Link to the product: https://www.shop.biodar.com.pl/breeding-set-biodar-for-mason-bee-osmia-rufa-bicornis-p-12.html



## Breeding set Biodar for Mason Bee (osmia rufa / bicornis)

Price	90,00 Euro
Availability	Available
Shipping time	3 days
PKWiU	01.49.19.0
Manufacturer	Cultural Farm BioDar

#### Product description

#### Breeding set Biodar for Mason Bee (osmia rufa / bicornis)

This breeding set consists of:

- Nesting box in a form of chest equipped with a carry handle
- Nesting trays set (35 units), in which the females of mason bees build nests
- Cocoons release box

The set includes detailed instructions for using the BioDar set.

The number of nests is adapted to the needs of 700 bees in a season abundant in food. Such a set can be used for many years, and following the instructions for proper keeping osmia breeding allows you to increase your own mason bee population quickly.

The set is enough for half a hectare of apple and pear orchard. Check what amount of cocoons are recommended for 1 ha of other crops: (click here)

#### Color:

releasing box - pine (clear varnish), nesting box - pine (clear varnish) or dark brown, nesting trays - colorless and brown, in a mixed system. The colors on the picture may differ from the actual colors of the product.

Detailed information about elements of breeding set can be found here:

- for cocoons release box: (<u>click here</u>)
- for set of 35 nesting trays: (click here)
- for nesting box: (<u>click here</u>)

#### Attention!

The set should be placed at any height, preferably not less than 1m from the ground, in a place providing protection against rain and wind, and the nesting box with trays must not be exposed to direct sunlight (high temperature during hot days may cause deformation of nesting trays and narrowing the nest channels)!

#### **Useful links:**

- recommended amounts of bees depending on the type of crop: <u>https://www.biodar.com.pl/EN/oferta\_murarka\_ogrodowa.php?page=murarka\_ilosci</u>

- BioDar System for growing own population of Red Mason Bee: <u>https://www.biodar.com.pl/EN/oferta\_murarka\_ogrodowa.php?page=murarka\_system</u>

#### This product has additional options:

Nesting box: Brown , Clear

#### Movies

BioDar Sytem for breeding mason bees (osmia rufa / bicornis)

Mason Bee - biology and use in agriculture, BioDar:

Extracting of mason bee cocoons from BioDar nesting trays:

#### Producer

**Cultural Farm BioDar** implements its mission using the rich scientific achievements of the Institute of the Heritage of Villages and Regions and extensive cooperation with non-governmental organizations. The protection of natural and cultural heritage is an important sphere of the Farm's activities, and one of the basic goals is to preserve biodiversity and breeding useful organisms that can be used in agriculture and horticulture.

Since 1989, we have been implementing a program for implementing of bumblebees and solitary bees for horticulate practice and since 2012 the company has been running its own breeding of solitary bees on a commercial scale. By participating in the creation of biological progress, we respond to the high demands placed on by food consumers and our customers in the field of high quality of offered products and the safety of their use.

The farm is part of the regional biodiversity conservation center. In this area of engagement, it runs conservation collections of crops with high biological value (historical varieties of agricultural, vegetable and fruit plants). In cooperating organic farms, it also oversees collections of medicinal, herbal and melliferous plants. Similar works are carried out for the protection of rare and endangered plants.

The sphere of cultural heritage includes products decorated in a way characteristic for different cultural groups. The high quality of our products is appreciated by very demanding customers. Their valuable remarks make the farm's offer constantly replenished and the products are perfected.

**BioDar System** 

#### **BIODAR System**

Achievements of the BioDar company enabled verification of the view about little importance of solitary bees in pollinating plants. As a result of long-term tests as well as constant improvement of constructed devices, there was namely introduced a complete and standardised system of breeding, which guarantees great effectiveness and ease of breeding mason and leafcutter bees (*Megachilidae*).

This innovative method makes possible acquiring the bees in an profitable way and in the same time maximally beneficial to their development. It was achieved thanks to limiting the most laborious activities, standardisation of the used devices and the use of materials accepted by these insects.

## Advantages resulting from the implementation of the BioDar System:

• Facilitating the colony formation and the production of a high quality biological material

Completing the nesting arrangement is very easy, and its layered structure enables the fast inspection of all levels.

• Significant limitation of the labour-consumption and costs of the bee breeding

In the traditional manner of breeding, common reed stems are most often used as a nest material; it is not possible to take cocoons out and select and disinfect them without destroying the nests, which involves the need of preparing or purchase of the reed every year.

- Increasing the work safety while taking out cocoons of nests While reed tubes are torn open, a lot of mould fungal spores, grains of clay and remains of pollen unused by bees is getting to air. Staying in such an atmosphere can cause allergic reactions manifesting itself in headaches and itching mucous membrane of throat, eyes and nose. Applying the new method is not posing such a risk.
- Getting a high percentage of females in filial generations thanks to breeding mason bees in nesting trays with the optimum diameter of nest channels.

# Functional and technical aspects of breeding *Megachilidae* bees using BioDar System

Complete breeding set consists of:

- Nesting box in a form of chest equipped with a carry handle
- Nesting trays set (35 units), in which the females of mason bees build nests
- · Cover protecting channels with bees
- Cocoons release box
- Mason bee cocoons
- Separator

#### **Nesting box**



The "hive" box with nesting trays constitute the body of the **BioDar System**. The box is built of **wood**, which is a durable, aesthetic and very well accepted by the bees material. Moreover, it has good acoustic and thermal insulation properties, positively influencing the course of biological processes in the nest arrangement. Maximum weight of the box with the nesting trays entirely filled up with food for larvae and with bees is not greater than 6.5 kg. The nesting boxes are secured with eco-friendly varnish, protecting them against climatic and habitat adverse conditions (great humidity, microbiological disintegration).

## **Nesting trays**



In the **BioDar System** all the aspects of the bee breeding economy are based on one key element, which is the nesting tray. This type of nesting arrangements was developed as a result of long-term tests and verified in field conditions. Using nesting trays is a novel solution and a step forward towards other nesting materials and manners of solitary bees breeding (see <u>development works</u>). A possibility of using the same nesting trays in many consecutive breeding seasons is a basic advantage.

The nesting trays are made of thermoforming film used for food packaging production. This material is well accepted by bees, both at a stage of settling channels as well as transforming larvae into next developmental stages. The trays put together in a form of packages have two-ply sidewalls along the nest channels enabling temperature stabilisation inside the nests. The optimum length and the diameter of nest channels are adapted to the mason bee females requirements while laying eggs. Using the trays of the same dimensions during the whole breeding process makes possible the unification of the remaining equipment, which is an essential factor of the comprehensive development and the organization of the entire system.

The nesting trays offered by the BioDar company are legally protected (UP-RP/W.120675, DE 20 2013 000 232.8).

## Additional accessories

• Cocoon release box



Kaseta służy do przechowywania kokonów, wylęgu pszczół i eliminowania pasożytów. Zbudowana jest z drewna, a jej wewnętrzna konstrukcja uniemożliwia wyjście pasożytów, które mogą występować w kokonach pszczół (np. drogosz żałobny-*Antrax antrax*).

#### Red mason bee cocoons

The red mason bee cocoons offered for sale descend from the reproductive material collected in the south and central Poland in 1989. At present, bees of this species are multiplied on the area of the own breeding apiary and in cooperating households. The adopted manner of the mason bee breeding and strict criteria of the cocoons selection guarantee obtaining the biological material of the best quality. Cocoons are sold from October till the half of March.

#### Separator



A handy tool designed for the precise and simultaneous taking cocoons out of many nests, without exposing them to crushing. Using the separator makes possible thorough cleaning the channels from remains of clay and pollen and acquiring the mason bee cocoons from the nesting trays on average 9-times faster than from the stems of reed.

• - Stelaż



A roofed frame giving place for up to 2 BioDar sets, protecting the nests from rain and sun. The frames are protected with a waterproofing impregnant protecting them from adverse climatic and habitat conditions (high humidity, microbiological decomposition).

## **Closing remarks**

Basing on the long-term tests, we can assure you, that the BioDar company delivers general-purpose, long-lasting and handy nesting arrangements, with all labour-saving accessories, which render the bee breeding profitable and successful.