in Poland». Currently it consists of 66 species planted in wood boxes of different hight. Among them are plants representing forests, forest margins, as well as meadow and agricultural ones.

Most of them are commonly found in gardens, road-sides or wastelands. Nowadays those plants are under valuated or threated as weeds, although they were often used in the past according to their medical and edible properties.

The following plants grow and develop on the collection site: Achillea millefolium L., Althaea officinalis L., Artemisia vulgaris L., Bellis perennis L., Chelidonium majus L., Equisetum arvense L., Hypericum perforatum L., Plantago major L., Rumex acetosella L., Symphytum officinale L., Tanacetum vulgare L., Taraxacum officinale F. H. Wigg., Urtica dioica L. and others.

Forest Botanical Garden «Marszewo» is also main educational centre in Gdańsk Forest District, which is a part of the Promotional Forest Complex – «Lasy Oliwsko-Darżlubskie». The varied, free of charge outdoor and indoor activities are provided by experiences educators (foresters and botanist) for organized groups of varied age.

Education is focused on: biodiversity of forests, sustainable forest management and natural and cultural heritage. For individual visitors «Marszewo» garden offers two series of events: Garden Sundays - Workshops and classes carried out by specialists (i.a. zoologists, botanists and foresters) on each Sunday from April to end of September Winter Sundays with birds - events organized in cooperation with the Operation Baltic Fund every second Sunday from December to February, as a part of the whole-country «Feeder action» in Poland.

There are also varied self-activities for visitors, like field games with maps, visiting botanical collections and two educational paths within the forest area of the garden.

Garden is presented in free of charge application and guide for cell phones, called «Nadleśnictwo Gdańsk». Garden is also a place for culture and art, with varied wooden sculptures, temporary exhibitions and place for concerts and theatre performances.

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POSSIBILITIES OF USING FLAX

Flax have a wide range of uses. Technical fiber is obtained from flax stems. A

wide variety of products are woven from flax fiber - technical fabrics for many sectors of industry, rugged bags and packing cloths, tarps, batiste and other very thin, delicate fabrics and laces.

Linseeds (appear flattened, with a smooth, shiny surface, lighter or darker brown in color, the oil has a pleasant color [1] contains 35-45% oil, which has a wide application, for example in food, furniture industry.

For the woody residue material of flax stems (spades and chaff) - and the remains of capsules after threshing the seeds also have a wide application, for example, for animal bedding, as solid biofuel (briquettes, pellets). Flax is also a soil improver [2].

In the period from 2018 to 2020,fiber flax harvested in the area is from 21 to 49 ha, with a yield of 21 to 46 cnt/ha [3]. The small area of fiber flax can be explained by the fact that the culture is very demanding, labor-intensive and requires a specific flax harvesting technique. in addition, the yield of flax is affected by meteorological conditions. Also, the technique of harvesting fiber flax is, for the most part, both physically and morally outdated. In order for changes and the development of the long-fiber flax industry to begin, cooperation between growers and processors is necessary, as well as the introduction of the latest scientific knowledge into production. Fiber flax farming is mostly done by farmers in Latgale. The return of this agricultural sector is hindered by the lack of financial support, as well as the finding of leased land. The return of this agricultural sector is hindered by the lack of financial support, as well as the finding of leased land.

Fifteen years ago, farmers were able to receive significant national subsidies, so the sowing area slightly increased, but this did not bring the expected development in the flax industry [3]. Currently, there is no special state support for flax farming. The demand for natural materials in the world is increasing, and there are already long traditions of flax farming in Latvia.

Linseed in Latvia is considered a promising crop in the future, because it is easier to grow and its yield does not depend as much on agro-climatic conditions as fiber flax, as well as the demand for linseed production is high not only in Europe, but also in the world as a whole.

In 2020, 61 ha of linseed were sown, which is 27 ha less than in 2019, average yield 9 to 14 cnt/ha [3].

It is difficult to grow flax using organic methods, because mineral fertilizers and plant protection products are needed to obtain a good harvest. The linseed field must be clean of weeds, and the linseeds must be protected from flea beetle (*Aphthona euphorbiae*). If not controlled, the pests can eat all the flax sprouts in one day. Currently varieties selected from Western European countries are grown in Latvia for both oil and fiber extraction, which do not provide a stable yield of flax straw and seed in Latvian soil and climatic conditions. For Western European varieties, the seeds ripen too late, and it is impossible to obtain quality flax fiber in our climate.

When studying the suitability of the linseed variety 'Scorpion' for the production of solid biofuel, it was concluded that the sulfur and carbon content and the highest calorific value of the variety 'Scorpion' in different plant parts depended

on the year of growth (meteorological conditions during the vegetation year) and the rate of nitrogen fertilization. Carbon content (min - max) in various was similar – stems (0.39 – 0.47 g kg^{-1}), shives (0.38 – 0.44 g kg^{-1}) and chaff (0.40 – 0.48 g kg^{-1}). Sulphur content (min –max) in linseed production differed – stems (0.56– 1.77 mg kg^{-1}), shives (0.97 – 1.90 mg kg^{-1}) and chaff (0.66 – 1.91 mg kg^{-1}). The gross calorific value (min – max) was observed in the linseed stems (17.75 – 18.79 MJ kg^{-1}) and shives (18.56 – 19.23 MJ kg^{-1}). The carbon yield from one kg nitrogen decreased by nearly 50% if the nitrogen fertilizer norm was increased from N0 to N100.

Water are formed in the process of burning carbohydrates; the energy from the Sun is freed, which is a natural, sustainable battery for the accumulation of the energy of the Sun.

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MIXTURES OF DIGESTATE AND WOOD ASH – AN EFFECTIVE FERTILIZER IN WINTER OILSEED RAPE CROPS

Winter rapeseed, or oilseed rape, is widely grown in Latvia. Moreover, during the last decade, the average yield of winter rapeseed has increased from 2.5 t ha^{-1} in