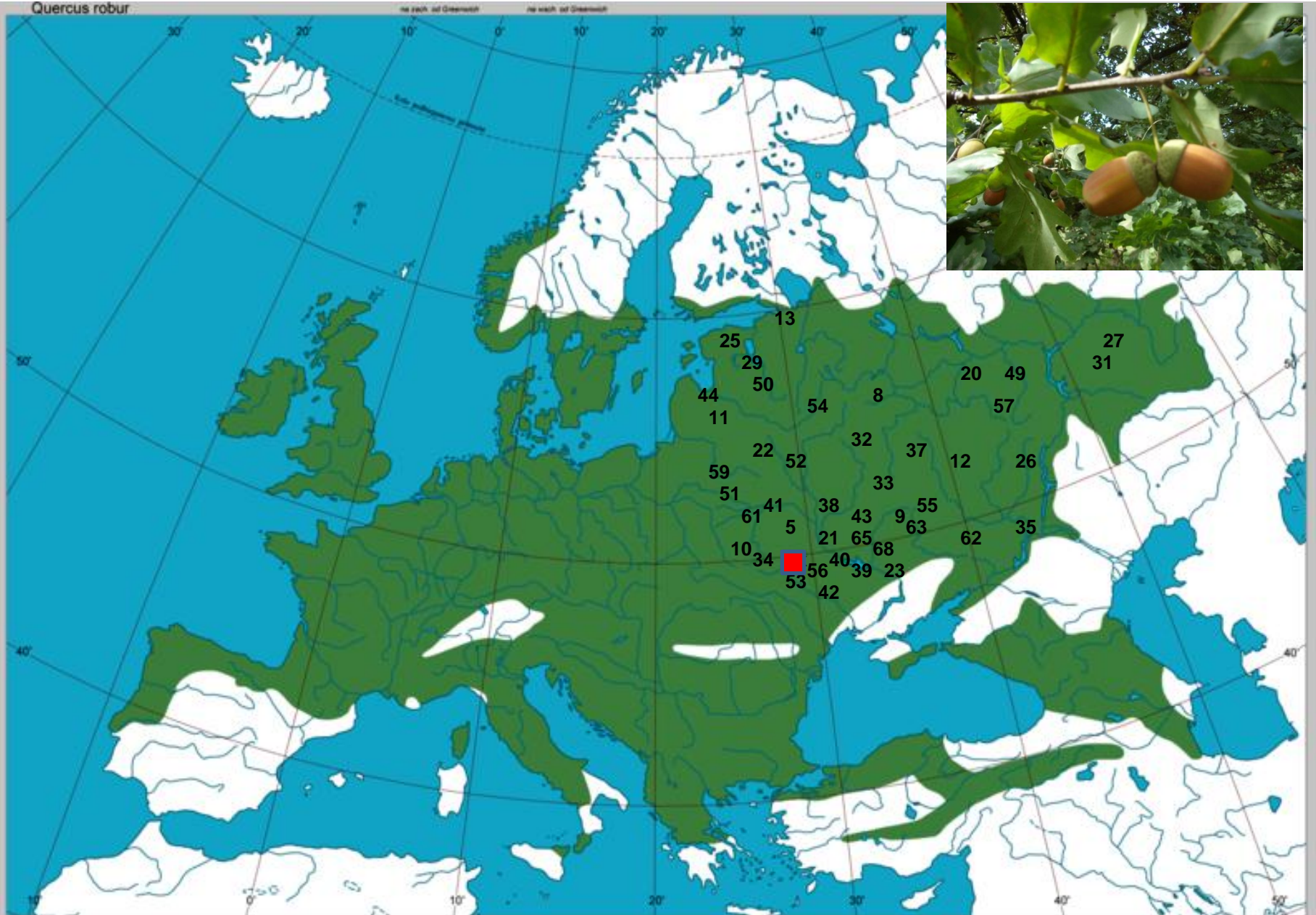
***Adaptability of oak
(Quercus robur L.) ecotypes in condition of
climate change***

Ihor Neyko

**Vinnitsya National Agrarian University,
Vinnitsya, Ukraine**



Quercus robur



Scheme of Quercus robur provenance tests (Vinnitsya, Ukraine)

Northwest population

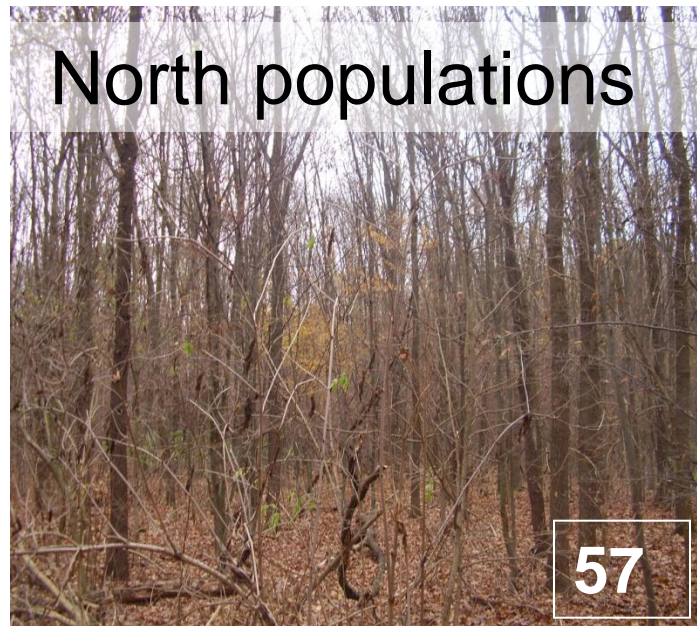
Northeast population

13	50	8	20	K5	31	27
25	54	32	33	49	26	7
29	K2	37	12	45	35	24
46	14	64	38	51	9	62
11	22	60	-	-	-	-
K1	52	47	43	-	-	-
44	34	Central population			55	K7
59	3	K3	5	17	63	28
51	41	6	21	30	Southern - east population	
61	1	67	56	40	15	69
36	10	Southern population			23	19
		53	42	16		

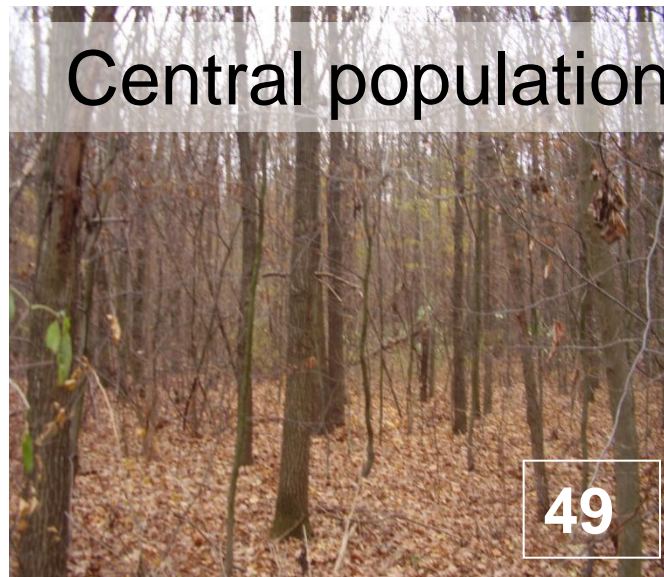
Central - western population

Southern - east population

Southern population

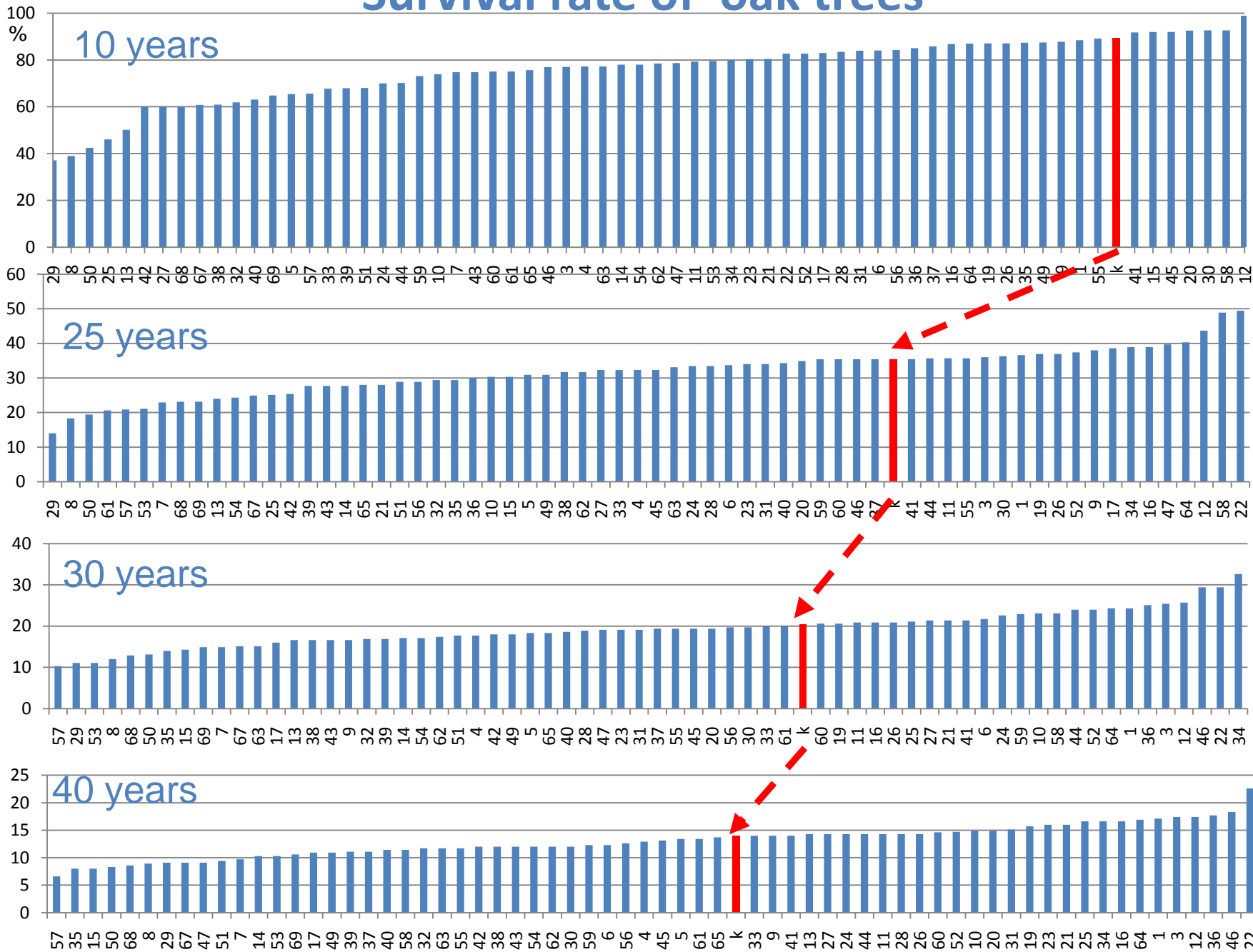


North populations

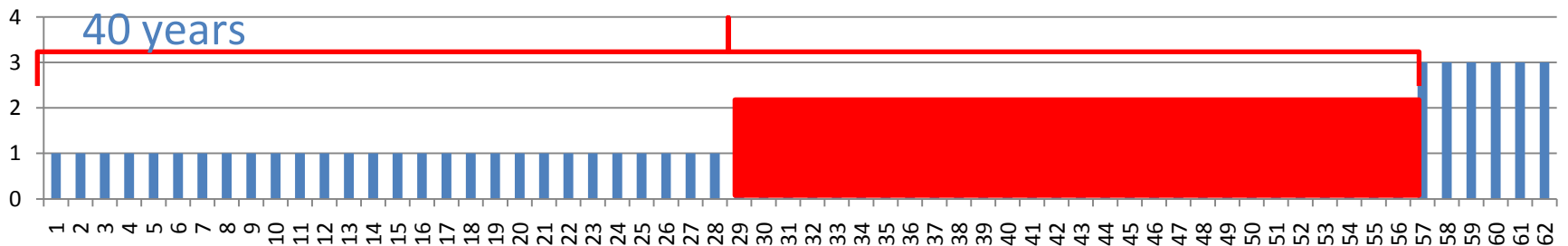
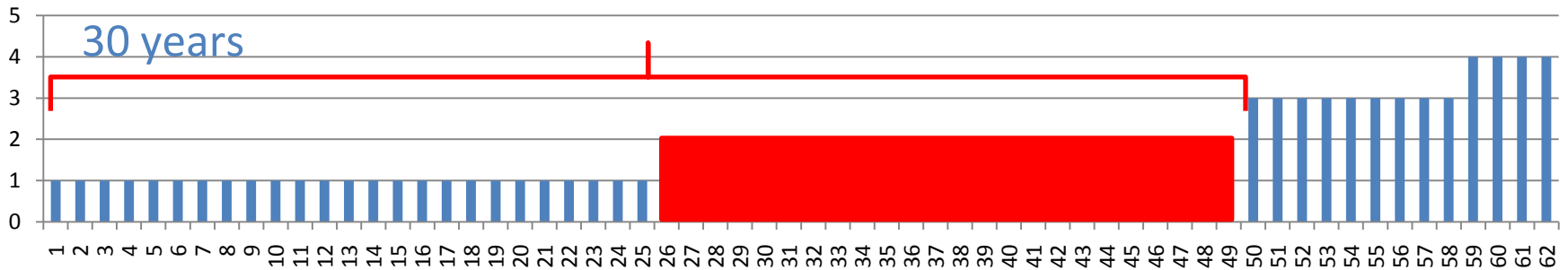
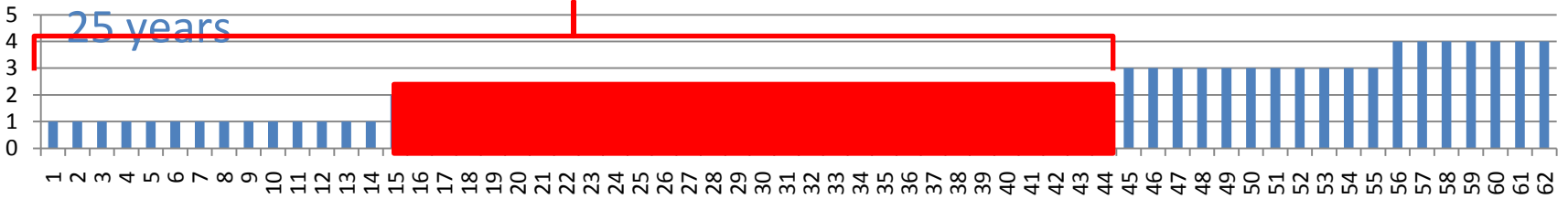
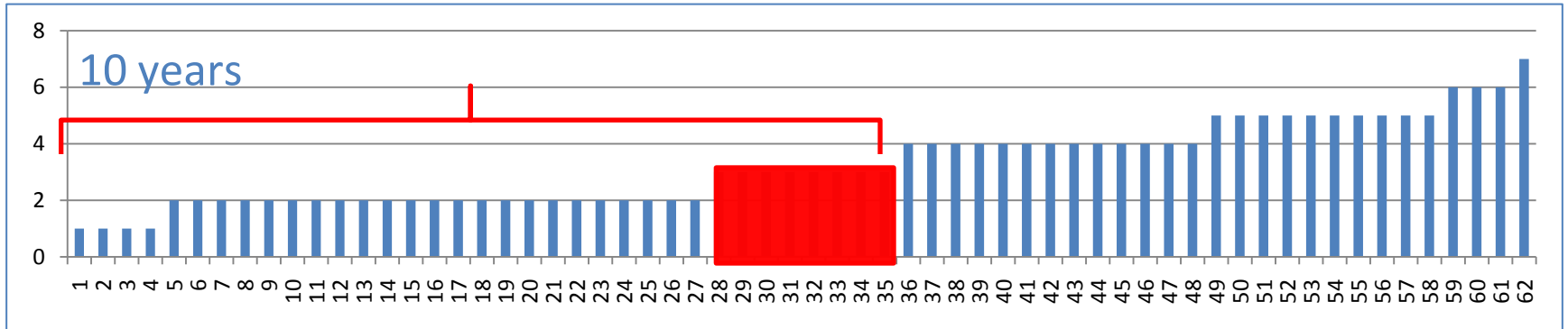


Central populations

Survival rate of oak trees



Changes of heights ranks



The data analysis of 1964-2010 specifies essential ecological and geographical influence of seeds origin, phenological forms on the growth and productivity of climatic ecotypes as well as on selection and quality indicators.

The worst seed germination intensity was characteristic for the most remote northern and north-east ecotypes: Moscow, Volgograd, St.-Petersburg, Chuvash, Estonian, Bashkir, Latvian, and Pskov. But it is necessary to note that some remote ecotypes had tendencies for the improvement of adaptability and decrease of tree dying intensity (some populations from Estonian, Bryansk, Brest, Latvian and Minsk ecotypes).

CONCLUSION:

- ✓ Progeny of the ecotypes of the most remote northern, northeast and east regions (Moscow, Tambov, St.-Petersburg, Bashkiria, Estonian, Chuvashia ecotypes) are marked by the slowest growth in height and diameter.
- ✓ Analysis of the results on the growth dynamics of oak ecotypes testifies that the greatest differentiation in height was marked at the initial stages of growth.
- ✓ Up to 10-year age the difference of growth intensity in height was more than 60 %. At the age of 25 - 40 there was a tendency towards activation of growth intensity of the northern and north-east ecotypes (Estonian, Tula, Tatarstan ecotypes).
- ✓ Intensity increase of the growth processes specifies the increase of adaptability of the remote ecotypes. Acclimatization of the remote geographical oak ecotypes makes up about 20-30 years.

Thank you!