

Pre-sowing seed treatment Parostok

**INCREASING FROST AND
DROUGHT RESISTANCE.**



Problem

Climate change is increasing the frequency and severity of droughts, floods and extreme weather events, causing unpredictable growing conditions and crop failures for farmers around the world.



DECISION

Increasing the yield of agricultural crops: Corn by 15%, Winter wheat by 27%, Rape by 24%, Sunflower by 65%, etc.

Increasing frost and drought resistance.
+35°C (95°F) / -35°C (-31°F)



DECISION

By increasing drought and frost resistance, we reduce the risks of crop failure for farmers and insurance companies.



Stage of readiness TRL9: small-scale production of commercial samples.



The essence of the proposed technology

- 1. The technology involves microwave stimulation of the nucleus of the seed cell.**
- 2. This increases the internal energy and strength of the seed cell.**
- 3. The increase in energy leads to a 2-4-fold increase in the energy of seed germination and development.**
- 4. There is an increase in the volume and power of the root system up to 3 times.**
- 5. Winter crops before wintering have increased frost and drought resistance.**
- 6. The ripening period is shortened by 10-12 days.**

PRICE FOR 1 PIECE

\$25000



Use is allowed only for processing own seed material.

For non-commercial use.

\$25000+%



For commercial processing of seed material

For commercial use.

*Price depends from region

ECONOMIC EFFECT



PANKYEV V.V. APF "ALEKS"
Zaporizhzhia Region.

| Agricultural culture | Variety | Hectare control | Hectare processed | Control of quintals/ hectare | quintals/ hectare harvested | Increase in yield (increase) quintals/ hectare |
|----------------------|-------------|-----------------|-------------------|------------------------------|-----------------------------|--|
| Winter wheat | Victoria | 10 | 700 | 43,4 | 60,1 | 38,5%/ 16,7 |
| | Union | 10 | 600 | 44,1 | 58,6 | 32,8%/ 14,5 |
| <u>Barley</u> | Foundat ion | 5 | 80 | 27 | 40 | 48,1%/ 13,0 |
| Sunflower | | 5 | 1250 | 12 | 19,8 | 65%/ 7,8 |

Sown areas - **6,000 hectares**. General crop allowance on account increasing the yield of seed grain of winter wheat varieties "Soyuz" and "Victoria" and others. for 5 years of wide use of innovative of technology fluctuated over the years in the range of **15-27%**, amounted to more than **11,000 tons** and plus more than **50000\$** due to the abandonment of **toxic chemicals**.

MARKET SIZE



17,4 » 41.2

Billion

AGROTECH WORLD MARKET VOLUME 2019 - 2027

Organic Agriculture Market 2021 Market Size USD
130.28 Billion

<https://www.organic-world.net/yearbook/yearbook-2023/infographics.html>

According to Research And Markets,
Crunchbase as of October 2021

From 2023 to 2030, our capitalization will grow and by the end of 2030, it may amount up to 0,1% of the capitalization of the entire markets.

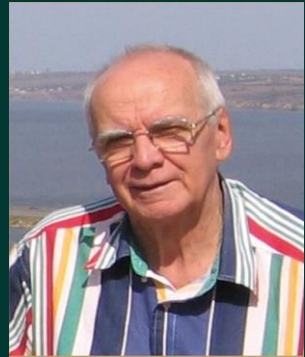
COMPETITORS AND ADVANTAGES

| Competitor | Technology | Advantages | Limitation |
|-----------------------|---|---|--|
| Monsanto-Bayer | Chemical seed coating and genetic modification. | Improved properties such as insect resistance. | Expensive seeds, chemical risks. |
| Syngenta | Chemical treatment of seeds. | Protection from pests. | Problems with toxicity, increasing resistance. |
| Parostok | Microwave irradiation. | Increase of germination, growth, Protection from pests. | Special equipment is required. |

ADVANTAGES

- 1. Sprout contains no chemicals - it strengthens plants with precise microwave energy. We complement our competitors, with our technology.**
- 2. Simple, mobile, processing of ordinary seeds immediately before sowing.**
- 3. Increase in yield by 15-65%+, the effect of treatment lasts up to 4 months, Protection from pests.**
- 4. Meets the Sustainable Development Goals of Zero Hunger and Chemical Reduction.**

OUR TEAM



Valery Prokhorov
General Director
ACADEMIC,
DOCTOR OF
SCIENCES



Leonid Burdyka,
Product
Technical
Director



Evgeniy
Vasyliiev
Director of
Development

The founders of the science park (NP): three state research institutes and five research, production and industrial enterprises of other forms of ownership have all the potential production, engineering, transport and social infrastructure provided for in the Procedure for approval of the decision on the creation of a science park, approved by the Cabinet Resolution of Ministers of Ukraine dated February 3, 2010 No. 93.



TRACTION

**Test implementations
are underway**



14 Units

**They were sold
before the war, but
they were all lost.**

20 Units

**Total volume of
production**

TIMELINE

1991

2002

2014

2023

2030

Development

Development and creation of experimental samples:
"MICROSTIM - 1"

Trial

Beginning of field tests

Release

"Parostok" was created on the basis of field tests

Implementation

Tests continued, test implementations at the MHP began

Future

The capitalization will grow and by the end of 2030, it may make up to 0.1% of the capitalization of all markets.
(>200 billion \$)

***58 crops and 128 hybrids were studied.**

Investments needed for business development

During the development of a commercial sample, 58K studies and test implementations were carried out.

We need help with test implementations in agricultural holdings, in the EU and the USA, or funding in the amount of 150-850 thousand dollars.

*** Our technology is recommended as a methodology for implementation by the Ministry of Agrarian Policy of Ukraine, document signed by the Deputy Minister 13.10.09 No. 37-15-3.12/18658**



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