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Oxygenating plants and urban beekeeping at Dyckerhoff Polska

Plantas oxigenantes e apicultura urbana na Dyckerhoff Polska

LAST YEAR, DYCKERHOFF POLSKA COMPLETED TWO ENVIRONMENTAL PROTECTION PROJECTS: WE PLANTED "OXYGEN TREES" TO IMPROVE AIR QUALITY AND SET UP BEEHIVES TO INCREASE THE POPULATION OF PRECIOUS HONEYBEES.

NO ANO PASSADO, A DYCKERHOFF POLSKA CONCLUIU DOIS PROJETOS DE PROTEÇÃO AMBIENTAL: PLANTAMOS "ÁRVORES DE OXIGÊNIO" A FIM DE MELHORAR A QUALIDADE DO AR, E INSTALAMOS COLMEIAS PARA AUMENTAR A POPULAÇÃO DAS PRECIOSAS ABELHAS.

Over the past year, Dyckerhoff Polska completed two very interesting ecological conservation projects in collaboration with the local environmental association "Liga Ochrony Przyrody" in Kielce.

The first project was part of the global initiative to reduce CO₂ in the atmosphere and involved creating a sort of "oxygen farm", in accordance with the principle of "cultivate oxygen, reduce your ecological footprint". The ecological footprint is the price we pay for living on earth. Climate change caused by anthropogenic factors, i.e., resulting from human activity, is one of the most serious problems facing our planet. "As an industrial concern, Dyckerhoff Polska is taking many initiatives to reduce CO₂ emissions. These measures are not only our duty, but also factor into the success and long-term growth of the company," says Mirosław Majchrowicz, Managing Director of Dyckerhoff Polska. One such initiative is planting Paulownia trees, also known as the Oxytree, which are extremely effective at producing oxygen. "As part of these measures, we planted over 250 Paulownia fortunei



1. PLANTING OF PAULOWNIA TREES AND INAUGURATION OF A BEEHIVE AT DYCKERHOFF POLSKA

PLANTIO DE ÁRVORES DE PAULOWNIA E INAUGURAÇÃO DE UMA COLMEIA NA DYCKERHOFF POLSKA



2

(Seem.) Hemsl. x Paulownia tomentosa (Thunb.) Steud around the Nowiny cement plant area,” adds Zuzanna Graur, Director of Sustainability and Decarbonization at Dyckerhoff Polska. This tree species is the result of a genetic modification of the woody Paulownia species, native to the warmer regions of Asia, particularly China, Laos and Vietnam. These fast-growing trees absorb more and more CO₂ from the atmosphere (due to multiple photosynthesis processes in the leaf structure as it grows) as they age which, in turn, leads to a significant improvement in air quality. The large leaves of these plants absorb huge amounts of carbon dioxide and produce much more oxygen than other trees. According to some studies, an Oxytree can produce around 260-300 kg of oxygen per year, which is far more than most native tree species that typically produce 100-150 kg of oxygen over the equivalent period of time. A one-hectare forest of “oxygen trees” can reduce CO₂

by about 111 tons in 12 months. Paulownia trees not only produce more oxygen than they consume, but they also help introduce many beneficial substances such as minerals and trace elements into the environment. They are also renowned for their large leaves that provide shade on hot days. Their lilac-white flower buds attract bees, which are responsible not only for producing honey, but also for the development and growth of plants through pollination. Paulownia trees therefore help us reduce our ecological footprint, support the planet, and breathe healthier air. The initiative also helps to promote our own native tree species. Besides the above, we also saw to the needs of the surrounding area by planting Paulownia trees along the Droga Surowcowa road, which is used to bring raw materials from the Kowala quarry to the cement plant. Besides reducing CO₂ emissions, these trees also act as natural sound insulation.

The Paulownia trees were planted

in several stages with the participation of the Dyckerhoff Polska leadership, Dyckerhoff representatives from Germany, and representatives from the local authorities, including, among others, Patrick Klein, Managing Director of Dyckerhoff GmbH, Paolo Zelano, Chairman of the Board of Directors of Dyckerhoff Polska, Mirosław Majchrowicz, Managing Director of Dyckerhoff Polska and Natalia Pryimak, Chief Financial Officer of Dyckerhoff Polska. The mayor of Nowiny, Sebastian Nowackiewicz, also planted his Oxytree at our headquarters.

- 2.** OFFICIAL OPENING OF THE BEEHIVE AND INAUGURATION CEREMONY FOR THE PAULOWNIA TREE FOREST BY (FROM LEFT): NATALIA PRYIMAK, PATRICK KLEIN, KRZYSZTOF ANTOSZEWSKI (LOCAL ENVIRONMENTAL ASSOCIATION), PAOLO ZELANO, MIROSLAW MAJCHROWICZ
 ABERTURA OFICIAL DA COLMEIA E CERIMÔNIA DE INAUGURAÇÃO DO FLORESTA DE PAULOWNIA POR (A PARTIR DA ESQUERDA): NATALIA PRYIMAK, PATRICK KLEIN, KRZYSZTOF ANTOSZEWSKI (ASSOCIAÇÃO AMBIENTAL LOCAL), PAOLO ZELANO, MIROSLAW MAJCHROWICZ

The oxygen farm project founded by Dyckerhoff Polska is the largest in the region and is in response to the ecological and climate challenges the world is facing. The key to positive change is by taking initiatives to promote social awareness and through many educational programs. The second ecological project was completed as part of the “Bees in the City” campaign, also supported by the national environmental association “Liga Ochrony Przyrody” of Kielce, to develop and promote the concept of urban beekeeping in our region. This campaign involved setting up beehives in cities and suburban areas to increase the honeybee population. The initiative is gaining wide acceptance, and more and more people are taking part. Microhives can already be found in the urban centers of many Polish towns and large cities. The hives are placed in city parks, on the roofs of hotels, restaurants, shops or public institutions. It is a great way to make your own honey and live in harmony with the environment. As is well known, bees are perfect pollinators, which is why their presence is beneficial for the development of vegetation. As the honeybee population in Poland and Europe continues to decline, Dyckerhoff Polska is a committed participant in the campaign to promote the presence and development of these extremely beneficial insects, so we built an apiary with four hives in the cement plant area, next to the Paulownia trees. We can therefore support the growth of the honeybee population by providing them with an ecological habitat in which they can proliferate.

The bees in the cement plant area promote biodiversity and support the development of various species of birds, insects and plants. Thanks to them, we can observe the conditions of the natural environment and learn about the specific composition of the surrounding flora. The type of bee introduced in our hives is the Carinthian bee. It is a good-natured honeybee, known for its gentleness and lack of aggression. It effectively protects the hive from pests and predators and adapts quickly to environmental conditions. The bee colonies are as-

sisted by a qualified specialist from the Liga Ochrony Przyrody, who is authorized to check on and inspect hives, collect the honey and carry out other necessary actions. We plan to plant more Paulownia trees and carry out other ecological projects, including the planting of flower meadows, over the next few years. It is our responsibility to balance our economic and social objectives with environmental protection. Sustainability is a social duty for us, but we also believe it is a long-term factor in the success of our company.

3



3. MIROŚLAW MAJCHROWICZ WATERING A NEWLY PLANTED PAULOWNIA TREE
 MIROŚLAW MAJCHROWICZ REGA UMA ÁRVORE DE PAULOWNIA RECÉM-PLANTADA

Durante o ano passado, a Dyckerhoff Polska concluiu dois projetos de conservação ecológica muito interessantes, em colaboração com a associação ambiental local „Liga Ochrony Przyrody“, em Kielce.

O primeiro projeto estava inserido na iniciativa global de redução de CO₂ na atmosfera, e envolveu a criação de uma espécie de „fazenda de oxigênio“, conforme o princípio „cultivar oxigênio, reduzir a pegada ecológica“. A pegada ecológica é o preço que pagamos por viver na Terra. As alterações climáticas causadas por fatores antropogênicos, ou seja, resultantes da atividade humana, são um dos problemas mais graves que nosso planeta enfrenta. „A Dyckerhoff Polska vem tomando muitas iniciativas para reduzir as emissões de CO₂, o que é uma preocupação do setor. Essas medidas não são apenas nosso dever, mas também contribuem para o sucesso e o crescimento da empresa no longo prazo“, afirma Mirosław Majchrowicz, Diretor-geral da Dyckerhoff Polska. Uma dessas iniciativas é o plantio de árvores Paulownia, também conhecidas como Oxytree, extremamente eficazes na produção de oxigênio. „Como parte dessas medidas, plantamos mais de 250 Paulownia Fortunei (Seem.) Hemsl. x Paulownia

tomentosa (Thunb.) Steud ao redor da área da usina de cimento de Nowiny“, acrescenta Zuzanna Graur, Diretora de sustentabilidade e descarbonização da Dyckerhoff Polska. Essa espécie arbórea é o resultado de uma modificação genética da espécie lenhosa Paulownia, nativa das regiões mais quentes da Ásia, particularmente China, Laos e Vietnã. Essas árvores de rápido crescimento absorvem cada vez mais CO₂ da atmosfera, devido a múltiplos processos de fotossíntese na estrutura da folha conforme ela cresce e envelhece. Isso, sua vez, leva a uma melhoria significativa na qualidade do ar. As grandes folhas dessas plantas absorvem grandes quantidades de dióxido de carbono e produzem muito mais oxigênio do que as outras árvores. De acordo com alguns estudos, uma Oxytree pode produzir aproximadamente de 260 a 300 kg de oxigênio por ano, o que é muito mais do que a maioria das espécies de árvores nativas, que normalmente produzem de 100 a 150 kg de oxigênio durante um período equivalente. Uma floresta de „árvores de oxigênio“ de um hectare pode reduzir o CO₂ em aproximadamente 111 toneladas em 12 meses. As árvores Paulownia não apenas produzem

mais oxigênio do que consomem, mas também ajudam a introduzir muitas substâncias benéficas, como minerais e oligoelementos, no meio ambiente. Elas também são conhecidas por suas folhas grandes, que proporcionam sombra nos dias quentes. Seus botões florais lilás-brancos atraem as abelhas, responsáveis não só pela produção de mel, mas também pela polinização que faz as plantas crescerem e se desenvolverem. As árvores Paulownia nos ajudam, portanto, a reduzir nossa pegada ecológica, favorecer o planeta e respirar um ar mais saudável. A iniciativa também ajuda a promover nossas próprias espécies de árvores nativas. Além de tudo isso, também atendemos

4. THE BOARD OF DIRECTORS OF THE CEMENT PLANT, THE DIRECTORS, EXECUTIVES AND EMPLOYEES FROM THE ENVIRONMENTAL PROTECTION DEPARTMENT, TOGETHER WITH THE LOCAL ENVIRONMENTAL ASSOCIATION, AFTER PLANTING THE “OXYGEN TREES” STANDING IN FRONT OF THE NEW APIARY AT THE NOWINY CEMENT PLANT. THE ENTIRE TEAM HAS BEEN INVOLVED IN THIS ENVIRONMENTAL STEWARDSHIP INITIATIVE
- O CONSELHO DE ADMINISTRAÇÃO DA USINA DE CIMENTO, OS DIRETORES, EXECUTIVOS E FUNCIONÁRIOS DO DEPARTAMENTO DE PROTEÇÃO AMBIENTAL, JUNTAMENTE COM A ASSOCIAÇÃO AMBIENTAL LOCAL, APÓS PLANTAR AS “ÁRVORES DE OXIGÊNIO” QUE ESTÃO EM FRENTE AO NOVO APIÁRIO DA USINA DE CIMENTO NOWINY. TODA A EQUIPE ESTÁ ENVOLVIDA NESTA INICIATIVA DE GESTÃO AMBIENTAL

