

Biochar in Latvia and ongoing activities in Silava

Biochar in forestry - SNS workshop

Gardermoen, Norway, 15-16 June 2021

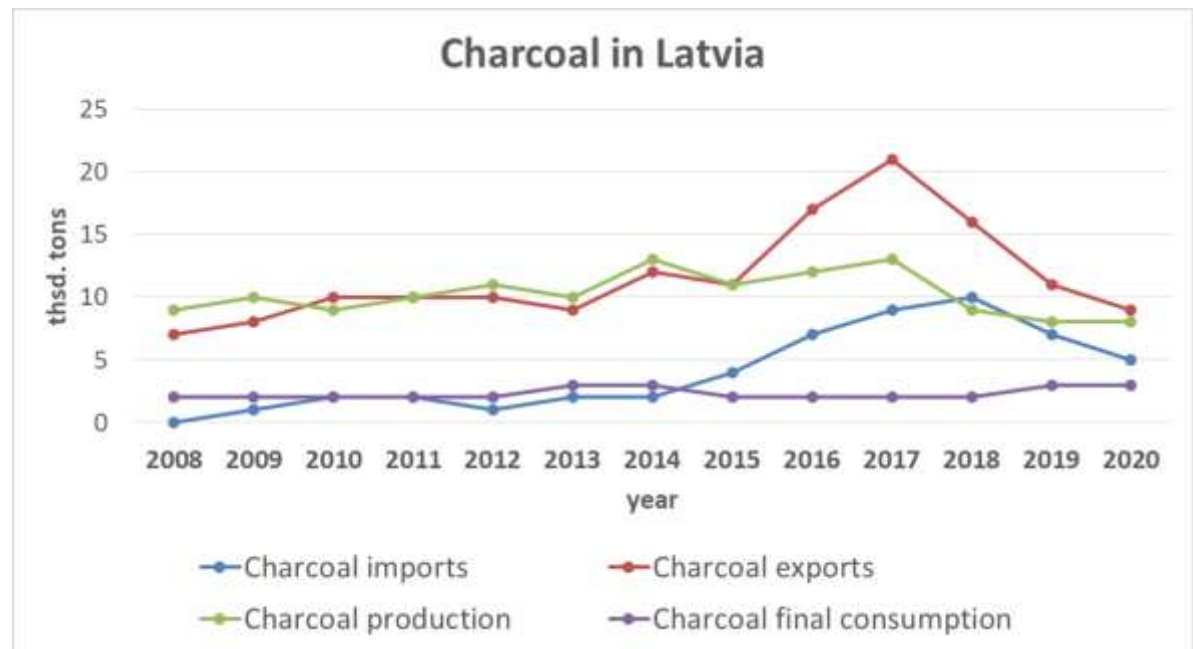
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Charcoal in Latvia



Latvia Wood; charcoal (including shell or nut charcoal), whether or not agglomerated exports by country in 2019

Partner	Trade Value, USD	Quantity, thousand tons
World	7 171 600	11.9109
France	5 382 950	8.96102
Lithuania	761 790	0.993419
Estonia	657 930	0.914429
Poland	118 170	0.619051
Sweden	96 470	0.167463
United Kingdom	53 310	0.061024
Denmark	31 950	0.032769
Qatar	19 180	0.034976
Finland	15 940	0.045077
Ireland	14 870	0.016092
Norway	5 730	0.02955
Iceland	5 460	0.005805
Italy	4 540	0.027
Germany	2 140	0.0017
Netherlands	1 000	0.0013
Switzerland	170	0.00025



Source: CSB database

Source: <https://wits.worldbank.org/trade/comtrade/en/country/LVA/year/2019/tradeflow/Exports/partner/ALL/product/440200>

Legislations



Republic of Latvia

Cabinet

Regulation No. 506

Adopted 1 September 2015

Regulations Regarding the Identification, Quality Conformity Assessment and Sale of Fertilisers and Substrates

*Issued pursuant to
Section 4, Paragraph one, Clause 1
of the Law on Circulation of Fertilisers*

Document information

Title: Mēslošanas līdzekļu un substrātu identifikācijas, kvalitātes atbilstības novērtēšanas un tirdzniecības ..

Status:  in force

Issuer: Cabinet of Ministers

Type: regulation



Document number: 506

Adoption: 01.09.2015.

Entry into force: 15.09.2015.

Publication: Latvijas Vēstnesis, 179, 14.09.2015

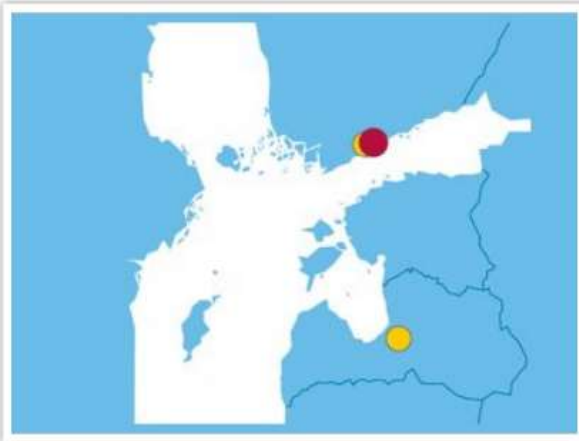
OP number: 2015/179.5

Language:  

Related documents

Biochar is not mentioned in the regulations.
The law does not affect their use for fertilization.

Previous projects in Silava



Duration: Jul 2011 - Dec 2013 (2 years, 6 months)

The project sought to improve the cooperation and knowledge between local and regional energy producers, potential consumers, local enterprises, universities and research institutes. The project also worked on the promotion of biocoal market development.

Partners

University of Helsinki, Department of the Forest Sciences

Country: Finland
Region: Uusimaa
ERDF funding: 382 358 €
Amount of eligible national funding: 129 119 €

Lead partner

The Forestry Development Centre

Tapio
Country: Finland
Region: Uusimaa
ERDF funding: 357 655 €
Amount of eligible national funding: 119 218 €

Latvia State Forest Research Institute "Silava" (LSFRI Silava)

Country: Latvia
Region: Pieriga
ERDF funding: 138 863 €
Amount of eligible national funding: 24 505 €

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BalBiC
Baltic Bioenergy and Industrial Charcoal

CENTRAL EUROPEAN INTERREGIONAL PROGRAMME 2007-2013



TAPIO

BIOCOAL PRODUCTION, PROPERTIES AND USES

Mari Rautiainen, Mikko Havimo and Kristaps Grudulis

The Development of the Bioenergy and Industrial Charcoal (Biocoal) Production (Report of BalBiC -project cb46)

Report 1/2012 Production and Logistics



Publications in Latvia



Contents lists available at [ScienceDirect](#)

Biomass and Bioenergy

journal homepage: www.elsevier.com/locate/biombioe

Research paper

Granulation of fly ash and biochar with organic lake sediments – A way to sustainable utilization of waste from bioenergy production

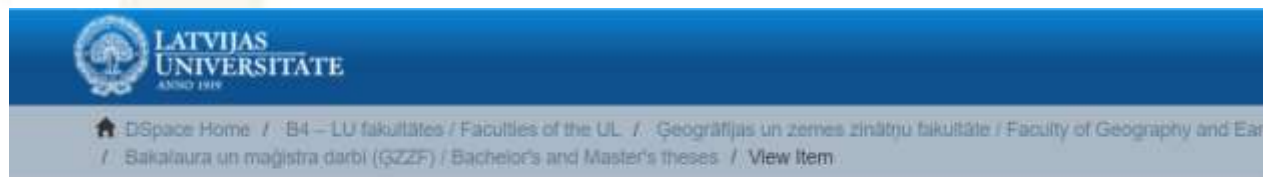
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In general, utilization of bioenergy production waste together with organic-rich lake sediments is one of the ways forward sustainable reuse of waste materials as well as it leads to protect freshwater lakes from overgrowing due to sapropel removal from lakes. **Granules derived from fly ash or biochar together with sapropel might be a future product applied in agriculture** in case of run out of natural resources, e.g., shortage of peat deposits.

Publications in Latvia



Bioogles un sapropeļa izmantošanas iespējas augsnes substrāta izveidē



View/Open

305-58013-Ceima_Santa_sc14010.pdf
(2.192Mb)

Author
Ceima, Santa

Bakalaura darba "Bioogles un sapropeļa izmantošanas iespējas augsnes substrāta izveidē" teorētiskajā daļā, tika veikta zinātniskās literatūras analīze par augsnes aktuālajām problēmām un iespējamajiem risinājumiem. Tika apkopota zinātniskā informācija par bioogļi un sapropeli, kā arī to īpašībām. Darba gaitā tika izgatavotas augsnes substrāta granulas no bioogles un Piksteres ezera sapropeļa. Izejmateriāliem noteikts ķīmiskais sastāvs, pelnu saturs, ūdens izvilkuma pH un elektrovadītspēja. Izveidotajām granulām noteikti ķīmiskie un fiziskie parametri (ķīmiskais sastāvs, mehāniskā izturība, blīvums u.c.) Bioogles suspensijā audzējot sīpolus, tika noteikta bioogles ietekme uz augu attīstību. Granulu efektivitāte novērtēta veicot audzēšanas eksperimentu ar salātiem. Eksperimentā ar kontroli salīdzinātas trīs granulū koncentrācijas. Pētījuma rezultātā noteikts, ka bioogle veicina sīpolu sakņu attīstību. Turklāt salātu attīstība būtiski labāk noritēja, ja augsnei pievienoti 15% bioogles un Piksteres ezera sapropeļa granulū. Bakalaura darba projekts sastāv no 49 lappusēm un satur 16 attēlus un 9 tabulas.

During the practical part of the thesis biochar granules were made using lake Pikstere sapropel as a binder. For both components chemical composition, ash content, pH and electrical conductivity were analysed. Physical and chemical properties (such as chemical composition, mechanical strength, density, etc.) were determined for granules. **Spring onions were grown in biochar suspension to evaluate biochars' effect on plant development.**

Results of this study show that biochar promotes onion root development. Lettuce showed significantly better growth results with 15% biochar-sapropel granule addition to the soil.

Silava project ERAF 112



Soil degradation across Europe is now happening because mineral fertilizers are increasingly used, due to intensive farming organic fertilizers are used less, resulting in organic matter being carried out by crops, the soil becomes vulnerable and easily eroded.

The scientific objective in ERAF 112 project: "to **develop innovative solutions and technologies for sustainable establishment of White Willow** - perennial grass **agroforestry systems** aiming return acid mineral soil marginal areas in **the bio-economy** by using of organic soil amendments – **side products from peat production and wood ash**"



Elaboration of innovative White Willow—perennial grass agroforestry systems on marginal mineral soils improved by wood ash and less demanded peat fractions amendments. 1.1.1.1/19/A/112 ERAF.

NATIONAL
DEVELOPMENT
PLAN 2020



EUROPEAN UNION
European Regional
Development Fund

INVESTING IN YOUR FUTURE

Where we get Biochar for our ERAF 112 project?



Ražošana

***Marienburg* uzsācis bio-ogļu ražošanu**

Db.lv, 11.02.2022



Gan bio-ogles, gan grilogles (attēlā) ir kokogļu veidi, bet atšķirībā no griloglēm, bio-ogles ir granulveida.

Publicitātes foto

Last year, more than 600 000 euros were invested in the technological reorganization of the plant, which has created an opportunity to start the technological production of bio-charcoal.

According to market forecasts, the size of the global bio-coal market will double by 2021 and reach two billion in 2026.

This year, the Marienburg plant is ready to provide up to 20 tons of bio-coal to Latvian farmers free of charge by trying this innovative product.

Silava project ERAF 112



180 metri



Thank You for Your attention



INVESTING IN YOUR FUTURE



IEGULDĪJUMS TAVĀ NĀKOTNĒ

Acknowledgement: Elaboration of innovative White Willow—perennial grass agroforestry systems on marginal mineral soils improved by wood ash and less demanded peat fractions amendments. 1.1.1.1/19/A/112 ERAF.

Atbalsts: Inovatīvu Baltā vītola-daudzgadīgo zālaugu agromežsaimniecības sistēmu ierīkošana ar koksnes pelnu un mazāk pieprasīto kūdras frakciju maisījumiem ielabotās marginālās minerālaugsnēs. 1.1.1.1/19/A/112 ERAF.