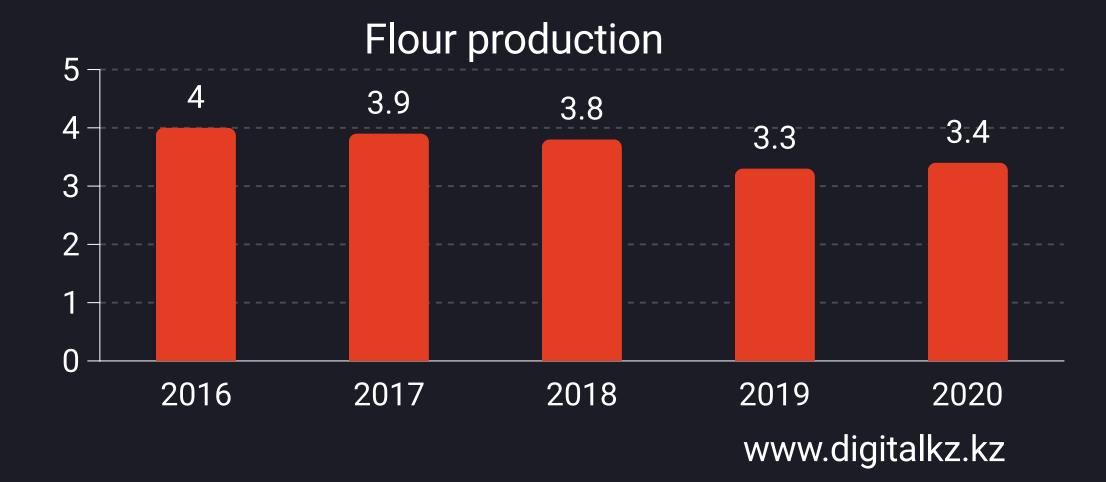
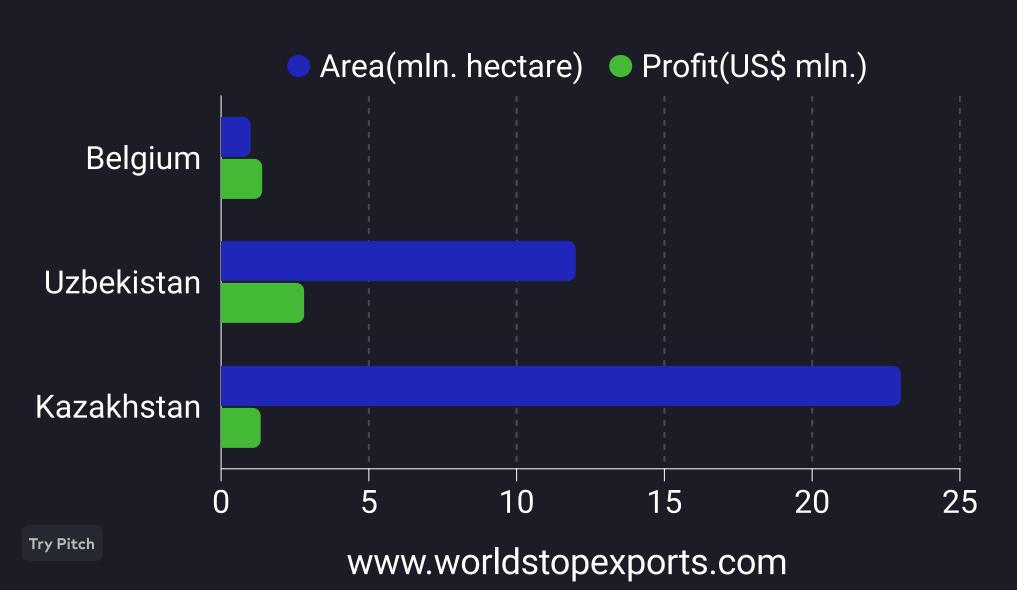
## Drone DFAN-01

Buy a DFAN and look at the rest from high

Nursultan & Makhambet & Alikhan

On the right graph, which indicates the wheat export of our country, an annual decline in productivity is observed.





On the left graph, suitable agricultural lands (in green) and the revenue obtained from them (in blue) are represented. Despite having 26 million hectares of arable land, the yield in our country amounts to only 230,000 dollars, whereas neighboring Uzbekistan, with less arable land suitability, produces twice as much agricultural output.



### 10 businessman

Age: 39 - 58

experience: 4 - 29 years

4 types of wheat

- 2 types of barley
- Oats
- Sorghum



We have contacted 10 entrepreneurs, including agronomists, foremen, assistants, and field owners. Their ages range from 39 to 58, with the shortest experience among them being 3 years and the longest exceeding 20 years. They cultivate two types of barley, four varieties of wheat, oats, and sorghum. The average height of the sprouts is 1.5 meters.

In 80% of the fields, internet reception is unreliable, and in 60% of them, there is no connectivity. Furthermore, 90% of the properties lack fencing, which increases the risk of foreign interference, as reported by the workers. Even with full daytime control of the fields, it is virtually impossible to maintain the same level of oversight during the night.

Most entrepreneurs possess pesticide and fertilizer sprayers. However, this method consumes a significant amount of time, and they simply cannot cover the entire territory in a single season. Moreover, it necessitates substantial financial resources for fuel, maintenance, and unforeseen circumstances, in addition to specialized personnel for effective operation.



Having seen the relevance of this topic and realizing the seriousness of the problem, we decided to create this product. Thus we set a **big goal** for ourselves:

Development of a drone that will alleviate the difficulties of Agriculture and farming.

Artificial intelligence for plant disease detection, allowing agronomists to capture field plant images and then process the images to recognize diseases and provide information about them

A motion sensor that alerts to field security breaches



**Functions** 

Temperature and humidity sensors working with Arduino sensors, providing agronomists with information about weather changes

An automated pesticide and fertilizer sprayer that replaces manual labor and is used during disinfection and spreading seasons





#### This page provided the economic benefits of our project

Type of sale Product cost

**Direct sale** 550 000 <sup>⊤</sup>

Type of trade Location

B2B & B2G Kazakhstan

MVP Net profit

200 000 **T** 200 000 − 100 000 **T** 

#### WHY WE?

Currently, in Kazakhstan, other drones are also in use, as alternatives to our product. However, when comparing our drone to each of them, we have identified our superior qualities. For comparison, we selected the DJI Phantom 4 RTK drone (drone #1), which is used for tracking movement and cartography, the DronAGRA 22 drone (drone #2), used for pesticide spraying, and another alternative - a working crew.

The first thing we noticed is, of course, the multifunctionality of our drone, which is not present in the others. The second advantage is the financial affordability of our product. For instance, drone #1 costs around 5 million tenge, drone #2 costs approximately 7.8 million tenge, not to mention the salaries of the workers and their needs. In comparison, our drone is priced at 550,000 tenge, which may seem surprisingly low at first glance, but it is indeed the case as we are concerned about the interests of domestic entrepreneurs. Additionally, our drone offers a complete training course, has domestic origins, and is backed by a warranty.

	Financially affordable	Guarantee	Special training course	Multifunctionality	Domestic product
DFAN-01	+	+	+	+	+
Quadcopter DJI Phantom 4 RTK	-	+	-	-	_
Dron AGR A22	_	-	-	-	-
Work crew	_	-	_	+	+

The drone project exhibits notable strengths, primarily centered around its user-friendly interface, which simplifies operation and enhances accessibility. Additionally, it stands out for its independence from constant internet connectivity, bolstering reliability.

Among the weaknesses, energy dependency is a critical aspect, as the project relies on a continuous power source, potentially limiting functionality in the absence of a stable power supply. Furthermore, the absence of protective features against sudden weather changes represents a vulnerability, posing risks to performance and safety in adverse environmental conditions.

The drone project presents several promising opportunities. Firstly, it offers the potential for the automation of manual labor processes, reducing the need for human intervention and increasing operational efficiency. This, in turn, can lead to enhanced productivity, elevating overall output. Moreover, the project offers the prospect of cost reduction, which can improve its economic viability.

One significant threat associated with the project is the possible unemployment of workers. As automation becomes more prominent, there is a risk of human workers being displaced, potentially leading to job losses and associated societal challenges.

But also do not forget that we create jobs for workers. That is, by opening workshops and offices, we solve the threat that we have created, raising the demand for IT specialists, techies and developers

## This is just the beginning.

At present, our team is actively working on enhancing the drone, improving its speed, and upgrading the software quality. Preparations are underway for an upcoming extreme launch scheduled for April 2024, during which our drone will address real-world issues in agricultural fields. This is just the beginning.

#### Pitch

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