



Agritech in Bangladesh

November, 2022

INNVISION
Research | Technical Assistance | Project Management

Disclaimer

This report is based on data that shall be updated periodically. If you find any discrepancy in the numbers and have updated data, please feel free to reach out to:

rubaiyath.sarwar@innovision-bd.com

Report Outline



Pg 4	Context
Pg 6	Key Takeaways
Pg 9	AgriTech startups in Bangladesh: Snapshot
Pg 12	Landscape 01: Overview of AgriTech sector in Southeast Asia
Pg 14	Landscape 02: Overview of AgriTech sector in Bangladesh
Pg 16	Landscape 03: Ecosystem Map of Agricultural stakeholders in Bangladesh
Pg 21	What's the Iron Triangle for AgriTech in Bangladesh?
Pg 22	Market Size: Agricultural segments opportunity sizes
Pg 28	Emerging Trends in AgriTech sector
Pg 30	Headwinds in AgriTech sector
Pg 31	Current Tailwinds in AgriTech sector
Pg 32	Future opportunities in AgriTech sector
Pg 33	How are we defining the consumers & business models?
	Pg 34 Consumer segments definition (Input: Farmers)
	Pg 35 Consumer segments definition (Output: Consumers)
	Pg 36 Assisted-Tech Solution in AgriTech for Digital Inclusion of BoP
	Pg 37 Business models & revenue models of AgriTech startups in Bangladesh
Pg 38	Featured AgriTech Startups in Bangladesh

Prologue

Bangladesh has a superior competitive advantage of being of the most fertile delta/land on this earth, the country is blessed with superior agricultural industry from ancient times. Also in modern times, it has one of the most robust agricultural research and development infrastructure/institutes & scientific manpower among the development countries. Also agriculture holds a massive chunk of its GDP, even bigger than some hot startup grounds like- retail, education, health, etc. Given all this, it is surprising to say the least that Bangladesh has not see surge of agri-tech startups yet. Our assumption is local entrepreneurs, investors and startup stakeholders are not yet aware of its massive opportunity size. That's the inspiration of this report.

The study has been done to provide a snapshot of the Bangladeshi Agritech ecosystem. The team has also identified the challenges and opportunities for the present startups, SMEs, ventures, VC funds, and government bodies. It is hoped that the report will be in assistance to entrepreneurs, investors, policymakers, ecosystem stakeholders, academicians, and students.

Agritech



AgriTech is the use of technology in agriculture with an aim to improve efficiency, yield, and profitability. Also according to agri-tech entrepreneurs, there are two types of entities that require clarifications-Agritech startups work on services, products, or applications that are derived from agriculture, improving various processes. Agritech ventures are businesses that are working with agritech. It can be SMEs, Ventures of large corporations.

1

Market Size and segmentation

- Agriculture is a USD 64.36 billion market in Bangladesh [refer to slide 11]
- Agritech startups can be divided into 6 segments. They are: Farm Inputs, Farm Support, Financial services, Market Linkage, Fullstack (provide end to end agri services), Hybrid (provide one or two types of agri services). There is no valuation of any of these segments.

2

Trends

B2B platforms and market linkage solutions by e-commerce and agri-products sites are facilitating the overall technological advancement of the Agritech ecosystem, creating new opportunities for the stakeholders. Agent models in Bangladesh are ensuring that the farmers reach desirable sale and provide services to farmers without digital access.

Note: The devaluation of the Bangladeshi taka against the US dollar resulted in an agricultural market value of 64.36 billion US dollars (1 USD = 101 BDT). The previously reported market was valued at 84.7 billion US dollars (1 USD = 85 BDT).

3

Funding

The three largest start-ups (iFarmer, iPage & Agroshift) alone raised around 5 million USD since their inception. However, there is a lack of data at the farmer level and a lack of data in R&D.

4

Challenges

The main long-term challenge for the Agritech industry is increasing the digital literacy of farmers and creating an accessible digital environment for the farmers. This would require deviation from the traditional methods, which might be too challenging for Bangladeshi farmers.





Agritech Startups in Bangladesh: Snapshot Jan 2022

Agritech Functional Category	Details	No of startups
Farm inputs	Tech solutions like- E-commerce platforms, apps, online marketplace to provide access to farming input materials like- seeds, feeds, fertilizers/chemicals, equipments, energy, etc.	1
Farm Support	Tech solutions that provide support to increase yield, help to reduce cost related to energy, manpower & production, support farmers with agri-advisory. etc. Some techs- Precision agri/IoT, weather solutions, AI, biotech, hydroponics, ERP, Agri-advisory, etc.	9
Financial Services	Tech solutions that are helping farmers to access financial solutions with ease and transparently. May have solutions like- credits, credit scoring, insurance solutions, risk assessment, etc.	0
Farm Output	Tech solutions that are connecting farm output with businesses or end consumer. Tech solutions like- E-commerce platforms, apps, online marketplace, etc for any farmed goods, livestocks, fishes, etc.	6
Full stack	A tech platform that provides solutions across all the segments.	1
Hybrid	A tech platform that provides solutions across multiple segments.	1
Total		22

Agritech Product Category

	Crops	7
	Livestock (Cows, Goats)	4
	Fishery	0
	Poultry	0
	Agroforestry	0

Landscape 01: **Overview of AgriTech sector in Southeast Asia**











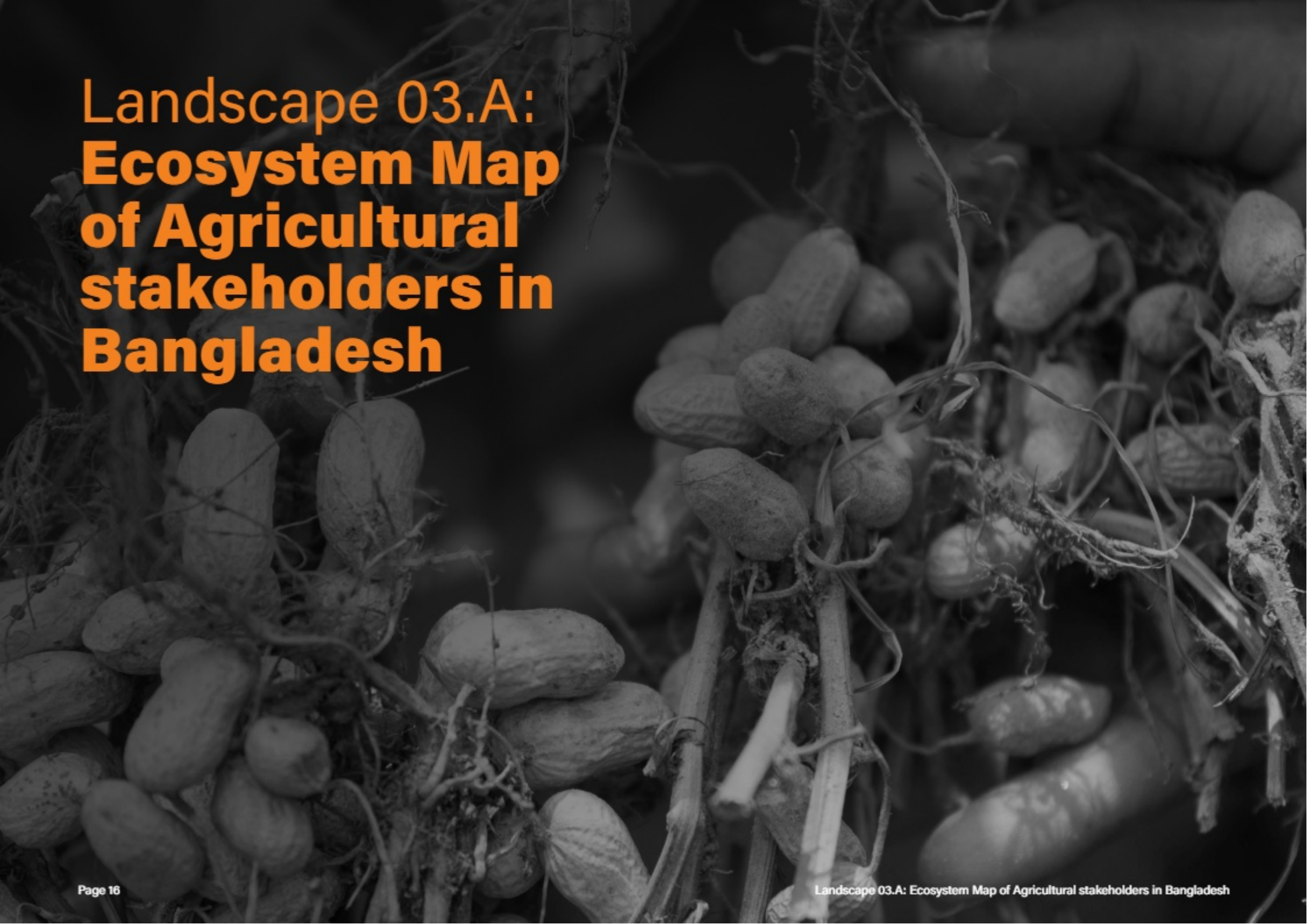
Segments	Fundamental Role	Notable Startups
<p>Farm inputs</p>	<p>Tech solutions like- E-commerce platforms, apps, online marketplace to provide access to farming input materials like- seeds, feeds, fertilizers/chemicals, equipments, energy, etc.</p>	
<p>Agricultural Support</p>	<p>Tech solutions that provide support to increase yield, help to reduce cost related to energy, manpower & production, support farmers with agri-advisory. etc. Some techs- Precision agri/IoT, weather solutions, AI, biotech, hydroponics, ERP, Agri-advisory, etc.</p>	
<p>Financial Services</p>	<p>Tech solutions that are helping farmers to access financial solutions with ease and transparently. May have solutions like- credits, credit scoring, insurance solutions, risk assessment, etc.</p>	
<p>Farm outputs</p>	<p>Tech solutions that are connecting farm output with businesses or end consumer. Tech solutions like- E-commerce platforms, apps, online marketplace, etc for any farmed goods, livestock, fishes, etc.</p>	



Landscape 02: **Overview of Agritech sector in Bangladesh**















Sub Segments	Agritech ventures in Bangladesh
Farm inputs	
Farm Support	
Financial Services	
Farm outputs	
Full stack	 <p>In general White Space: Except 1-2 like iFarmer, no startup yet emerged to provide full-stack solutions to input or output agri-business.</p>
Hybrid	



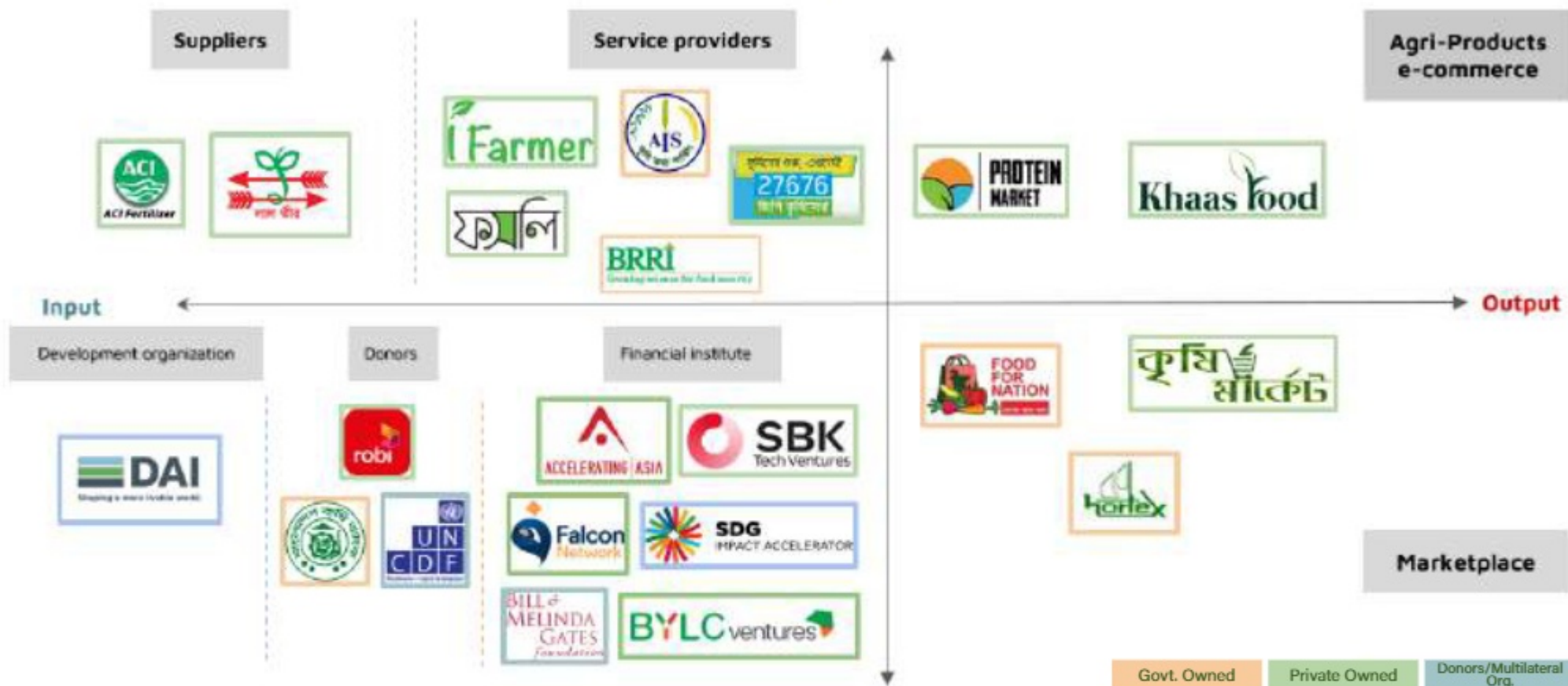
**Landscape 03.A:
Ecosystem Map
of Agricultural
stakeholders in
Bangladesh**



Input				Production & Harvest			Output sale		
Process	Resources (input, labor, equipment, finance)	Distribution	Retailing	Pre-production	Production	Harvesting / Selling	Trading	Trading/ Warehousing / Wholesaling	Retailing Processing
Inputs	 	Distributors	Local Shops	 Farmers			Small Trader	Wholesalers Aratdars	
Machinery		Distributors	Service Providers				Small Trader	Large Suppliers	
Know-how		District Office	Extension Officers				Small Trader	Large Suppliers	 
Finance	 	Branch Office	Credit Officers				Small Trader	Large Suppliers	
	Govt. Owned	Private Owned	Donors/Multilateral Org.						

Landscape 03.B: **Ecosystem Map of Agricultural stakeholders in Bangladesh**





Suppliers/ Service providers

Agricultural information service, machinery & equipments, Solar Pumps, Agro Chemicals, Fertilizers Bio-manure and Liquid Fertilizer, etc providers at the input stage of agricultural production process.

<https://bangladeshbusinessdir.com/agriculture/>

<https://www.agriculture1.com/agriculture-suppliers/bangladesh>

<https://aas-bd.org/donors/>

Financial institutions/Donors

Enables Bangladeshi agriculture financing and funds agriculture and livestock farming.

Product e-commerce

Company Selling their products through their own website to multiple buyers.

Marketplace

Digital platform where it connects with multiple sellers, suppliers and multiple buyers.



What's the Iron Triangle for Agritech in Bangladesh?



Market Size: Agricultural segments opportunity sizes

*USD 1 = BDT 101

Segments	Market Size
Agricultural Output	58.11
Agricultural Credit Disbursement (May 2022)	2.57
Agricultural Input	3.67
Total	64.36

Key Facts

- There are roughly about **20 million** farmers. 80% of them are smallholders. (Source: 6 Agri-tech Startups to Watch by Future Startup)
- Agriculture accounts for around **11.50%** (FY2021-22p) of the GDP of Bangladesh and employs about **40.60%** of the total labour force of the country. (Source: National Accounting Wing, BBS; Research - Department (Internal Economic Wing) Bangladesh Bank.) [Note: "p" denotes provisional estimates.]
- **70.1%** land area devoted to agriculture. (Source: Food and Agricultural Organization)

Breakdown of the Market Size: Based on Annual Output



Gross Value Added of Agriculture Sector and Sub-Sector at Current Prices, 2020-21

*USD 1 = BDT 101

SI No	Name of crops	Total value of output (BDT Million)	Output in USD Million	Output in USD Billion
1	Cereals	1,350,493	13,371	13.37
2	Beverages (Tea, Tobacco and Narcotics)	183,283	1,815	1.81
3	Fibres	100,221	992	0.99
4	Fruits	200,276	1,983	1.98
5	Oilseeds	159,369	1,578	1.58
6	Pulses	43,728	433	0.43
7	Spices	269,136	2,665	2.66
8	Sugarcane	19,947	197	0.20
9	Vegetables	358,139	3,546	3.55
10	Other Crops	3,798	38	0.04
	Total Crops	2,688,390	26,618	26.62
	Horticulture	17,145	170	0.17
	Irrigation	145,925	1,145	1.44
	Crops & Horticulture	2,851,460	28,232	28.33
	Animal Farming	1,145,212	11,339	11.34
	Forest and Related Services	608,517	6,025	6.02
	Total Agricultural and Forest	4,605,189	45,596	45.60
	Fishing	1,264,364	12,518	12.52
	Total	5,869,553	58,114	58.11

Source: National Accounting Wing, BBS

Breakdown of the Market Size: Agricultural Credit Breakdown by type of Financial Institutions

Disbursement and Recovery of Agricultural Credit by Different Banks and Financial Institutions

Agricultural Credit Performance (Billion BDT)								
	FY19	FY20	FY21					
			SCBs	BKB	RAKUB	PCBs	FCBs	Total
Disbursement target	218.00	241.24	31.95	60.00	18.50	145.46	7.01	262.92
Actual disbursement	236.16	227.49	26.90	65.97	18.28	135.49	8.47	255.11
Recovery	237.34	212.45	24.61	66.70	22.72	147.12	10.09	271.24
Overdue	669.16	60.60	22.22	13.82	16.04	6.57	0.00	58.65
Outstanding	429.74	455.93	116.19	183.40	40.33	115.67	3.81	459.40

Note: B.K.B=Bangladesh Krishi Bank, R.K.U.B=Rajshahi Krishi Unnayan Bank, S.C.B=State owned Commercial Bank, PCB.= Private Commercial Bank, FCB= Foreign Commercial Bank

Source : Agricultural Credit Department, Bangladesh Bank .

Breakdown of the Market Size: Agricultural Credit Breakdown by type of Agricultural Sectors

Source : Annual Report of BB 2020-21 (Chapter-9)

Sector	Billion BDT			Billion USD
	2020-21	2019-20	2018-19	
Crops loan (other than tea)	118.8	114	128.9	1.276
Purchase and installation of irrigation equipment	3.2	2.7	4.4	0.044
Livestock	32.5	31.7	35.3	0.350
Marketing of agricultural goods	1.2	1.3	1.8	0.018
Fisheries	26.8	26.1	29.5	0.292
Poverty alleviation	19.5	20.9	20.4	0.202
Other agricultural activities	34.3	30.9	34.9	0.346
Total	263.3	227.6	252.2	2.5

The major features and achievements of the programme implemented in FY21 were as follows:

- Around 3.06 million farmers availed agricultural and rural credit facility, of which 1.61 million women got BDT 92.88 billion from different banks.
- Around BDT 5.19 billion was disbursed among about 0.08 million farmers through 14,702 open credit disbursement programmes arranged by different banks.
- Around 9.83 million bank accounts were opened for farmers in the state-owned commercial banks (SCBs) and other scheduled banks with an initial deposit of BDT 10 only.
- Bangladesh Krishi Bank (BKB) distributed more than BDT 0.68 billion to 18,663 tribal farmers in the three hill tract districts at a 5.0 percent interest rate.

Source : Annual Report of BB 2020-21 (Chapter-9)

Breakdown of the Market Size: Agri-input Market

*USD 1 = BDT 101

Agricultural Input	BDT in cr	BDT in bn	USD bn
Seed	10000[1]	100	0.99
Fertilizer	9,000[2]	90	0.89
Pesticides	673[3]	6.73	0.07
Irrigation	13569.05[Remark]	135.7	1.34
Machinery	3000[4]	30	0.35
Feed	250[5]	2.5	0.03
Total	36492.05	364.920507	3.67

Source:

1= <https://cutt.ly/cME2mj1>

2= <https://www.tbsnews.net/economy/farm-mechanisation-awaits-investment-boom-326182>

3= <https://www.tbsnews.net/economy/pesticide-use-sees-decline-316849>

4= <https://www.tbsnews.net/economy/farm-mechanisation-awaits-investment-boom-326182>

5= <https://policyinsightsonline.com/2019/01/feed-feeds-bangladesh/>

Remarks:

3.12 million ha land under Irrigation (<https://en.banglapedia.org/index.php/Irrigation>)

Irrigation cost per Bigha Avg BDT 11000 (<https://www.thedailystar.net/news/bangladesh/agriculture/news/scanty-rain-high-irrigation-cost-put-farmers-double-trouble-3095911>)

Emerging Trends in Agritech sector



1 Rise of B2B platforms and market linkage solutions by agri-product e-commerce sites

Some of the digital platforms have connected various stakeholders in the supply chain and trying to consolidate highly fragmented agricultural market.

2 Emergence of Farm to Consumer Brands

Rising product awareness has led to demand for safe and unadulterated food products. This could potentially lead to creation of vertically integrated farm to consumer brands.

3

Rise of Assisted tech-enabled service providers

The rising penetration of smartphones has made farmers more comfortable using precision agri-technology. The onset of COVID has driven adoption as on-ground manual support reduced.

4

Rise of Assisted tech-enabled service providers

The new government initiatives (eg-Food for nation, Hortex, etc.) coupled with the disruption of market linkages due to the pandemic has accelerated the creation of e-markets/marketplaces involving farmers, traders and buyers. We will probably see the emergence of several startups providing services for enabling this transition.

Headwinds/Challenges in Agritech sector



1 Lack of Digital Access

There are several ICT-enabled services for farmers, but accessibility issues such as not having the device required for running these technologies, not having adequate and consistent powers for charging the devices, and/or lack of internet connectivity necessary for operating applications or connecting with others, create a challenging environment for the farmers in adoption of ICT services

(Source: Bangladeshi Farmers: Technology to the Rescue?)

2 Gender-disparity exists in the technology adoption of farmers.

Around 53% of women-headed households use indigenous tools in land cultivation, where the number is 28% for men-headed households. The reasons behind women-headed households being not technologically savvy are socio-economic limitations, low sharing of information with women, and time constraints

(Source: GENDER AND TECHNOLOGY ADOPTION AMONG FARMERS IN BANGLADESH)

3 End consumers pain is "quality product".

Quality product requires a transparent traceable supply chain. But traceability in the farming supply chain is inconsistent. Limited amount of data is being digitized between the corporations/super-shops and large distributors. Negligible transactional data being tacked from the distributor>to retailer>farmers.

(Source: Digital Agriculture in Bangladesh).

Headwinds/Challenges in Agritech sector



4 Creating **traceable supply chain is costly**, so most business with limited capital try to cater to niche well-off consumer markets, and niche markets means a limited amount of farmers can be onboarded. Unless you cannot onboard a lot of farmers, it is tough to crack the input market as well. This creates a cyclic bottleneck.

5 Lack of **sustainable business models** or low volume of **paid clients** resulting in many well-funded digital projects by development agencies or startups/companies **closing as soon as the fund was over.**

6 Easy availability of **agricultural extension** services in Bangladesh, which is one of the best in the developing world. Farmers get easy agro-advisory services from **government agricultural extension service offices, local private seeds/agrochemical shops, etc.** This makes **hard to convince** the farmers to adopt **digital tools** for those kinds of services.

Current Tailwinds in Agritech sector

1 Inventions like **Charulata (salt withstanding rice)**, decoding of **Jute genome sequence**, and development of profitable rice types such as Binadhan-7 are promising accomplishments of the country. This shows that there is a **strong scientific community**, this makes a fertile ground for local agritech ventures to partner with and use local technical talents for future innovations. (Read more here.)

3 **Input marketplaces** are becoming more popular in Bangladesh, among small-holder farmers as well, creating ease of doing business for farmers.

2 Bangladeshi farmers use **hydroponics/vertical gardening**, locally known as “Dhap” when they are facing the problem of dryland. The farmers prefer traditional methods, and use vertical farming when they cannot farm in the traditional way.

4 Merging tech and agrarian industry can be beneficial for the farmers and the businesses, and more traditional methods of farming are being replaced by the modern methods. The farmers can also be provided low interest loans for their digital literacy improvement and technological adoption can make them creditworthy for other loans and there will be a possibility of majority of farmers being banked.

Future Opportunities

1 **Farming As A Service (Faas)** can be offered to farmers in future by providing affordable tech solutions for efficient farming by converting fixed cost to variable cost and providing a subscription or pay-per-use model.

2 Bangladesh's massive comparative advantage of being one of the major **agriculture market & exporter** in the world, has poised itself as a fertile ground for agricultural innovation. Moreover, comparatively Bangladesh has a strong **agricultural scientific community** from local research institutes (BRRI, BARC, etc) who are well connected with international research bodies. There is a huge opportunity to merge the tech industry with the agrarian societies as the AgriTech is slowly gaining transition in Bangladesh.

3 **Financial services (digital credit scoring, lending solutions/credit for input materials)** for the farmers will grow as new incumbents like iFarmer are spearheading this growth. Combination of the agritech and fintech sector can also introduce easier payment schedules tied in with the farmer's' crop rotation can help with expansion, diversification, and innovation. We are going to see more startups with fintech and agritech solutions in this space.

4 **Affordable & advanced farming practices** like- early stage precision agriculture, mechanized farming, greenhouse farming, hydroponics, automated irrigation & water management systems will become mainstream among large and medium farmers. And this will create new market & product opportunities for agritech entrepreneurs to cater to them.

A black and white photograph of a woman in a patterned sari standing next to a cow. The woman is looking towards the camera, and the cow is looking to the left. The background shows a rustic structure with a thatched roof and some hanging fabric. The overall tone is dark and moody.

How are we defining the **Consumers & Business Models?**

Consumer segments definition (Input: Farmers)

	Large Farmers	Medium Farmers	Small/Marginal Farmers
Definition based on land owned	has land: 7.5 acres or more*	has land: 2.5-7.4 acres*	has land: upto 2.4acres*
No. of farmers; % among total farmers	250K 2%	2.1 Mn 14%	8.6 Mn and 4.2 Mn 56% and 28%
Digital services owned	Smartphones, laptop/PC, Medium to High speed broadband internet. (15 to 35 MBPS at top speed)	Medium range smartphones, Either laptop or PC, Mobile internet. (5 to 10 MBPS at top Speed)	Feature Phones and Low end smartphones (3 mbps at top Speed)
Agri Services consumed	Agri consultancy, financial services, Credit, agri-machineries		Credit
Startups			

Sources: Land area source*

<https://moa.gov.bd/site/page/4fb627c0-d806-4a7e-a1cd-b67d4bc85159/%E0%A6%8F%E0%A6%95-%E0%A6%A8%E0%A6%9C%E0%A6%B0%E0%A7%87-%E0%A6%AC%E0%A6%BE%E0%A6%82%E0%A6%B2%E0%A6%BE%E0%A6%A8%E0%A7%87%E0%A6%B6-%E0%A6%95%E0%A7%83%E0%A6%B7%E0%A6%BF>

Consumer segments definition (Output: Consumers)

	Bangladesh 1/BD1	Bangladesh 2/BD2	Bangladesh 3/BD3
Definition based on economic class	Internet Consumers (3G/4G Mobile +Broadband) Consuming Class Formal Employment White Collar	Internet Users (3G/4G Mobile) Serving Class Formal or Informal Employment Beige to Grey Collar	Least Internet Users (2G/3G Mobile) Producing class Informal Employment Grey to Blue collar, and no collar (elementary occupations)
Working class members (total 60.8 million)*	1 million (1.6%)	5.1 million (8.4%)	54.7 million (89.9%)
Per capita Income	More than 5000 USD/year	Average 3196 USD/year (between 4999-2000 USD)	Avg 1486 USD/year (between 2000 to 1200 USD)
Digital services owned	High-end smartphones, laptop/PC, Tablets, Smart TVs, Medium to High speed broadband internet. (15 to 35 MBPS at top speed)	Medium range smartphones, Either laptop or PC, Mobile internet. (5 to 10 MBPS at top Speed)	Feature Phones and Low end smartphones (3 mbps at top Speed)
Agri products preference	High quality agri-products, last mile delivery through e-commerce platforms		Not observed yet
Startups			

*Consumer class breakdown is available here.

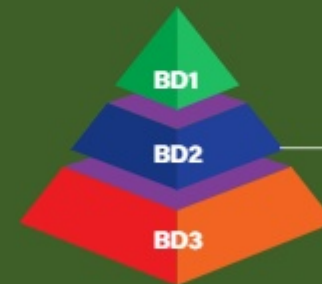
<https://moa.gov.bd/site/page/4fb627c0-d806-4a7e-a1cd-b67d4bc85159/%E0%A6%8F%E0%A6%95-%E0%A6%A8%E0%A6%9C%E0%A6%B0%E0%A7%87-%E0%A6%AC%E0%A6%BE%E0%A6%82%E0%A6%B2%E0%A6%BE%E0%A6%A8%E0%A7%87%E0%A6%B6-%E0%A6%95%E0%A7%83%E0%A6%B7%E0%A6%BF>

Assisted-Tech Solution in Agritech for Digital Inclusion of BoP

To tackle low digital literacy or solve access issue for BoP Population

Agent based models which adds a bridging layer between population with lower digital literacy or lack of access to digital tools, and provide services to help them have access to digital services/products. This is one of the unique phenomenon observed in frontiers markets like Bangladesh, where bottom of the pyramid (BoP) population lacks digital access or has lower digital literacy.

Why?	Farmers has low digital literacy or access to digital tools are difficult to avail agricultural products or services through online platforms, but this gap can be bridged through trained agents/retailers/agro-advisers, etc.
How?	Agents models are emerging to facilitate the sell of agricultural products or provide services (info) to farmers without digital access.
Example	Bhalo's has a agent based model where they onboard retail shop-operators through agent apps. These trained Bhalo agents then again provides high quality farm inputs, customized advisory, low cost credit facilities.



- 54.7 million workers (89.9% of the workforce).
- 12.8 million of them are small or marginal farmers. Their avg income 1486 USD/year
- Most of them use feature Phones and Low end smartphones (few of them use 3 mbps at top speed).

Business Models and Revenue Models in Agritech

	Business Model
Business-to-business (B2B)	B2B stands for business to business. It's essentially a transaction between two businesses—such as a wholesaler and a manufacturer, or a retailer and a wholesaler. Selling other businesses products and services that help work better. Agritech startups that provides input services or raw materials are in this category. Example- Khamari .
Business-to-business-to-customers (B2B2C)	Business to business to consumer. In this model, a company collaborates with another business to sell a service or product to a customer. For instance, platform like iFarmer works with verified and trained partner farmers, offering them input on credit/partial credit, advisory services and then connects the farm produce to Business to Business (B2B) clients. Also Bhalo's business model comes under this category.
Business-to-customers (B2C)	B2C is all about businesses selling services and products to customers directly. Making a commercial transaction with the end customer, e.g. Provider of consultancy and educational services to farmers. B2C interactions deal with consumers and farmers. Example- Khaas Food

	Current and Potential Revenue Models
Software as a service (SaaS)	SaaS (Software as a Service) products make it easy to automate operations in a business without the requirement of much infrastructure investment from the client. Example-
Transaction fees	Paying fee against every single transaction. Example- Khaas Food
Commision	Paying a percentage of fee for sales. Example- Bhalo

<https://moa.gov.bd/site/page/4fb627c0-d806-4a7e-a1cd-b67d4bc85159/%E0%A6%8F%E0%A6%95-%E0%A6%A8%E0%A6%9C%E0%A6%B0%E0%A7%87-%E0%A6%AC%E0%A6%BE%E0%A6%82%E0%A6%B2%E0%A6%BE%E0%A6%A8%E0%A7%87%E0%A6%B6-%E0%A6%95%E0%A7%83%E0%A6%B7%E0%A6%BF>

Featured **AgriTech** **Startups in** **Bangladesh**



iFarmer

iFarmer is a technology company that enables small-scale farmers and Agri Businesses to maximize their profit.



Founded

2017

Founders

Fahad Ifaz and Jamil M Akbar

Company size

50-100 employees

Segment

Agri-product marketplace

Stage

Series A

Company Type

Private

Product/Services

- Access to Finance
- Access to Inputs & Advisory
- Access to markets for the farmers

Business model

B2B2C

Revenue model

SaaS, Commission

For more information visit their website: www.ifarmer.asia

Key metrics

Total funding amount: \$2.8 Mn

- Operating in 19 districts
- 71000+ registered farmers and 5000+ registered retailers
- Around 80,000 ton farm-produce sold
- Facilitated BDT 1.77 Bn to support farmers
- BDT 448 Mn worth of agri input delivered

Consumer segment

Large Farmers
Medium Farmers
Small/Marginal Farmers

Key investors / Accelerator



Vision

Build Bangladesh's most efficient and largest agriculture finance and supply chain platform and improve lives of the farmers, retailers, businesses and consumers in a meaningful way.

Bhalo

Bangladesh's leading farm inputs marketplace.



Founded

2019

Founders

Subrata Kumar

Company size

11-50 employees

Segment

Farm inputs marketplace

Stage

Early Stage

Company Type

Social Enterprise currently registered as non-profit

Product/Services

- High-quality farm inputs
- Advisory, and farm services
- Low-cost credit and insurance facilities

Business model

Marketplace

Revenue model

Commision, Fees

For more information visit their [LinkedIn Profile: Bhalo](#)

Key metrics

bhalo is one of the two winners of SDG Impact Accelerator 2021, and supported by YGAP Bangladesh, CSISA-MEA (a project of USAID), and Bill & Melinda Gates Foundation.

Till date, bhalo has generated almost BDT 19 Mn in revenue and has 17% gross margin with excellent credit recovery. bhalo has served around 1,500 farmers covering 15 unions across 3 upazilas. They have reportedly increased the income of farmers they are working with by up to 50%

Consumer segment

Smallholder farmers; also caters to medium and marginal farmers.

Key investors / Accelerator



Vision

bhalo aims to become Bangladesh's leading farm inputs marketplace offering high-quality farm inputs, advisory, credit/ finance and insurance facilities; impact millions of lives, and change the farm inputs industry.

adorsho praniSheba Ltd

A platform for cattle identification, wellbeing monitoring, farm management, insurance, loan and veterinary services.



Founded
2019

Founders
Fida Haq

Company size
51-200 employees

Segment
Agri Precision tech

Company Type

For Profit

Product/Services

- Records cow species, genetic development, information conservation, reproduction, dairy management, and provision of primary treatment
- Cattle insurance services

Business model

B2B & B2C

Revenue model

SaaS

**For more information visit their website: www.pranisheba.com.bd
And download their app: praniSheba**

Key metrics

adorsho praniSheba is a digital platform for rural areas with the integration of technologies like IoT, RFID (Radio-Frequency Identification), AI, and face recognition through Machine Learning to provide cattle identification and wellbeing, farm management, micro-finance facilities, etc. for underserved people.

- Farmers reached: 1500+
- Number of Cattle Insured: 471+
- Online Veterinary Reached: 1200
- Loan Disbursed Amount: BDT 18.8 Mn
- Insurance Insured Amount: BDT 46.3 Mn
- Value Added to Farmers: BDT 22.3 Mn

Consumer segment

- Large Farmers
- Medium Farmers
- Small/Marginal Farmers

Key investors / Accelerator



Vision

adorsho praniSheba Ltd. seeks to aid in the rural socio-economic development through technological implementation.

Khaas Food



Khaas Food is an e-commerce platform coupled with a chain of brick-and-mortar stores for safe and pure foods in Bangladesh.

Founded

2015

Founders

Habibul Mustafa Arman

Company size

51-200 employees

Segment

Agri-product marketplace

Stage

Pre Seed

Company Type

Private

Product/Services

Provides wholesome quality food and quick delivery service

Business model

B2C

Revenue model

Transaction Fees

For more information visit their website: www.khaasfood.com
And download their app: Khaas Food

Key metrics

Raised BDT 35 Mn worth of equity funding
Currently working with 1000+ farmers
Served around 7 Mn customers
Have 150+ products in their portfolio

Consumer segment

Bangladesh 1/BD1
Bangladesh 2/BD2

Key investors / Accelerator

Angel Investors (Undisclosed)

Vision

Khaas Food wants to be the ultimate destination for pure food products in Bangladesh

Greeniculture

Greeniculture is an one-stop urban farming and e-commerce Platform



Founded 2018	Founders Ahmed Imran Halimi and Suriya Jaman	Company size 11-50 employees	Segment Agri-product marketplace	Stage Seed
------------------------	--	--	--	----------------------

Company Type

Private

Product/Services

- Rooftop Farming
- Residential Landscaping
- Lawn Gardening
- Indoor Potted Plants
- Vertical Gardening
- Industrial Landscaping
- Green Corporate House
- Green Wedding Management
- Gardener Services

Business model

B2B

Revenue model

Commission Fees

**For more information visit their website: www.khaasfood.com
And download their app: Khaas Food**

Key metrics

Greeniculture follows a Planting-Nurturing-Commercialization (PNC) model to act as the one-stop urban farming platform. They help farm owners in pre and post harvest management, design farms, choose farming materials, use proper farm input, etc. to commercialize and deliver food to the consumer level.

Till date, Greeniculture has,

Total Funding Amount: \$9K

Successful project: 83+

Customers served: 1700+

Consumer segment

Mostly corporate clients B2B

Key investors / Accelerator



Vision

They aim to initiate a green revolution in the cities of Bangladesh and make a bridge between rural and urban areas by providing organic foods, technological implementation and farming materials.

iPage

iPage Bangladesh is an one-stop AgriTech service that aims to enable farmers through AI-based agricultural information system for boosting agricultural knowledge.



Founded 2018	Founders Saif Mithu	Company size 11-50 employees	Segment Agri Peripheral tech	Stage Seed
------------------------	-------------------------------	--	--	----------------------

Company Type

Private

Product/Services

Precision Agriculture
Integrated Agricultural Extension Program
AUNKUR (Prescribes seed, fertilizer, pesticide, irrigation chart & forecasts yield)

Business model

B2B & B2C

Revenue model

SaaS

For more information visit their website: www.ipageglobal.com

Key metrics

Total Funding Amount: \$ 400k+

Facts and figures:

- 75% Accuracy in soil test compared to the chemical testing process.
- 5% of total cost of production are charged as subscription fee
- 25 minutes time required to generate one site specific advisory based on soil test.
- 41% of additional profitability
- 1500+ smallholder farmers have been served and educated through technology
- 45+ B2B partners
- Up to 20% Production cost reduction
- \$49k+ revenue from farmers' subscription fee
- \$130k+ worth of sale from B2B trade
- \$1.68 Mn GMV from advisory and trading service

Consumer segment

Large Farmers
Medium Farmers
Small/Marginal Farmers

Key investors / Accelerator

Angel investor: Zaved Akhtar

Vision

Want to bring full-fledged agri-tech solutions that will open a wide horizon for the farmers to avail the benefits of technology within their affordability.

Protein Market



Protein Market is an agrotech startup that provides safe protein products to B2B and B2C customers and aims to build a safe and organic food chain and farming networks.

Founded	Founders	Company size	Segment	Stage
2020	M Asif Rahman, Nazmul Hasan Rupok, Jahangir Alam, and Md. Shahjahan	11-50 employees	Animal Agriculture	Pre Seed

Company Type

Private

Product/Services

Provides safe and unadulterated protein products

Business model

B2B & B2C

Revenue model

SaaS

For more information visit their website:
www.proteinmarket.com.bd

Key metrics

Protein Market aims to create employment at the marginal level through enabling unprivileged to organically produce and supply chickens, cows, goats, and river fishes.

Total funding amount: \$117k

Consumer segment

Bangladesh 1/BD1
Bangladesh 2/BD2

Key investors / Accelerator

Angel Investors:

1. M Asif Rahman, founder of 'WPDeveloper' and 'ARCom'
2. Nazmul Hasan Rupok, CEO of WPDeveloper
3. Jahangir Alam, Co-Founder and COO of eFoli
4. Md. Shahjahan, CEO of Auth Lab

Vision

To build a safe and organic food chain and organic farming networks.

Agri-Science Society (AgSS)

Provider of consultancy and educational services to farmers.



Founded

2019

Founders

Sk. Shoaibur Rahaman

Company size

11-50 employees

Segment

Agriculture Support & Mechanization

Company Type

Non Profit

Product/Services

- Smart Farming using Internet of Things (IoT)
- Smart Farming app
- Agricultural Dictionary app
- Farm management
- Agricultural Magazine
- Online Learning Platform for Agri-Students and Farmers.

Business model

B2C

Revenue model

SaaS

**For more information visit their website: www.agssbd.org
And download their app: AgSS Team**

Key metrics

- Aiming to make agribusiness more sustainable
- Consulting farmers through innovative programs and digitalization
- Have a free-to-download agricultural dictionary that has 6200+ relevant and informative terminologies
- Have a revolutionary plan to introduce blockchain-based supply chain solution for improved efficiency, transparency, and immutability that will lead to transparency in the whole supply chain and address sustainability issues
- Till date, Positively impacted 500+ farmers to make their tasks more productive
- 1000+ farmers have been consulted
- 5000+ agri-students regularly visit their agriculture dictionary app to enrich their knowledge
- 100+ farming articles shared with 50,000+ farmers and agricultural students

Consumer segment

Large Farmers
Medium Farmers
Small/Marginal Farmers

Key investors / Accelerator

Individual donation and sponsorship

Vision

Dreaming a Bangladesh where no food insecurity will exist, technology will be used vastly in agriculture and farmers will lead a prosperous life.

Fosholi

App-based platform offering advisory service for the farmers.



Founded

2018

Company size

11-50 employees

Segment

Agriculture Support & Mechanization

Stage

Seed

Company Type

For Profit

Product/Services

- Pre-cultivation
- Cultivation
- Post-Cultivation
- Weather forecast
- My Crop
- Knowledge Bank
- Farmer's Toolbox
- Question Bank

Business model

B2C

Revenue model

SaaS

For more information visit their website: www.fosholi.com
And download their app: Fosholi

Key metrics

- 2.6+ million users registered on the Fosholi App
- Successfully formed 4200 farmers club countrywide
- About 1,05,000 farmers from 12 different districts are getting regular assistance and counselling through the Fosholi App

Consumer segment

- Large Farmers
- Medium Farmers
- Small/Marginal Farmers

Key investors / Accelerator



ACI Limited

Vision

Positively affect the lives of millions of smallholder farmers, new technology is leveraged in the advancement of the grassroots of agriculture in Bangladesh. We ask for your attention, advice and support in this regard.

Krishi Shwapno

Provider of blockchain-based supply chain solutions to farmers and consumers



Founded

2019

Founders

Sayed Zubaer Hasan, Dr. AFM Jamal Uddin and Partha Pratim

Company size

2-10 employees

Segment

Hybrid

Company Type

For Profit

Product/Services

- On-Demand harvesting
- Desired quality check
- Zero wastage
- Doorstep delivery
- Fair price
- Farming advice

Business model

B2B & B2C

Revenue model

Commision Fees

For more information visit their website: www.krishishwapno.com

Key metrics

- Blockchain-based agricultural technology platform for farmers and consumers
- More than 40 micro entrepreneurs and 6500 farmers are affiliated with them, all this within just two years since its inception

Consumer segment

Large Farmers
Medium Farmers
Small/Marginal Farmers

Key investors / Accelerator

Citi Foundation



Empowered lives.
Resilient nations.

Vision

Transforming agriculture and bringing about difference in farming by providing farmers with timely information, technology and right kind of inputs to achieve better yields

Fashol Dotcom Limited

fashol.com

Connects producers of food directly with retailers, restaurants, and service providers using in-house applications that drive end to end operations.

Founded

2019

Founders

Sakib Hossain and Mamun ur Rashid

Company size

50-100 employees

Segment

Farm Output

Stage

Seed

Company Type

For Profit

For more information visit their website: www.fashol.com

Key metrics

- Have around 500 retailers under their network
- Deals with 350+ different kinds of vegetables and fruits
- Aims to introduce transparency to the farm produce supply chain
- Retailers can get fresh vegetables and fruits with 5-10% less than the price and they do not have to travel to source the fresh produces which save their travel expense and time

Consumer segment

Large Farmers
Medium Farmers

Key investors / Accelerator

Undisclosed/Not available

Vision

Build Bangladesh's most efficient and largest Supply Chain platform and improve the lives of producers, businesses, and consumers in a meaningful manner.

Agroshift

Agroshift is a B2B agri-marketplace that connects farmers to businesses. Agroshift works directly with farmers and traders in a micro-fulfillment model to source daily needs like vegetables, fruits, grains, and meat.



Founded
2022

Founders
Qazi Bouland, Rameez Hoque, and
Diptha Saha

Company size
2-10 employees

Segment
agri-marketplace

Stage
Pre-Seed

Company Type

Private

Product/Services

Helps farmers sell their products to businesses and consumers

Business model

B2C

Revenue model

Commission Fees

For more information visit their website: www.agroshift.com

Key metrics

Total funding amount: \$1.8M

Consumer segment

Farmer, Micro Retailer,
Business, Individual consumer

Key investors / Accelerator



Vision

To serve millions of people working in the agri and textile sectors across Bangladesh.

Mission

To build Bangladesh's most efficient and largest Supply Chain platform and improve the lives of farmers, small businesses, and consumers.

Authors/Analysts

Data Analytics & Emerging Frontiers (DAEF) Team



Shazzad Hossain Mukit
Lead
Research, Database,
Analysis, Report



Nabila Nishat Raisa
Research, Report



Zubayer Wasit
Research, Database



Tania Tabassum
Research, Database, Report



Sabiha Saju Ibne Abedin
Research, Report



Risalat Rahman
Research, Report



Gias Uddin
Research, Database, Report



Subrata Kumar
Founder & CEO, Bhalo



Joy Bhattacharjee
Financial Product Lead,
iFarmer

Contributors