

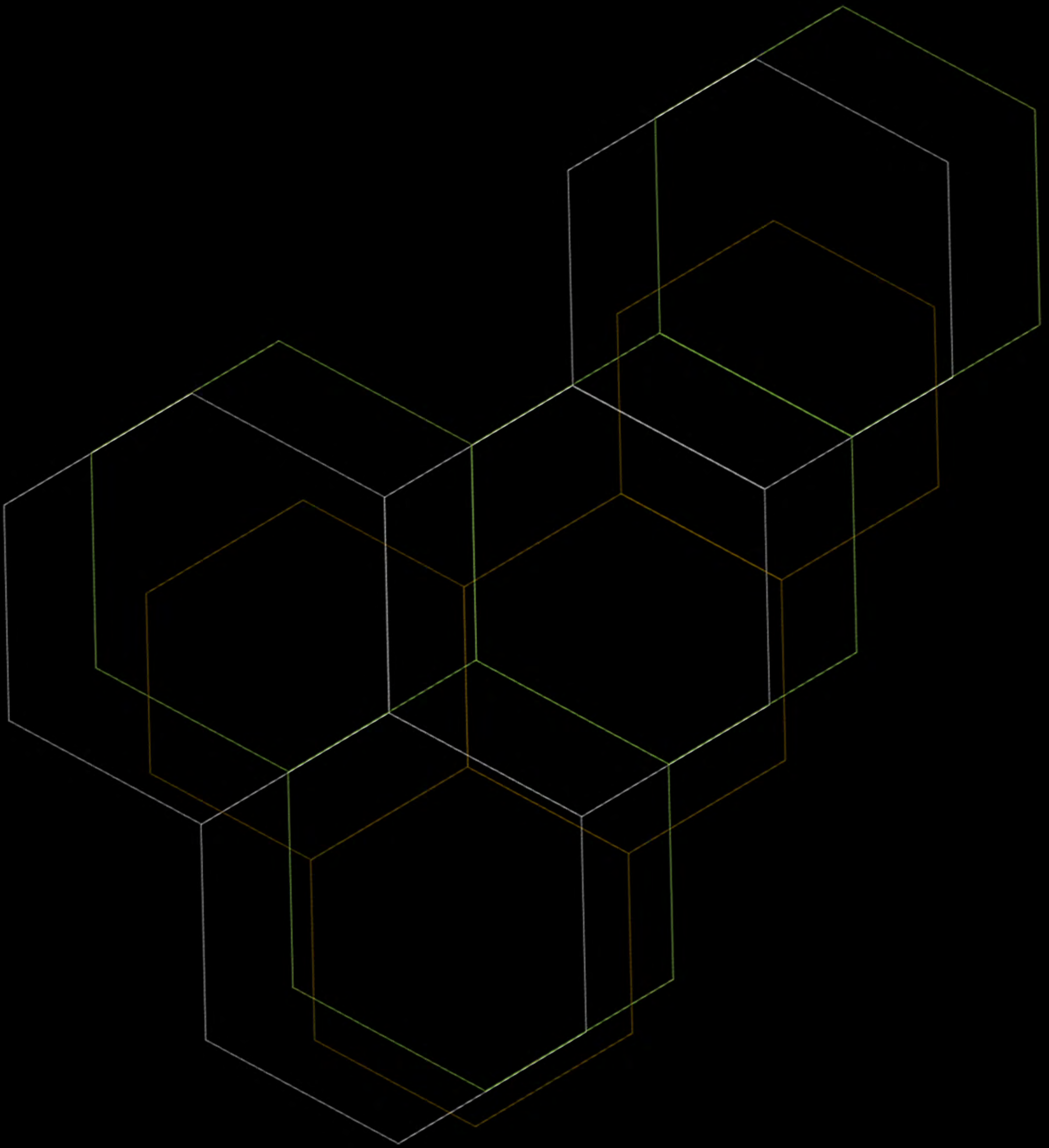


# CATALOG

## Bee Nutrition Science

[dulcofruct.com](http://dulcofruct.com)





# BEE NUTRITION SCIENCE



# About Us

## Welcome to the world of BEE NUTRITION SCIENCE!

A valued company that made history and gained reputation in over 16th countries by providing the best recipe for healthy and successful apiaries, offering the best nutrition for bees, energetic and protein and a basis of biostimulators.

Dulcofruct company has been an active player on the beekeeping market since 2009.

It all began as a family passion that combined hard work with love for this special beings that we call bees that grew from year to year, combining nature with today's knowledge creating the concept "Bee Nutrition" and adding the scientific studies and partnerships thus coming up with our creed "BEE NUTRITION SCIENCE"

# Research & Development Department

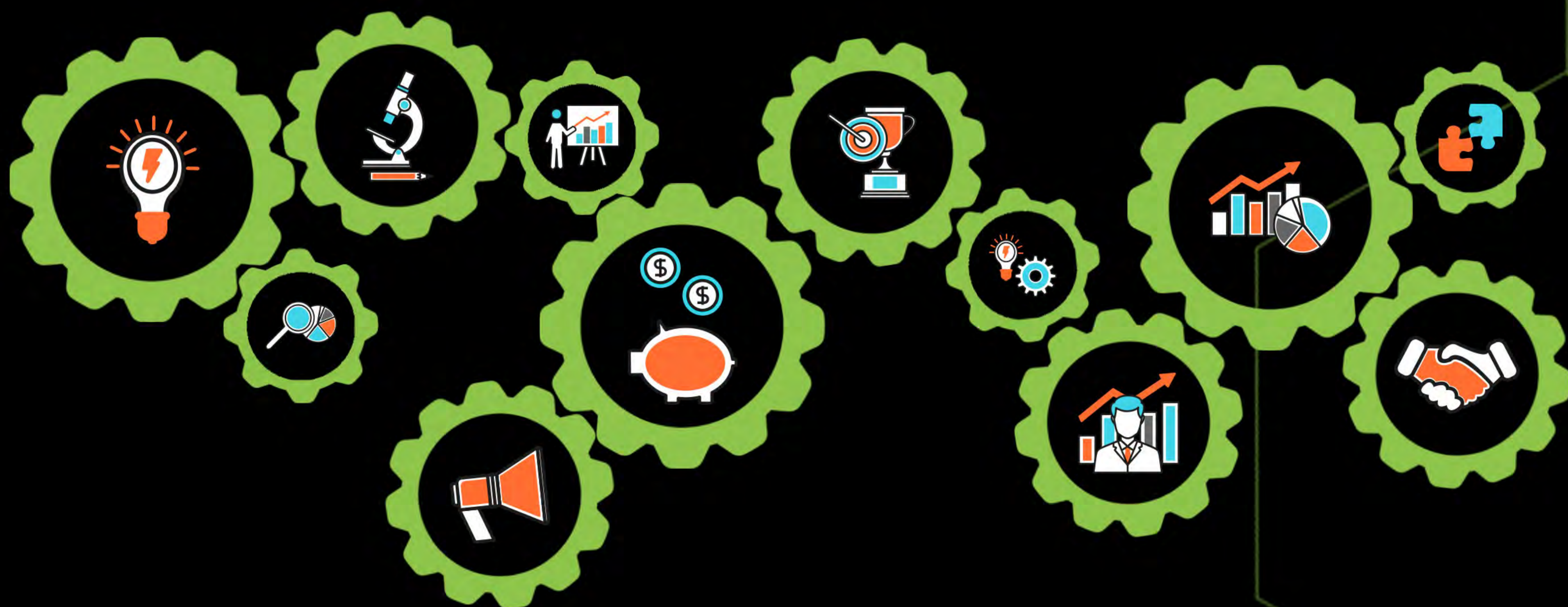


At our business core stands our Research & Development department that is continuously researching, planning and implementing new programs and protocols in our company. We are using top of the line tech and materials combined with creative abilities and research to improve our bee nutrition line to meet the hardest needs of the targeted markets.

Our key element is managing to combine the benefits of nature's ingredients with top of scientific knowledge all of this together, added to the latest technology in the market has only one result: optimum bee nutrition. Our team is conducting daily experiments and studies led by our bee nutrition specialists *PhD Daniel Popovici* and *PhD Ovidiu Craiu*.

## The main objectives of our R&D department are:

- To conceive new recipes for each apiary depending on race of bees, climate changes, multiple stress factors.
- To offer knowledge to beekeepers by presenting online and on-site seminars with the importance of having a healthy and well fed apiary, by respecting the motto “Healthy bees are happy bees!”
- To develop and combine various studies on bees with top of the class Universities from Romania, veterinary institutes, biologists and well known beekeepers.



# Exclusive Feeding Experiment

## Reasons for the experiment:

The experiment was conducted to support beekeepers on the sustainability of bee colonies :

- in conditions of climate change
- weather vulnerabilities
- various stress factors for bees
- long rainy periods
- reduction of floristic biodiversity
- extreme droughts
- lack of natural harvesting



## Location, climatic factors, materials used

This unique test was carried out in the Eastern part of Romania, in a nectar and pollen free area.

The nutrition of bee colonies was done exclusively with Dulcofruct brand products.

In general, the changeable weather with extreme climatic phenomena, rains and storms and lack of natural harvesting, create a major stress on bee colonies.



# Unique experiment!

## Type of feeding, types of products

Our products have been applied twice a week, in quantities tailored to bee needs. During the experiment, a purified water source was provided as well.

The development of bee families was due exclusive to the Dulcofruct products used:

- Super Protein Pattie
- Candy Board Super Protein
- Candy Board with Plants
- ApiPollen Substitute
- IdealApi Optimal Syrup
- IdealApi Complete Syrup

The hives were populated with 15.000 adult bees without brood, 7 Dadant Frames, which surprisingly developed in 65 days, reaching 80,000 individuals per colony, using only Dulcofruct nutrition solutions.

The most important indicator of the development was the amount of present brood, with dimensions measured between 80-140dm<sup>2</sup> as the bees succeeded in constructing combs and covering the frames with larvae proportional to the whole frame.

Dulcofruct products contain:

- vital sugars essential for stimulation with a perfect balance of aminoacids, minerals, vitamins, fats, microelements
- natural polyphenols and natural antiseptics, ensuring rapid growth and harmonious development of bee families

## Conclusions:

*Dulcofruct Company has been able to demonstrate, in such a simple way, using “Exclusive Feeding Experiment”, that bees can have an harmonious, sure and explosive development when nature does not provide enough for them. The consumption of “Dulcofruct” products was excellent, the bees metabolizing all the ingredients without traces of residues.*



# MANUFACTURING PRESENTATION



Started 2009

High capacity storage

Based in  
Golestii de Sus



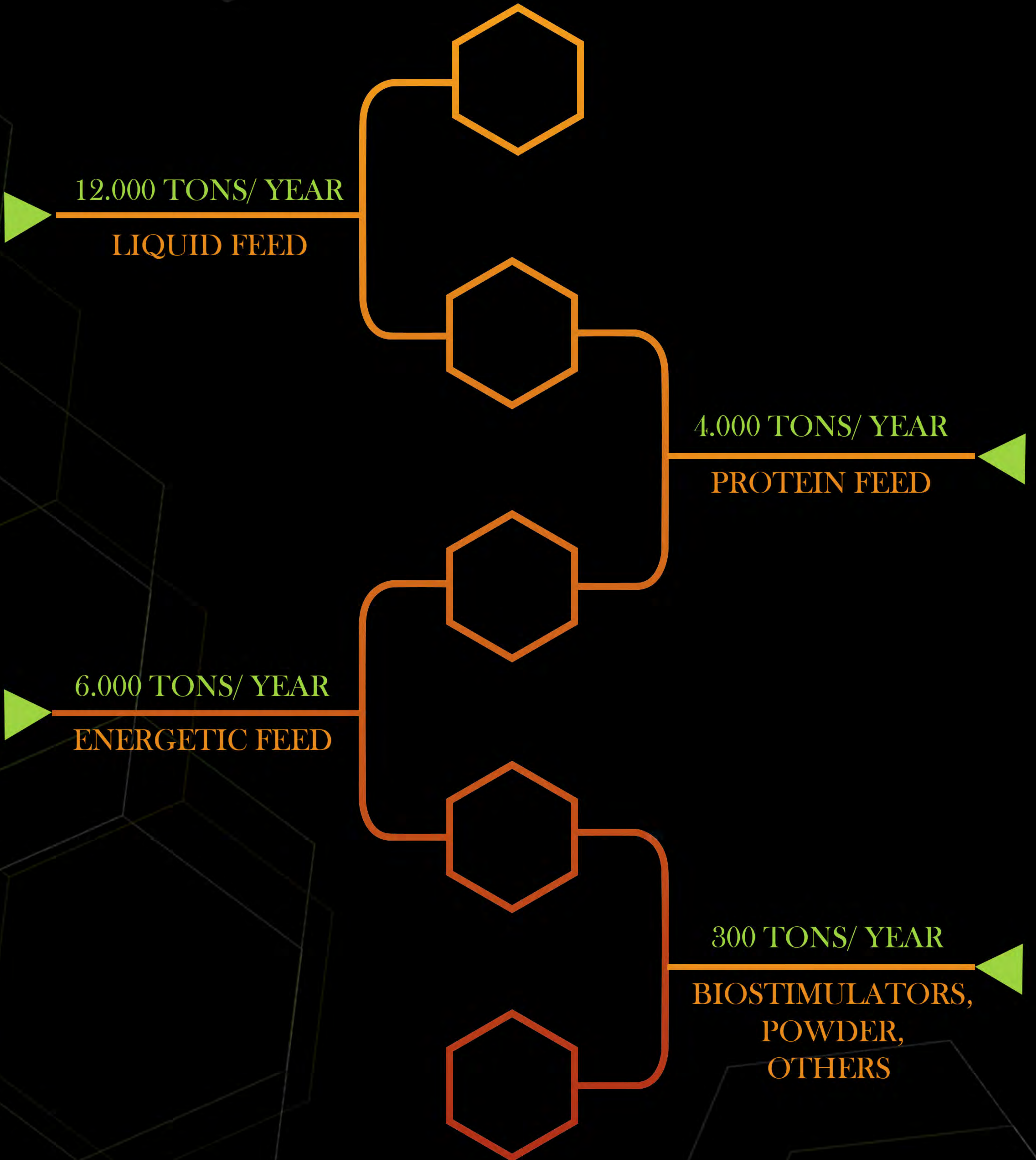
8.000 m<sup>2</sup> Factory

60 Employees





# PRODUCTION LINE



# HAVE WE MET?





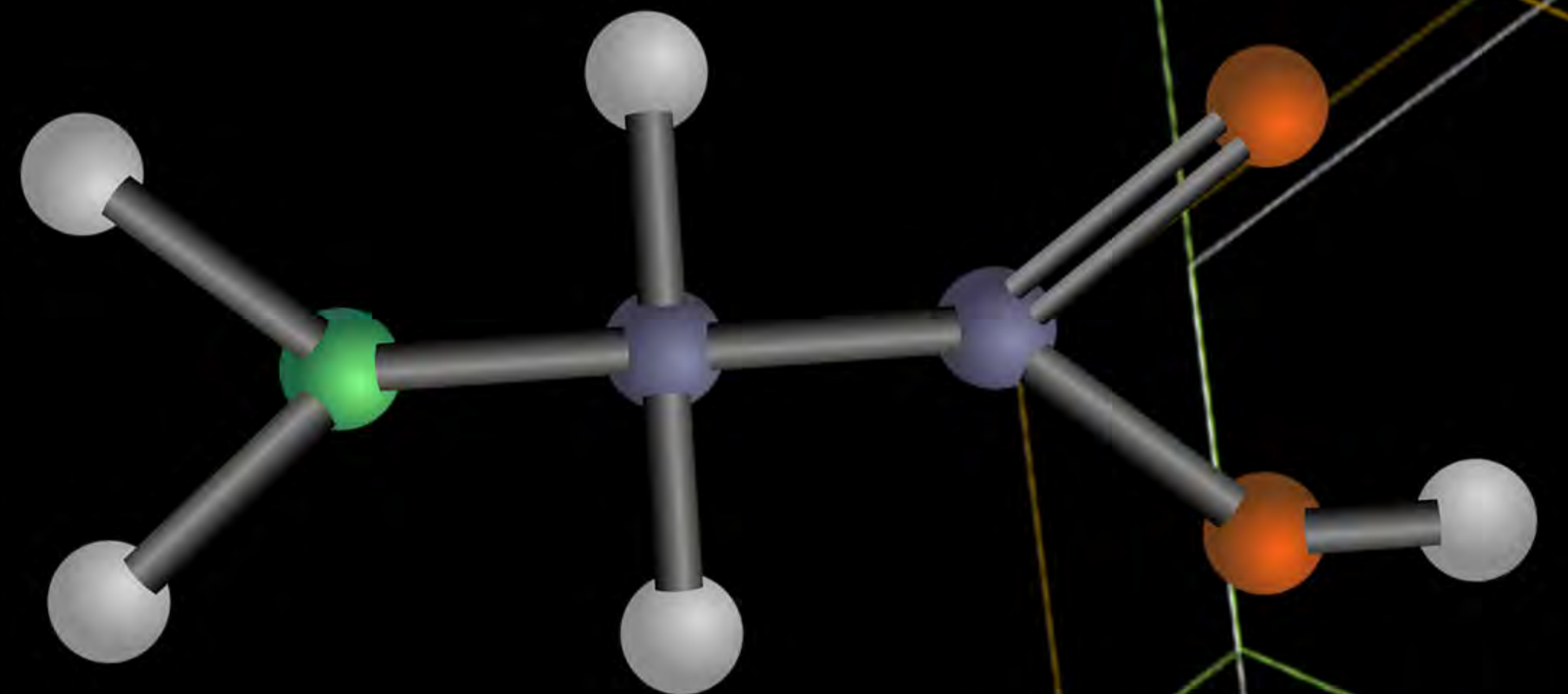
# INTRO TO BEE NUTRITION

*Honey bees, like all other animals, require essential ingredients for survival and reproduction.*

The Honey bees essential requirements are:

1. Carbohydrates (sugars in nectar or honey)

Carbohydrates are required by both the adult and larval stage for normal growth and development. They generate energy for muscle activity and are absolutely essential for fueling flight. Carbohydrates also are the primary energy source for maintaining the required body and nest temperature. The elevated intake of carbohydrates in the form of syrup is correlated with proper wax gland function and secretion. Supplementing with carbohydrate food is done when bees need it the most, that is, in the spring and autumn periods, this resulting in a better harvest in the active season. The bees lack of access to carbohydrates leads to their death in few hours, up to 2-3 days, depending on the initial reserve for carbohydrates in the digestive tube.



2. Protein and Amino acids

Various studies have looked at the amount of pollen that a colony would need to reach healthy, productive population numbers. Most of the research estimates that a honey bee colony requires an average 20-70 kgs of pollen annually as a material base of brood development. The adult bee body protein reserve can vary widely but it is very important for immunity and lifespan modulation. This is a large range but it is dependent on the length of the season, the protein value of the local pollen sources, the genetics of the bees themselves and diverse climatic and stress factors.

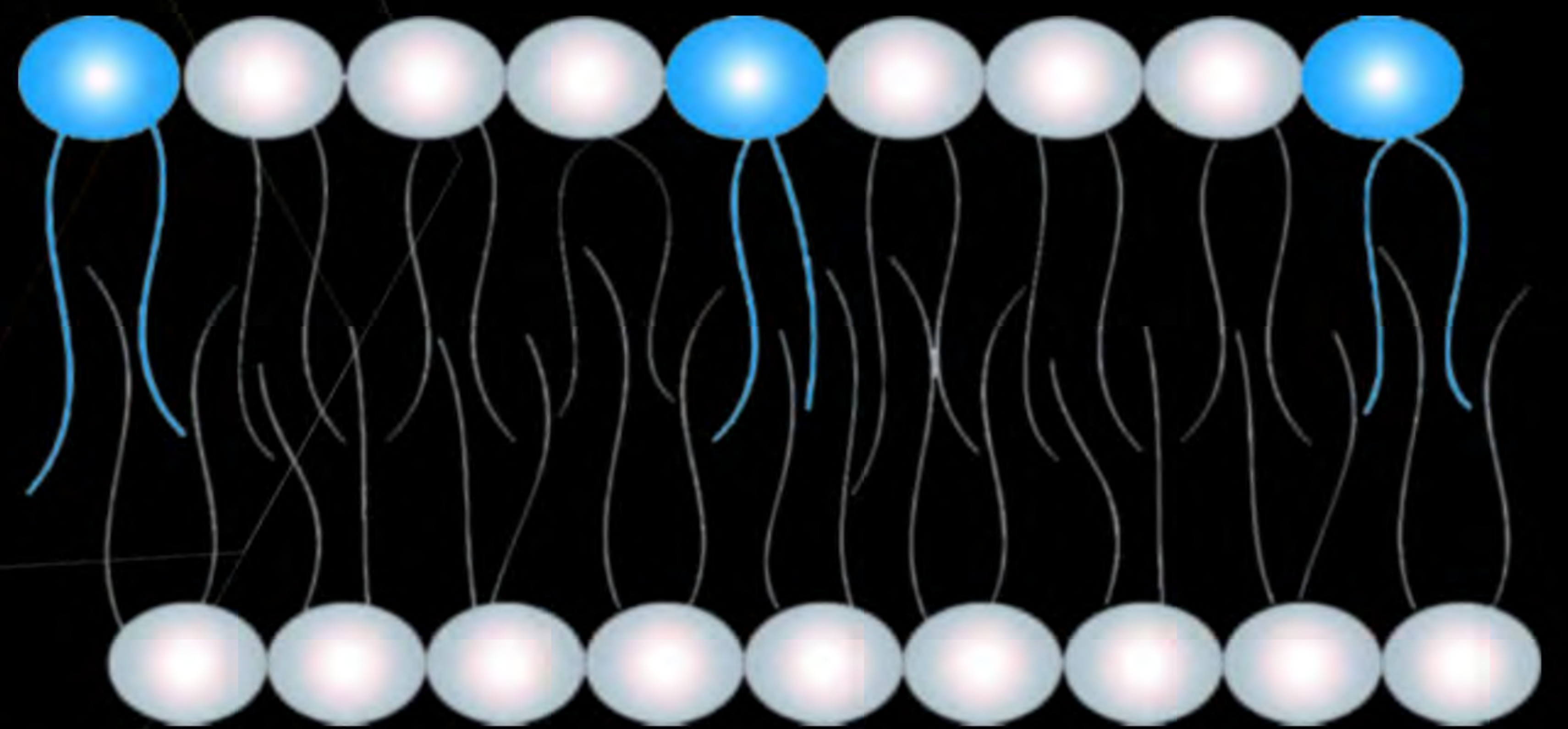
A study by de Groot (1953) showed that most pollen contains all the essential amino acids: arginine, histidine, lysine, tryptophan, phenylalanine, methionine, threonine, leucine, isoleucine and valine, but when nature cannot provide this is when we interfere.

### 3. Lipids (fatty acids)

Lipids and fatty acids are the building blocks of phospholipids which are a major component of cell membranes. These complex lipids are the precursors to important hormones involved in the molting process during the honey bee's life cycle and serve as a primary energy store for insects in their fat bodies.

These fatty acids also are used for the derivation of different defensive secretions and they also aid in the lubrication of food.

The lipids in the bees' metabolic system come from their own synthesis, as well as from food sources.



### 4. Vitamins, minerals (salts)

Nectar and pollen both contain many vitamins and minerals.

Pollen contains the B-complex vitamins (thiamine, riboflavin, pyridoxin, pantothenic acid, niacin, folic acid and biotin). These vitamins are crucial for hypopharyngeal gland development (Herbert and Shimanuki 1978). Pantothenic acid is now known to play a critical role in queen/worker differentiation. Riboflavin, nicotinic acid and pyridoxine have also been correlated to brood rearing.

Like the other essential nutrients pollen contains all of the essential minerals: sodium, potassium, calcium, magnesium, chlorine, phosphorus, iron, copper, iodine, manganese, cobalt, zinc, and nickel. Many of these minerals are important components in enzymatic metabolism, in the nervous system functioning and also in the reproductive system.



## 5. Plant antioxidants and plant active substances

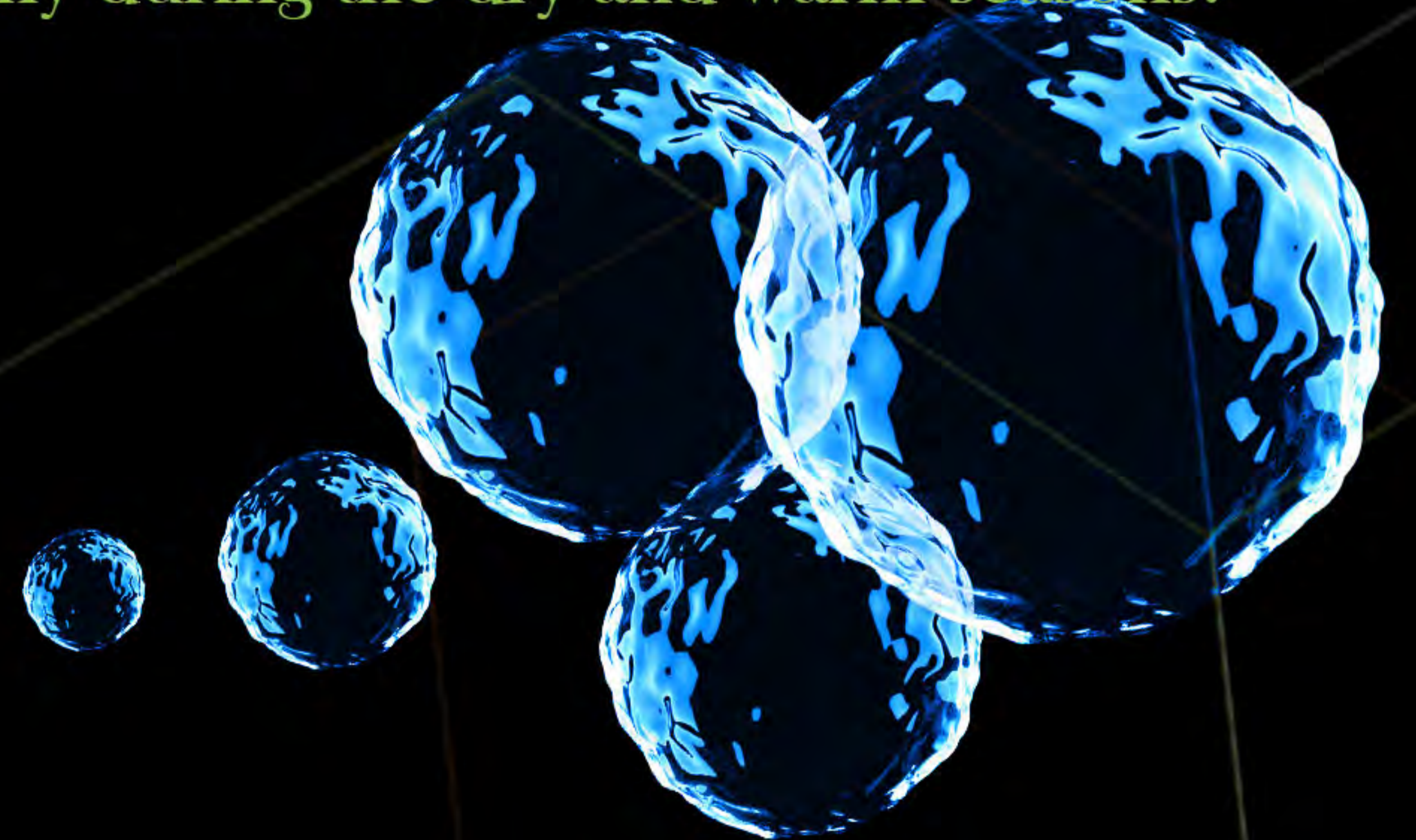
Honey and pollen contain countless active substances from plants, mostly with an antioxidant role, but also with other biological functions. Although the composition of honey and pollen in terms of these components is variable, some species including various substances with a toxic effect, and other species being poor, bees are dependent on this category of substances to reach an acceptable level of well-being and of performance.

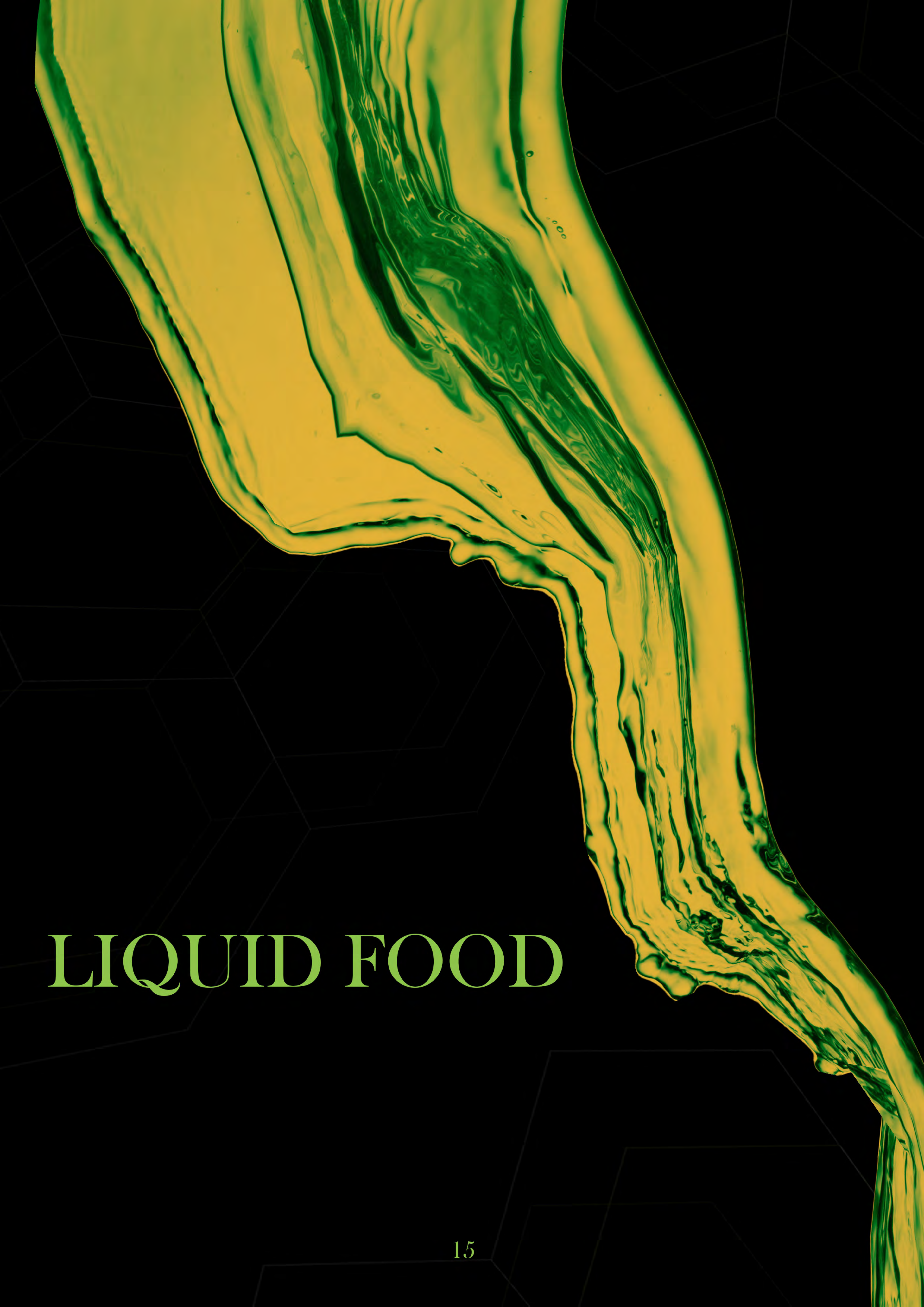


## 6. Water

Without water bees will die within a few days if not sooner. Water also aids in ingestion and digestion as a lubricant and carrier. Hive bees must maintain an optimal humidity of 90 to 95% in order for brood to hatch normally

Water collection is essential to thermoregulating the colony during the dry and warm seasons.





# LIQUID FOOD

# IDEAL API CLASSIC SYRUP

## Supplementing food supplies for winter

### Benefits:

- It has a chemical structure adjusted to the requirements of the bee
- Balanced mineral content
- Does not contain starch, maltose or other residual substances
- It is well digested by bees, does not wear off (does not contain sucrose), does not load the intestine, does not contain pathogens or toxic substances
- Fast capping, does not crystallize in combs. It has no odor, providing protection from thieves

**Packaging: 13 kg/ pet**

**15 kg/ bucket**

**2 kg/ bag**

**1400kg/ IBC**







# IDEAL API OPTIMAL SYRUP

The fast and efficient solution for the protection and harmonious development of bee families

Results for the entire apiary:

- Stimulates the increase in the amount of brood
- Plant extracts have antibacterial and beneficial effect
- Prevent Nosema effectively
- Perfect balance between sugars
- Supports the nutritional needs of bees
- Increases the lifespan of the entire bee community
- Optimal pH

Apinectar Plus does NOT contain neonicotinoids, pesticides, aflatoxins and heavy metals!

**Packaging: 13kg/ pet**  
**15kg/ bucket**  
**2kg/ bag**  
**1400kg/ IBC**

# IDEALAPI HERBAL SYRUP

Syrup designed to supplement food that protect the bee family against *Nosema Apis* and *Nosema Ceranae*

## Benefits:

- Contains plants
- Can be easily capped
- Doesn't contain sucrose
- Doesn't crystalize
- Doesn't wear off the bee in the winter
- Easy digestion
- Balanced content of microelements, essential in bee nutrition

**Packaging: 13kg/ pet**

**15kg/ bucket**

**2kg/ bag**

**1400kg/ IBC**





# IDEAL API COMPLETE SYRUP

The complete composition  
for the developing of bee families

## Benefits:

- Increase the queen's laying
- Reduces the risk of getting sick
- Has a nutritional perfect balance due to the intake of fructose, sucrose, glucose, vitamins, minerals and amino-acids
- Increases the power of the colony

**Packaging:** 13kg/ Jerrycan  
15kg/ bucket  
2kg/ bag  
1400kg/ IBC



# PROTEIN FOOD

# SUPER PROTEIN PATTIE

Premium product

## Benefits:

- Protects the reproductive genome of both sexes
- Increases the number of excellent drone performances
- Increases the bee's immunity and longevity
- Reduces the population of Varroa
- Prophylactic treatment of harmful factors
- Does not adulterate bee products

*Packaging: 5,4kg / bag*





# CANDY BOARD SUPER PROTEIN

## Benefits & Advantages:

- Easy to use
- Perfect balance between nutrients, ensuring the needs of bees
- Good digestibility - does not load the intestine
- Stimulates the explosive development of bees by increasing the number of eggs laid
- Good palatability - fast consumption - maximum results

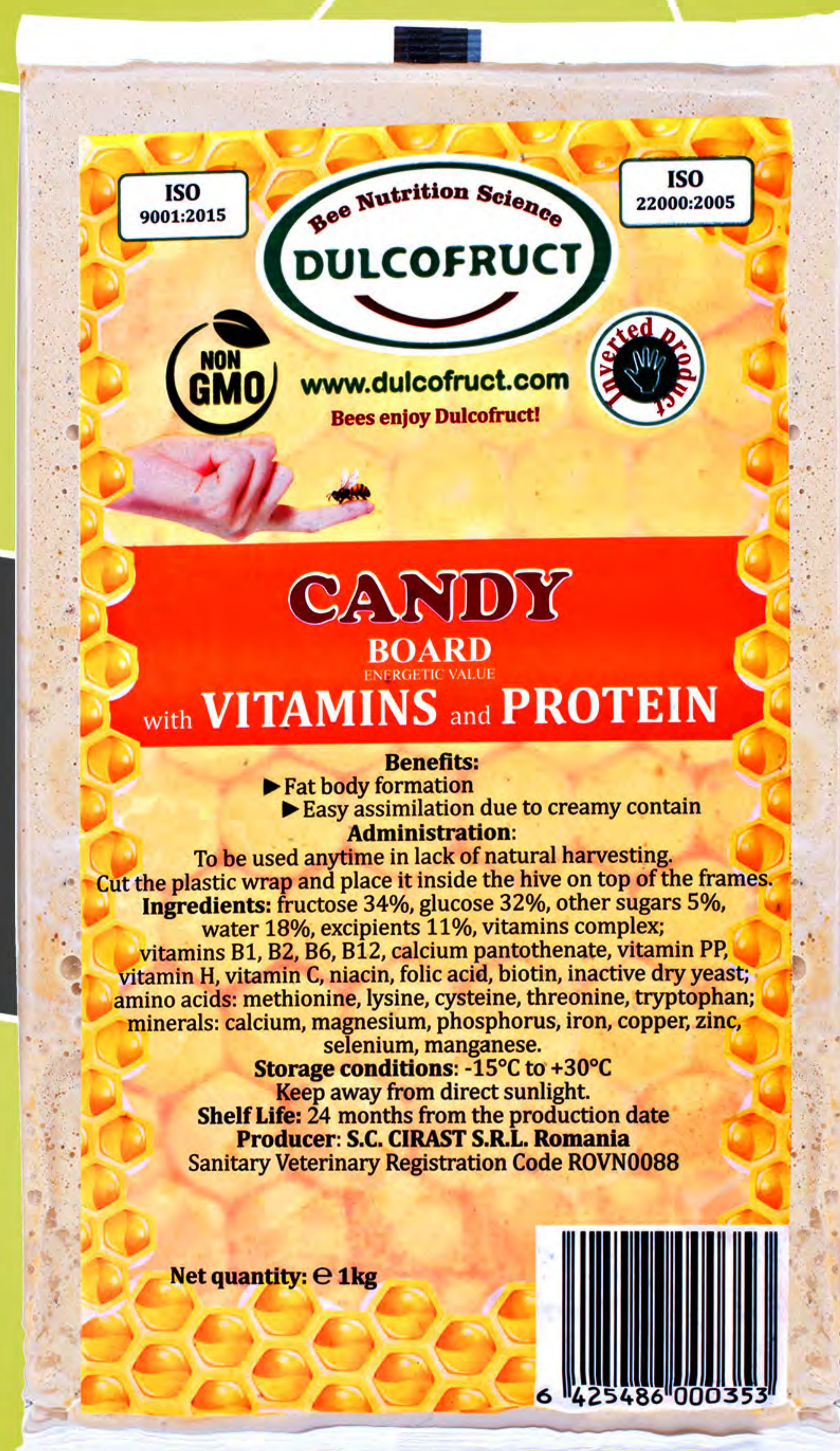
**Packaging: 1 kg/ candy**  
**10 candies/ box**

# CANDY BOARD WITH VITAMINS AND PROTEIN

## Benefits:

- Easy to handle
- Has complete amino acids content
- Good development of bee families
- Easy digestibility

**Packaging: 1 kg/ candy**  
**10 candies/ box**





# APIPOLLEN SUBSTITUTE

Specially created by the R&D department like a replacer of nature pollen by guaranteeing the qualitative development of the bee colonies no matter the weather conditions

## Benefits:

- Protects the intestinal flora and increases the food assimilation
- Contains only easy digestible perfect balanced elements, free residues
- Fast increase of the colony's power by production of vitellogenin extremely necessary for larvae and the brood
- Various types of administration

**Packaging: 2 kg/ bucket**  
**7kg/ bucket**



# AMINO BEE SYRUP

The Protein need for bees

## Benefits:

- Balances the carbohydrate and protein needs of the bees
- Fast assimilation and absorption of the product due its liquid state
- Rapid development of bee families
- 100% digestibility without any residues
- Ensures the optimum protein level in monofloral areas

Package: 400gr/ pet





# ENERGETIC FOOD (WINTER)

# CANDY ENERGETIC

Solid energetic bee food, specially made for fast administration into the hive increasing the energetic values of the bee colonies in the cold season when the bees haven't got any fly activity

## Benefits:

- Increases the bees' longevity
- Assures the energetic excess in the cold season
- Easy assimilation due to creamy contains

**Package: 1kg/ candy**  
**10 candies/ box**





# CANDY ENERGETIC FORTE

Solid energetic bee food that has inverted sugars, saving the bees energy in the cold season

## Benefits:

- Varroa mite control benefit
- Saves the bees energy
- Fast assimilation
- Easy handling

**Package: 1kg/ candy**  
**10 candies/ box**

# CANDY ENERGETIC WITH VITAMINS

Candy with Vitamins has as its target to develop young colony with time saving

## Benefits:

- Increase the queen spawn
- Low pH that prevents the appearance of diseases
- Easy handling
- Increase the ability of nurses to feed the larvae
- Increase the immune status of the population

**Package: 1kg/ candy**  
**10 candies/ box**





# CANDY ENERGETIC WITH PLANTS

Solid energetic bee food that contains natural polyphenols, with natural antiseptics and antibiotics from plant origin

## Benefits:

- Provides protection against Nosema and other intestinal diseases
- Increases intestinal resistance and general immune status of bee family
- Fast assimilation
- Queen's brood stimulation

**Package: 1kg/ candy**

**10 candies/ box**



# BIOSTIMULATORS

# BEE IMMUNITY BOOSTER GEL/ LIQUID ULTRASOUNDS TECHNOLOGY

Increases bee longevity, vitality and diseases resistance

## Benefits:

- Scientifically tested and proven product that helps to increase the average life of the bee with minimum 20%
- There are no restrictive administration periods
- Improves hygiene instinct
- It enhances the bee's central nervous system
- Increases immunity
- Natural active ingredients
- Easy to use

**Packaging: 150gr/ tube - gel**  
**250ml/ bottle - liquid**







# BEEVIROL

## Biostimulator with antibacterial effect

### Benefits:

- Antibacterial - eliminates pathogenic bacteria
- Antiviral - relieves the symptoms of viruses until remission
- Prevents the appearance of American and European locca
- Boosts the harvesting rhythm and the hygienic behavior
- Increases the ability to orient
- Increases the lifespan of bees
- Stimulates the queen's laying

**Package: 1l/ jerrycan**  
**5l/ jerrycan**

# APIPLANT

It is an alcoholic extract of medicinal plants

The active substances, including plant polyphenols, also have a nutritional role, canceling the impact of the deficiencies generated by monoflora honey or some types of artificial food, but especially it beneficially influences through the effects:

- antifungal, stopping the development of *Nosema apis* and *Nosema Ceranae*
- immunostimulator at several levels in the body of bees
- antiseptic

## Benefits:

- Protects the bees
- Increases endurance
- Blocks *Nosema*
- Increases bees longevity
- Increases queens laying

Package: 500ml/ pet



**ALBANIA**

**Farmaci & Aksesore  
Veterinare Bulku**  
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Phone: +355 69 730 1401

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**Lasercharge LTD**  
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Phone: +357 22 460404

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**Icko Apiculture**  
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Phone: +33 4 90 40 49 71

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**BALTIC BERRIES**  
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Phone: +371 27 502 676

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Tel: 00218915115151

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**UAB "Bitė Tuk"**  
Vilnius  
Phone +370 61601482

**NETHERLANDS**

**Imkershop**  
Brandenburglaan 8  
4333BZ Middelburg  
Tel:+31 06-220 830 90

**NEW CALEDONIA, AUSTRALIA AND NEW ZEALAND**

**AU RUCHER SARL**

**POLAND**

**PRZEDSIĘBIORSTWO PSZCZELARSKIE  
TOMASZ ŁYSON SP.Z O.O. SP.K.**  
Sułkowice, ul. Raławicka 162,  
Klecza Dolna 148, 34-124 Klecza Górna  
Phone: +48 33 875-99-40

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**Dingle Beekeeping Supplies**  
Dingle Beekeeping Supplies  
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**REPUBLIC OF MOLDOVA**

**S.R.L. REGINA NATURII**  
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Phone: +373 079 089 996

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**ApiMaye Arıcılık**  
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**UNITED KINGDOM**

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Old Road  
Maisemore  
Gloucester  
GL2 8ht  
Phone: 01452 700289

**LOOKING TO BUZZ AROUND**

**Andorra  
Armenia  
Austria  
Belarus  
Czech Republic  
Germany  
Malta  
Montenegro  
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Slovakia  
Switzerland**

## **We are here for you!**

Would you like to find out more about our products?

Our staff will gladly respond to all your requests.



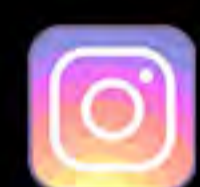
**[www.dulcofruct.com](http://www.dulcofruct.com)**



**[office@cirast.com](mailto:office@cirast.com)**



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**Dulcofruct**

**THANK YOU!**

**Bee Nutrition Science**