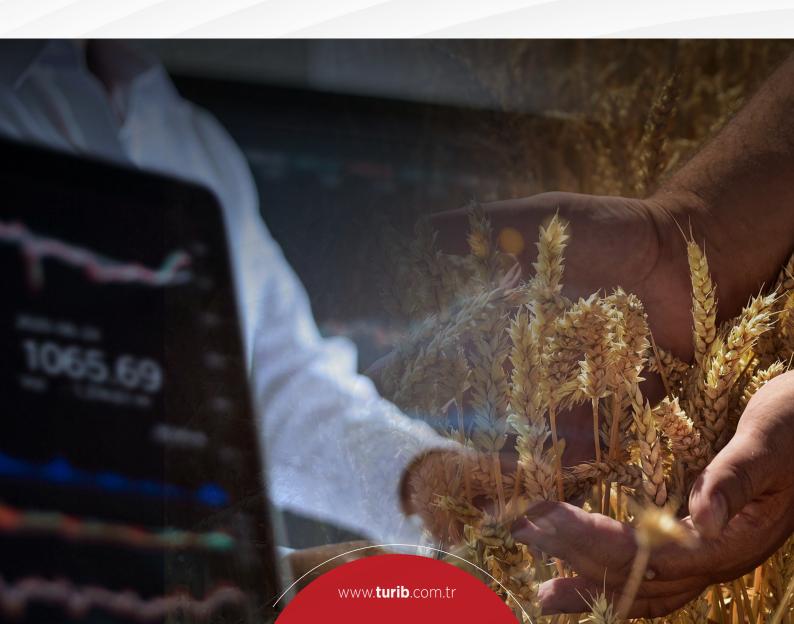


Electronic Warehouse Receipt Market 2022 Bulletin



TURKISH MERCANTILE EXCHANGE ELECTRONIC WAREHOUSE RECEIPT MARKET 2022 BULLETIN

TMEX EWR Market recorded a trading value of 100 billion Turkish Liras since the commencement of its operations.

Turkish Mercantile Exchange (TMEX) has launched its Electronic Warehouse Receipt (EWR) Market operations on July 26, 2019. In 2022, EWR Market reached a trading volume of 11.4 tons and a total trading value of 67 million Turkish liras in more than 377 thousand EWR transactions. Thus, since TMEX commenced operations, in more than 729 thousand EWR transactions, 28 million tons of trading volume and 100 billion Turkish Liras of trading value have been recorded.

EWR is an electronic receipt that represents agricultural commodities that are stored in licensed warehouses. EWRs representing agricultural commodities can only be traded in TMEX EWR Market. In TMEX EWR Market, grain commodities such as barley, wheat and corn are the main commodities subject to trade. 17 distinct commodities such as legumes, oilseeds, pistachios, hazelnuts, dried apricots, cotton and olives can be traded in TMEX EWR Market.

A licensed warehouse, where the actual commodities represented by EWRs are stored, is one of the pillars of commodity exchange systems. In Türkiye, 163 licensed warehouses provide service in 41 provinces, 127 districts and 234 different locations with a storage capacity of 8.8 million tons as of the 2022 year-end. The total licensed warehouse storage capacity, which used to be 4 million tons when TMEX commenced operations, increased greater than 2-fold in 3 years, reaching to a capacity to potentially store one-fourth of Türkiye's total grain harvest.

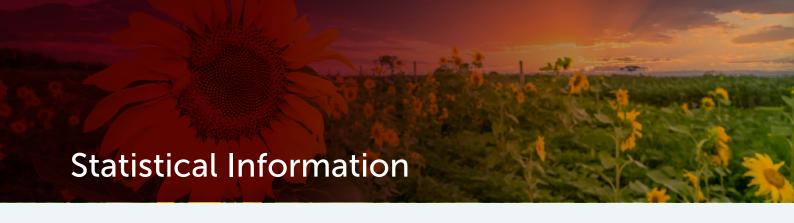
The pulse of agriculture, the compass of farmers and investors: "TMEX Agricultural Commodity Indices"

TMEX Agricultural Commodity Indices keep the pulse of the agricultural sector. With barley, wheat, corn and grain price indices, which were first published on 14 July 2021, the main direction of the agricultural commodity market in Türkiye can be tracked. TMEX Agricultural Commodity Indices, representing the widest and most accurate representation of the opportunities in agricultural commodities for investors engaged in agricultural activities, also eliminated the lack of indicators and benchmarks by which the relationship between global agricultural commodity markets can be monitored. The Indices are available at Matriks and Foreks data venders' terminals as well as the TMEX website.

TMEX Research & Development Center offers inclusive and innovative solutions for the financialization of agricultural sector and their access to financing.

The Ministry of Industry and Technology of Republic of Türkiye approved TMEX as a Research & Development (R&D) Center on March 23, 2021. TMEX R&D Center, located within the Information Technologies unit of TMEX, aims to increase the efficiency and productivity of the agricultural sector, to offer inclusive and innovative solutions to the problems of the agricultural commodity market ecosystem, to work for commercialization of these solutions and to provide employment opportunities for qualified human resources.

The R&D Center initiated the technological transformation project in 2021 for the migration to a new trading system, where Commodity Market Intermediary Institutions (CMII) will mediate EWR trades. The new trading system will provide a flexible infrastructure in order to digitalize agricultural commodity trading and support the role of our Exchange in the agricultural market and to increase the EWR trade volume to ensure commodity diversity. The Project is targeted to be completed in year 2023. In addition, actions are planned to be taken to launch trading of future contracts on this infrastructure. Herewith, an important function such as future price formation in agricultural commodity markets is set to be achieved through TMEX Futures Market.



Graph 1. 2022 EWR Market Statistics



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EWRs in 17 Commodities



89,628

Number of Investors Traded



377,267

Total Number of Transactions



67

Billion TRY Total Traded Value

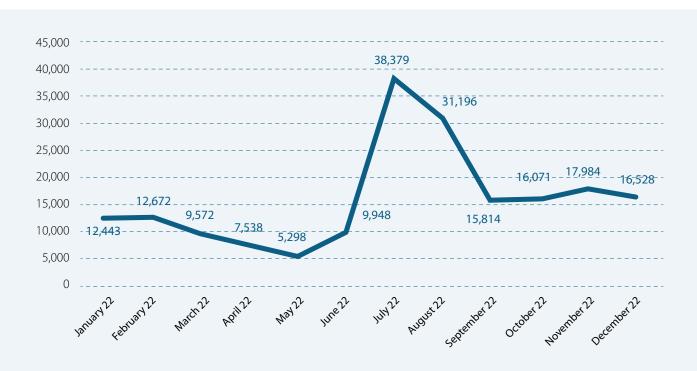


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Million Tons Total Traded Volume

Source: TMEX

Graph 2. Number of Investors with EWR Holdings



Graph 3. Licensed Warehouse Capacity (Thousand Tons)

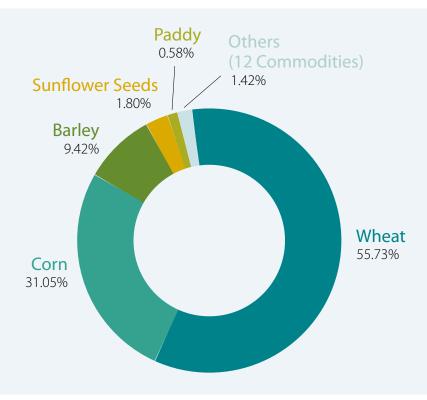


Source: Turkish Grain Board (TMO), T.R. Ministry of Trade

Graph 4. Number of Investors Registered in TMEX



Graph 5. EWR Market Total Traded Value by Commodity (2022)



Source: TMEX

Table 1. EWR Market Trading Information by Commodity (2022)

Commodity	Traded Volume (Kg)	Traded Value (TRY)	Number of Transactions
Wheat	6,205,034,381	37,300,962,816.09	211,696
Corn	3,843,941,395	20,780,790,296.83	94,469
Barley	1,156,173,480	6,301,921,450.93	63,925
Sunflower Seeds	98,907,291	1,207,115,546.91	4,495
Paddy	30,133,027	387,844,170.16	492
Others (12 Commodities)	56,942,633	952,359,264.36	2,190
Total	11,391,132,207	66,930,993,545.28	377,267

Table 2. The Traded Value (TRY) in EWR Market (2019-2022)

Month / Year	2019	2020	2021	2022
January	249,631,758	409,625,952	684,547,076	1,884,912,340
February	373,078,585	483,659,536	838,929,331	1,534,117,917
March	609,349,568	423,966,557	1,038,175,988	4,421,326,841
April	619,005,795	1,136,249,076	1,041,200,101	3,683,564,659
May	316,028,167	829,363,899	1,018,704,589	2,594,301,695
June	279,310,076	742,479,935	1,143,053,351	3,930,673,485
July	*1,021,044,476	1,864,101,488	1,219,884,241	8,440,988,500
August	385,930,707	839,643,925	1,463,252,267	13,395,738,190
September	476,810,372	996,687,321	1,940,527,519	9,690,696,002
October	813,129,130	1,791,924,552	1,748,312,430	4,228,717,765
November	998,481,557	1,171,262,165	3,284,508,557	6,367,829,726
December	312,482,451	734,410,487	3,081,885,836	6,758,126,426
Total	6,454,282,641	11,423,374,893 (77% increase)	18,502,981,286 (62% increase)	66,930,993,545 (262% increase)

Source: TMEX

Table 3. EWR Market - Wheat EWR Trading Information (2022)

Month	Traded Volume	Traded Value
January 2022	305,387,629	1,107,696,968.75
February 2022	183,539,944	823,609,378.50
March 2022	407,519,303	1,912,199,643.33
April 2022	342,905,694	1,682,345,264.47
May 2022	180,299,319	1,074,398,959.12
June 2022	297,475,681	2,059,382,249.42
July 2022	894,274,313	6,012,219,877.69
August 2022	1,700,554,006	10,974,153,570.80
September 2022	1,049,527,948	6,854,849,869.50
October 2022	260,262,103	1,501,292,548.40
November 2022	390,359,013	2,072,887,983.37
December 2022	192,929,428	1,225,926,503.21
Total	6,205,034,381	37,300,962,816.90

^(*) TMEX EWR Market commenced operation on 26/07/2019. Data for the period before 26/07/2019 had been collected from Istanbul Settlement and Custody Bank Inc. (Takasbank).

Table 4. EWR Market - Corn EWR Trading Information (2022)

Month	Traded Volume	Traded Value
January 2022	140,605,791	524,407,929.68
February 2022	127,552,926	486,367,813.40
March 2022	356,355,311	1,711,755,892.42
April 2022	278,682,315	1,436,772,092.25
May 2022	195,377,645	1,151,984,396.70
June 2022	239,188,932	1,498,927,596.43
July 2022	128,162,886	759,053,625.90
August 2022	154,530,529	887,989,715.19
September 2022	266,633,290	1,481,994,149.96
October 2022	418,467,185	2,351,686,817.61
November 2022	733,448,283	4,005,711,611.80
December 2022	804,936,302	4,484,138,657.20
Total	3,843,941,395	20,780,790,296.83

Source: TMEX

Table 5. EWR Market - Barley EWR Trading Information (2022)

Month	Traded Volume	Traded Value
January 2022	22,720,990	78,062,482.85
February 2022	31,546,935	108,891,701.79
March 2022	117,703,477	501,847,437.40
April 2022	80,511,522	379,963,461.35
May 2022	52,315,086	302,972,490.57
June 2022	46,975,833	288,417,792.50
July 2022	276,173,797	1,627,621,094.15
August 2022	243,252,724	1,400,107,914.12
September 2022	170,293,374	979,352,804.34
October 2022	14,102,206	84,246,338.47
November 2022	13,955,582	83,489,747.45
December 2022	86,621,954	466,948,185.94
Total	1,156,173,480	6,301,921,450.93

Table 6. TMEX Agricultural Commodity Indices

Index Name	Index Closing Value by 30.12.2022	Annual Change (%)
TMEX Barley Index	3,062.55	37.57%
TMEX Wheat Index	3,209.85	59.08%
TMEX Bread Wheat Index	3,129.27	55.08%
TMEX Durum Wheat Index	3,470.18	60.77%
TMEX Grain Index	3,150.60	57.17%
TMEX Corn Index	2,976.57	46.83%
TMEX Corn Class 1 Index	3,006.30	46.61%
TMEX Corn Class 2 Index	2,943.94	47.08%

(Percentage changes from 31/12/2021 to 30/12/2022)

About TMEX

Established in June 2018, TMEX is engaged in exchange operations for trading of electronic warehouse receipts and of futures contracts with an underlying of electronic warehouse receipts issued by licensed warehouse operators.

TMEX works in collaboration with the Union of Chambers and Commodity Exchanges of Türkiye (TOBB), T.R. Ministry of Trade, T.R. Ministry of Agriculture and Forest, T.R. Ministry of Treasury and Finance and other stakeholders for the digitalization of food supply chain from field to fork, expansion of the usage of EWRs, development of contract farming and licensed warehouse operations.





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