

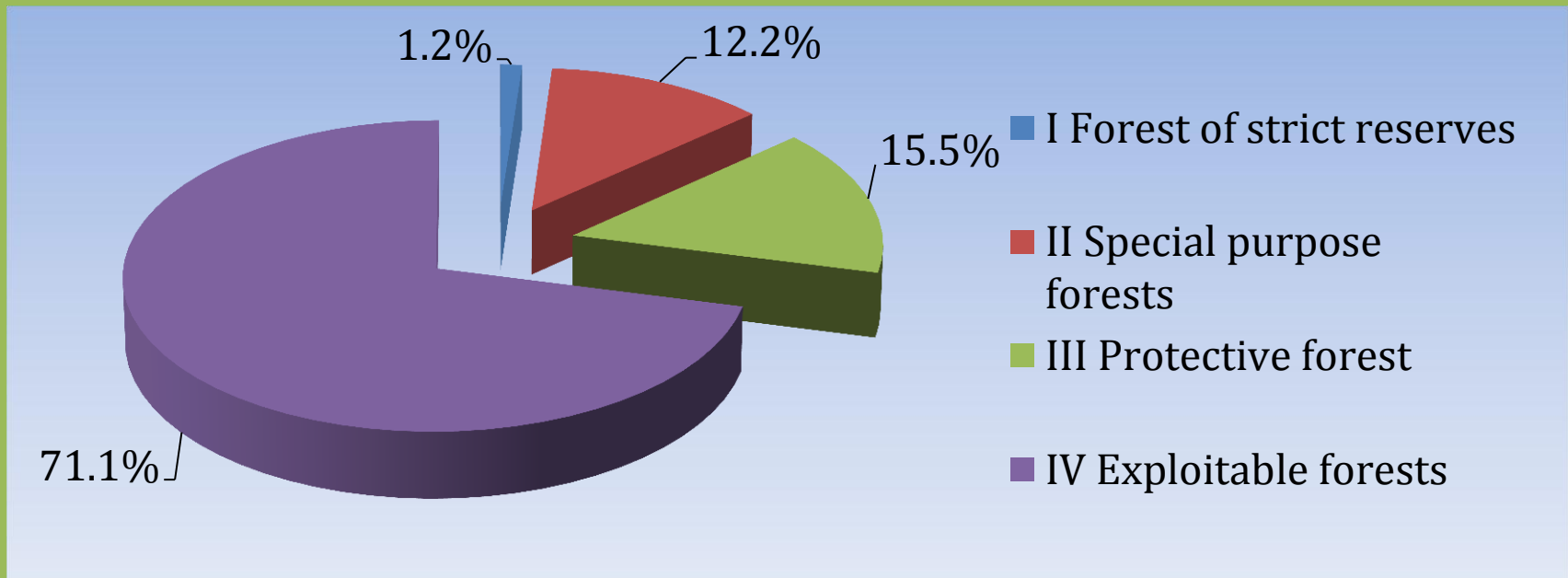


**Institute of Forestry, Lithuanian  
Research Centre for Agriculture and  
Forestry**

# General characteristics on Lithuanian forests

<b>Forest land area, 1000 ha</b>	<b>2159.8</b>
Forest cover, %	33.1
Productive forest area (stands), 1000 ha	2050.9
Total growing stock volume, mill.m <sup>3</sup>	479.4±6.2
Mean volume per ha, m <sup>3</sup>	234.1
Gross annual increment, mill.m <sup>3</sup> o.b.	16.2±0.2
Mean gross annual increment m <sup>3</sup> /ha	7.9
Average forest stand age, years	52

# General characteristics on Lithuanian forests

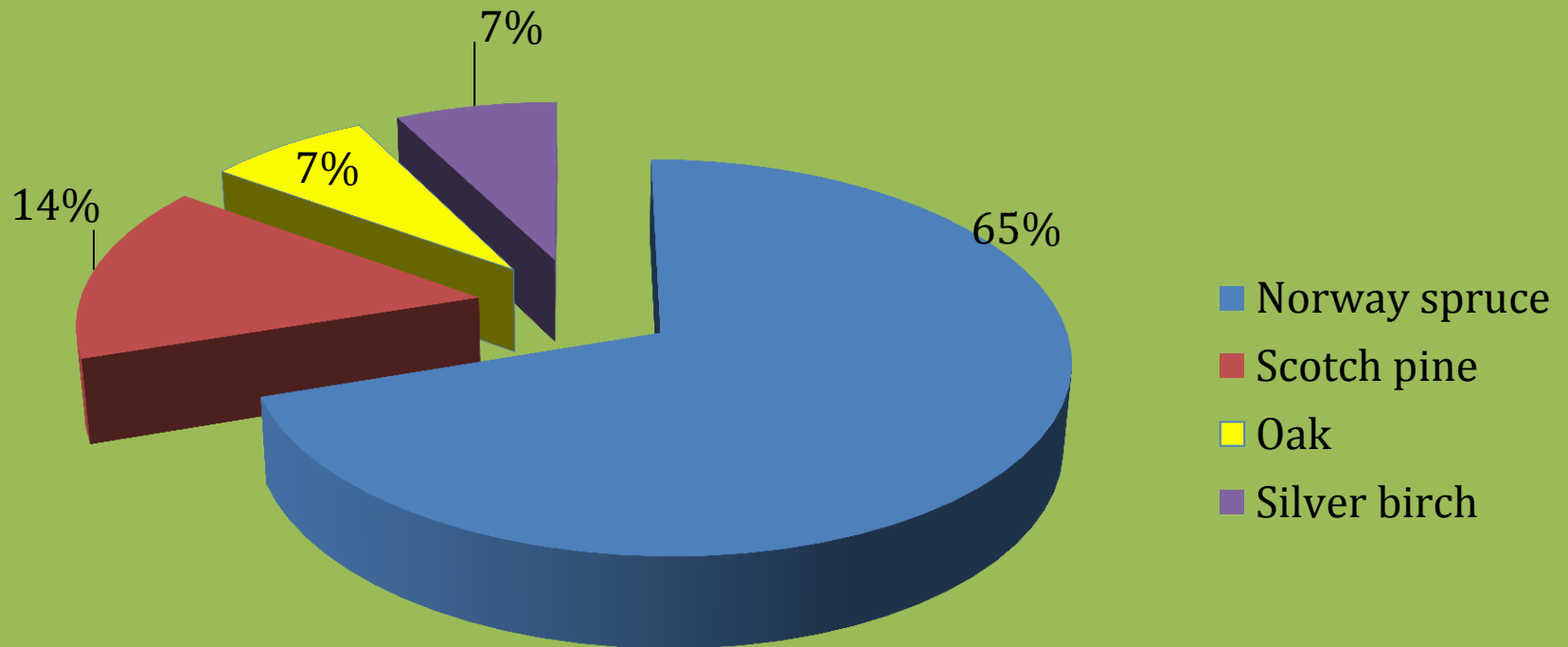


- Since 1995 all forests are divided into 4 forest groups
- Special-purpose group includes recreational forests and forests for protection of ecosystems
- Proportions between the groups remain more or less constant

# Forest restoration

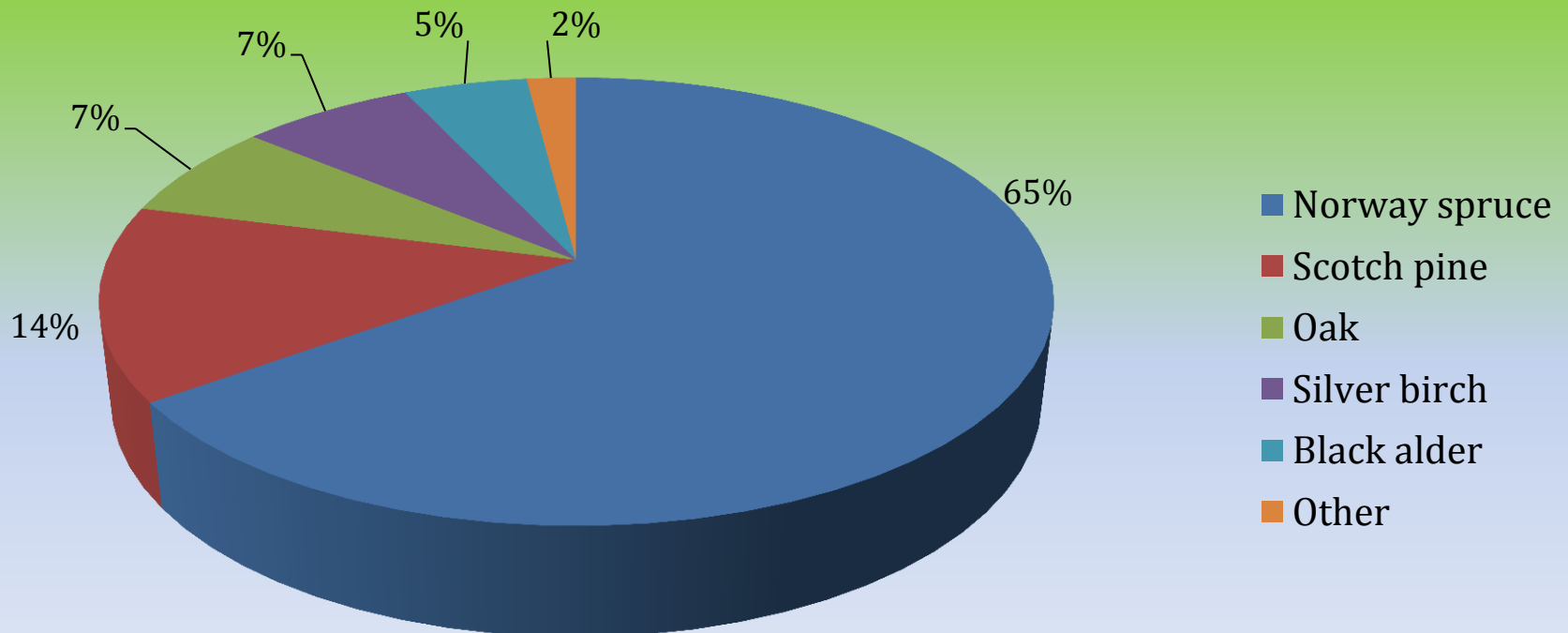
- According to Lithuanian statistical yearbook of forestry, annually forest is restored:
- by planting seedlings 6-7 thousand ha.
- by natural regeneration 3-4 thousand ha
- and 1-3 thousand ha is planted in to agricultural lands.

# Regeneration by tree species



# Productivity of the nurseries

- State forest enterprise nurseries produce about 160 mln. forest seedlings per year.
- Forest plant consumption in State forest enterprises is about 48,3 mln. seedlings/year.



# Productivity of the nurseries





# Use of seeds

- Ripening of seeds of main forest tree species in 2009

Seed source	Scotch pine	Norway spruce	Pedunculate oak	European Ash	Silver birch	Black alder	Norway maple	small-lived lime	Total
Seed orchards	190.6	-	-	-	32.5	10.3	-	-	<b>233.4</b>
Gene reserves and seed stand	19.5	-	3 100	-	23.8	31.8	-	31	<b>3206.1</b>
Ripening in seed source	89.4	-	12 753	-	-	86.7	561.4	401.6	<b>13892.1</b>
<b>Total ( the year of ripening 2009)</b>	<b>299.5</b>	<b>-</b>	<b>15 853</b>	<b>58</b>	<b>56.3</b>	<b>128.8</b>	<b>561.4</b>	<b>432.6</b>	<b>17331.6</b>

# Forest regeneration requirements and legislations

In Lithuania reforestation and afforestation are regulated by Forest law

- According to Forestry Law of Republic of Lithuania clearcuts, non-full natural regenerated and burned land must be restored no later than in three years after the appearance;
- Dead plantations and not completely natural regenerations no later than in two years after the appearance;
- Illegally harvested forest must be restored within one year from illegal harvest was noticed.

# Forest regeneration requirements

Soils for forest plantation might be prepared completely (plowing, milling, cultivation, etc...)

Or partially, depends on the site conditions or regenerating method (plowing furrows, making sites, mounds, etc...).



# Trends and expectation

- In near future all trends will not change very extremely.
- Forest cover will increase by planting abandon and pure sites.
- Container seedlings are expected for forest regeneration. No one nursery breeding such kind of seedlings.

# Criteria for successful regeneration

- Good soil preparation;
- Quality of the seedlings;
- Quality of planting;
- Protection from animals, insects and disease;
- Maintenance of new stand;

# Targets for regeneration

- To use right machinery for soil preparation for different site indexes ( not one for all site types)
- to involve container seedlings into special soil conditions. (Slope, peatlands, sandy soil and etc.)
- To discover what influence have biomass to forest regeneration left for biodiversity after clearcuts. (dead wood, snags and etc.)
- To discover what influence doing competing vegetation to forest regeneration.
- All State forests are certified, chemicals V.S natural treatment
- Research for new treatment alternatives V.S chemistry treatment



Thank you for your attention