

# MED-Amin

Réseau méditerranéen d'information sur les marchés agricoles  
Mediterranean Agricultural Market Information Network

Persistent droughts

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## Edito

Le 15 août dernier, la température médiane quotidienne de la surface de la mer méditerranée a atteint un nouveau record avec 28,9 °C, battant le précédent record qui datait de 2023. Si les chercheurs soulignent que le plus « remarquable n'est pas tant d'atteindre un maximum sur un jour donné, mais d'observer une longue période de températures aussi élevées »<sup>1</sup>, ce record souligne les étés de plus en plus chauds que connaît la région.

Cette année encore, l'est et sud de la région méditerranéenne ont connu un été particulièrement chaud et sec. Tandis que l'Afrique du nord subit une sécheresse prolongée, l'Italie du sud, notamment la Sicile, le nord-est de l'Espagne, la Grèce et le centre-ouest de la Turquie ont été frappés par des conditions particulièrement chaudes et sèches, qui ont aussi concerné l'est de l'Europe (Ukraine, Roumanie, sud de la Russie - voir article du Joint Research Center page 2). Ces conditions affectent les rendements estimés des cultures d'été dans le sud et le sud-est de l'Europe d'après le [bulletin d'août de l'unité MARS du JRC](#).

Afin de répondre aux pénuries d'eau, les pays du Maghreb accélèrent leurs investissements vers la construction de retenues (le Maroc investit dans 16 nouveaux barrages<sup>2</sup>), l'exploitation des énergies renouvelables (en Tunisie, la centrale photovoltaïque d'El Ghordhab est prévue pour fournir plus de 20 GWh par an et sera raccordée à un important puit de la région de Tataouine

afin d'irriguer des céréales<sup>3</sup>), voire le dessalement d'eau de mer et le recyclage des eaux usées (l'Algérie mise sur le dessalement d'eau de mer pour couvrir 60 % des besoins en eau de sa population d'ici 2030<sup>4</sup>). Si ces outils permettent aux pays de diversifier leurs sources d'approvisionnement, la durabilité de chaque projet est à prendre en compte.

Ainsi, la modélisation d'un aquifère en Egypte a permis d'estimer les volumes théoriquement prélevables pour rester dans le cadre d'une exploitation durable<sup>5</sup>. Une autre étude publiée dans Nature ([voir page 3](#)) a montré que les aquifères du sud-ouest de l'Europe (Portugal, Espagne, France, Italie) étaient dans un état plus satisfaisant qu'estimé jusqu'alors, notamment grâce aux efforts favorisant la recharge. Toutefois, l'étude indique aussi que de nombreuses ressources seront affectées négativement par le changement climatique, et ces publications soulignent la nécessité de fonder la gestion des ressources en eau sur des données précises et d'accroître le dialogue entre politiques et scientifiques.

Dans ce cadre, le rapport spécial du MedECC (Mediterranean Experts on Climate and environmental Change) sur le nexus eau-énergie-alimentation-écosystèmes (WEFE), qui devrait

être publié prochainement, met en exergue les impacts du changement climatique sur la région (qui se réchauffe 20% plus rapidement que le reste du monde) et ses vulnérabilités, tout en caractérisant les interdépendances entre les composantes du système. Le rapport souligne la complexité et les controverses autour des solutions concernant la gestion de l'eau et montre l'impact positif des solutions fondées sur les écosystèmes ou les changements de comportement. Il met en avant l'importance de ne pas concevoir des solutions en silos, de partager les bonnes pratiques et de renforcer le dialogue intrarégional entre les porteurs d'enjeu (politiques, scientifiques, usagers), ce à quoi s'attache le réseau MED-Amin.

**Elen Lemaitre-Curri & Timothée Herviault,**

*MED-Amin Secretariat*

<sup>1</sup> [La Méditerranée surchauffe, la température médiane des eaux frôle les 29 °C](#) (Le Monde)

<sup>2</sup> [Barrages : le Maroc investit dans 16 ouvrages pour un volume de stockage additionnel de 5 milliards de m3](#) (HESPRESS)

<sup>3</sup> [Tataouine - Entrée en exploitation de la centrale photovoltaïque d'El Ghordhab: Un tournant énergétique au profit de l'agriculture](#) (LaPress.tn)

<sup>4</sup> [Algérie face au stress hydrique : des solutions innovantes pour un avenir durable](#) (Euronews)

<sup>5</sup> [Modelling Approach for Assessment of Groundwater Potential of the Moghra Aquifer, Egypt, for Extensive Rural Development](#)



## ALGERIE-ITALIE

**Projet de production de blé dur par le groupe Bonifiche Ferraresi**  
(adapté de [La France Agricole](#) 08/07 ; et de [TSA](#), 18/08)

L'Algérie et l'Italie ont annoncé la signature d'un partenariat de 420 millions d'euros le 6 juillet 2024, pour un projet d'investissement italien dans le sud de l'Algérie. L'objectif : produire du blé et renforcer la sécurité alimentaire de l'Algérie. Le projet sera réalisé par le groupe italien Bonifiche Ferraresi et le Fonds national d'investissement, pour la production des céréales et des légumineuses. Le communiqué de presse évoque une superficie estimée à 36 000 hectares dans la wilaya (préfecture) de Timimoune, avec l'objectif de mettre en valeur de 3 000 hectares dans un premier temps. Le wali de Timimoune a indiqué que le groupe italien a « obtenu l'autorisation de forage de 160 puits ».

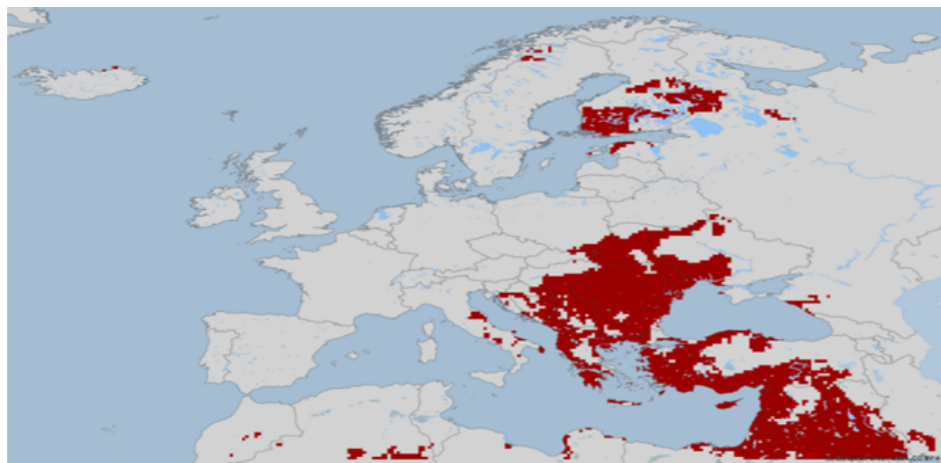
## FRANCE

**Un mauvais bilan pour la moisson de blé tendre**

([franceinfo](#), 14/08 ; [Terre-net](#), 23/08)

La moisson de cette année s'annonce comme « une des plus faibles récoltes des 40 dernières années », rapporte vendredi le service de statistiques du ministère de l'Agriculture (Agreste). La production est estimée à 26,3 millions de tonnes, en baisse de 23,9 % par rapport à la moyenne des cinq dernières années (rendement moyen estimé à 62,4 q/ha)

Sur le plan de la qualité, les résultats sont très disparates. « On n'atteint pas forcément le standard export 76 220 11 sur l'ensemble de l'Hexagone. Les PS vont de 60 à 76 kg/hl, et la moyenne se situe entre 73 et 75 kg/hl. Le taux de protéines se montre aussi assez variable, mais on arrive globalement à tenir une moyenne entre 10,7 et 11 %, ce qui reste assez proche des qualités pour le grand export ».



Overview of areas with potentially record-breaking heatwaves in 2024 (Joint Research Centre, July 2024).

## Persistent droughts: critical water shortages and crops threatened

Adapted from [Joint Research Centre](#) - 31 July 2024

Northern Africa has been severely affected by drought for the past six years, with no signs of a reprieve this summer. Southern and eastern Europe are now braced for similar challenges having already experienced two years of persistent drought conditions. Above-average temperatures and heatwaves combined with low rainfall are impacting soil moisture and vegetation growth. Seasonal forecasts suggest this will continue, with warmer and slightly drier conditions this summer, particularly in southern Europe.

### Drought conditions in early July 2024

The European Drought Observatory at the JRC identifies agricultural drought, where plants and crops show signs of stress, in large areas of the Mediterranean region. This is particularly impacting central and southern Italy, north-western Spain, Greece and central-western Türkiye. These conditions are also expanding to Ukraine, Romania, and southern Russia. Some regions in Morocco, Algeria, and Tunisia were also experiencing prolonged drought conditions with significant impacts on vegetation.

Information from several sources shows that in Sicily, Italy, reservoirs are below alert levels, with volumes 45% lower than the previous year. 25% of municipalities have issued water-saving

regulations as drought caused a 25% loss in agricultural production - severely affecting citrus fruits, wheat, and vineyards, with economic damages estimated at €2.7 billion euro. Animals are drinking mud as lakes dry up and farmers have been forced to slaughter animals due to food and water shortages.

Meanwhile, central and western Europe were experiencing wetter-than-average conditions during the summer, with parts of France and Germany facing over-wet conditions which can also damage crops due to mould.

### Drought forecast for the coming months

These impacts are likely to continue with drier than normal conditions until September 2024 over the Iberian Peninsula, southern France, central-northern Italy, Slovenia, Croatia, Hungary, Slovakia, eastern Europe, southern Russia, and northern Africa. Meanwhile, close to average or slightly wetter than average conditions are predicted for northern Europe.

The prolonged lack of rainfall across most of south-eastern Europe and northern Africa, alongside warmer than average temperatures, may affect river flows and impact agriculture, ecosystems and energy production. Managing water resources carefully is essential to minimise these negative impacts.

## Tritordeum: a versatile and resilient cereal for Mediterranean agriculture and sustainable food production

Papadopoulos, G., Mavroeidis, A., Stavropoulos, P. et al. Tritordeum: a versatile and resilient cereal for Mediterranean agriculture and sustainable food production. *CEREAL RESEARCH COMMUNICATIONS* 52, 323–331 (2024).

This review paper provides an in-depth analysis of × Tritordeum (Ascherson et Graebner), a novel cereal crop with promising agronomic, nutritional, and economic potential. Through a comprehensive examination of the crop's agronomic characteristics and management requirements, we highlight its adaptability

to Mediterranean climates, resilience under changing environmental conditions, and potential applications in the food industry, such as breadmaking and pasta production. We also discuss the role of digital agriculture technologies in optimizing tritordeum cultivation and their potential impact on agricultural practices. Furthermore, we assess the opportunities and challenges associated with tritordeum's integration into the agricultural economy and production systems,

emphasizing its potential to contribute to a more sustainable and health-conscious food system. By offering a holistic understanding of tritordeum's attributes, this review serves as a valuable resource for researchers, agronomists, food manufacturers, and policymakers interested in exploring the potential of this innovative cereal grain.

➔ Read the [article here](#)

## Futures markets

Adapted from *Futures Markets of the AMIS Market Monitor*, No. 121 of September 2024

### Futures prices

The persistent downward trend in grain and oilseed futures observed since the start of the 2023-24 season intensified in August, with maize, soybean and wheat futures reaching four-year lows, close to price levels during the COVID-19 pandemic.

In wheat, CME (Chicago Mercantile Exchange) futures were notably influenced by favourable late-season weather conditions in the US, supporting yields that surpassed expectations. Meanwhile, in Europe, high opening stocks combined with an early start of the harvest pressured Euronext wheat futures, culminating in a low point in mid-August. Since then, Euronext wheat prices have shown signs of stabilizing, underpinned by lower availability of wheat that is meeting the futures contract specifications in a context of below-average production levels in the EU and widespread quality concerns, particularly in France. Soybean and maize futures have similarly declined over July and August, approaching four-year lows as favourable weather conditions in the US Corn Belt bolstered expectations of record yields.

### Volumes & volatility

Historical volatility decreased and is now near or below the 10-year average for wheat, maize, and soybean futures. Implied volatility also declined, reaching levels below historical averages, suggesting that market participants anticipate a lower risk of significant price swings in the coming weeks. Notably, in maize and soybeans, implied volatility generally trends downward after August as the most

critical phases of crop development have passed, reducing weather-related risks and consequently expected volatility.

Trading volumes on CME have been subdued, a typical pattern in contexts of low volatility and declining price trends. Meanwhile, open interest for grain and oilseed contracts is significantly higher than at the start of the previous season, indicating increased long-term holding of positions. Such a combination of lower volumes and higher open interest hints at reduced intraday speculation.

### Forward curves

Futures contracts for wheat, maize and soybeans on CME show a steepened contango, with deferred contract prices rising relative to those for nearby deliveries. The steepening contango dynamic, which intensified through July and August, incentivizes market participants to store grain rather than sell. This price structure indicates that available supplies at harvest are expected to exceed initial new-crop demand. Euronext wheat futures are also in a pronounced contango, driven by a rapid harvest and tepid international demand for the European origin.

### Investment flows

Money managers currently hold their shortest net position in nearly five years in CME grains and oilseed futures, reflecting a bearish outlook. In contrast, investment funds that ended the 2023/24 season net long on Euronext wheat have started the new season with a net short position, aligning with the bearish stance of money managers in the CME market.

## ITALY

**Durum Wheat: Reduced Volumes, but Excellent Quality**

([foodweb.it](#), 24/07)

According to Italmopa (Associazione Industriali Mugnai d'Italia), production is expected to reach 3.5 million tonnes (-15% compared to 2023). Due to the drought, the decline is particularly significant in Sicily. The situation is better in central and northern Italy. Despite the decrease in the availability of domestic product, the technological and commercial quality of the raw material remains very positive.

## EGYPT

**Egypt's major wheat purchase falls through over payment terms**

(adapted from [TRIDGE](#), 15/08 ; [APKInform](#), 15/08 ; [XM \(Reuters\)](#), 19/08)

Egypt's state food supply agency, GASC, attempted to capitalize on low global wheat prices by announcing a record tender of 3.8 million tonnes of wheat on August 6, for delivery between October 2024 and April 2025. However, by August 12 it had purchased only 280 000t at a higher price than the previous tender (\$241-242.25 per tonne FOB, versus \$221 in July), achieving only 7% of its planned volume. Traders attributed this shortfall to higher prices driven by the extended payment delays that were offered (270 days). Since then, GASC has engaged in informal discussions with suppliers according to traders. While Supply Minister Sherif Farouk did not specify the sources, Russia and the EU have been key suppliers for Egypt. He also noted Egypt is exploring the possibility of adding Türkiye as a new origin for wheat imports, following Algeria's recent significant purchase. Farouk said Egypt's wheat reserves currently cover well over six months of demand, but the supply ministry aims to extend reserves to more than nine months to mitigate potential geopolitical tensions.

## SCOOPS

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## Multi-decadal groundwater observations reveal surprisingly stable levels in southwestern Europe

Chávez García Silva, R., Reinecke, R., Coptý, N.K. et al. Multi-decadal groundwater observations reveal surprisingly stable levels in southwestern Europe. *Commun Earth Environ* 5, 387 (2024).

Climate change and human activity are leading to water scarcity in southwestern Europe with concerns over unsustainable groundwater use. However, regional assessments using measured data are missing. This study evaluate long-term trends and drivers of groundwater levels (1960–2020) from 12,398 wells in Portugal, Spain, France and Italy. Résultats show

that 20% of wells had rising groundwater levels, 68% were stable, and only 12% were declining. Rising wells in temperate climates were due to increased precipitation. Recovering wells in semi-arid regions were attributed to improved groundwater management. In Eastern Mancha (Spain), farmers formed water user associations, installed sensors to monitor aquifer levels, and improved their irrigation techniques. The government introduced water governance in exchange for the allocation of subsidies. Stable wells are concentrated in temperate climates with year-round high

precipitation. Declining wells in semi-arid regions are primarily located near agricultural areas and experience prolonged summer soil moisture loss, whereas in temperate regions, the decline is associated with large urban areas. Strategic groundwater monitoring and data sharing are essential for sustainable and science-based water resources management, as climate change will further intensify water scarcity, putting more than 20% of stable wells at risk.

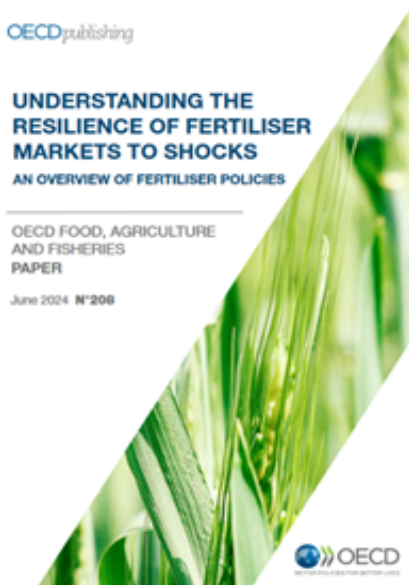
➔ Read the [article here](#)

**REPORT: Understanding the resilience of fertiliser markets to shocks – An overview of fertiliser policies**

Jones, D. et A. Deuss (2024), OECD Food, Agriculture and Fisheries Papers, n° 208, Éditions OCDE, Paris.

In the wake of significant price increases in 2021 and 2022, countries introduced new or revised their fertiliser policies, further complicating the policy landscape in a highly concentrated market susceptible to supply disruptions. This report takes stock of the variety of policies in place and develops a framework for their classification and analysis. Key insights include the evolution and composition of farmer support estimates for mineral fertiliser use, the generally low or zero import tariffs reflecting high import dependence, and the non-transparent and frequently changing export restrictions imposed by major exporters. The analysis also shows a clear shift in policies from supporting mineral fertilisers to reducing their use or supporting organic fertiliser production and use. Yet, despite the potential of organic fertilisers, expanding their use and development will require substantial investment, changes in farm management, and policy adjustments.

↪ [Full report](#)

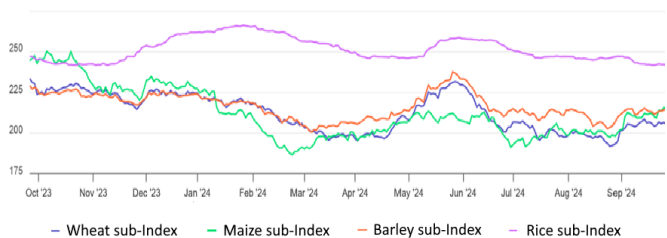


**Trends on Global Markets**

	Global Price Index <sup>1</sup> (26/09/2024)	Supply & Demand in Aug. 2024 <sup>1</sup>	
		From previous forecast (M/M)	From previous season (Y/Y)
Blé/Wheat	206 ↗	▲	↔
Maïs/Maize	215 ↗	▼	↔
Riz/Rice	242 ↘	↔	▲
Orge/Barley	215 ↔	n/a	n/a

<sup>1</sup>: Monthly average in USD - base 100=year 2000 - ↗↘↔vs last month (▲ : Easing ; ▼ : Tightening ; ↔ : Neutral, n/a : not applicable)

**IGC Grains and Oilseeds Index (GOI)**  
Basis January 2000 = 100



Sources : AMIS Outlook - <http://www.amis-outlook.org> and International Grains Council

**Events**

21-23

10

2024

25

10

2024

**1<sup>st</sup> 4 per 1000 Mediterranean Regional Conference (Rabat, Morocco)**

Cirad, CIHEAM, OIV, IAV Hassan II, ICARDA, and FARM Foundation (AAA) organize a regional conference involving experts from Mediterranean countries, in relation to soil organic carbon, climate change mitigation and adaptation, focusing on agroecology.

↪ [Visit the webpage](#)

**12<sup>ème</sup> réunion ministérielle du CIHEAM (Rabat, Maroc)**

La 12<sup>ème</sup> réunion ministérielle des pays du CIHEAM portera sur la souveraineté alimentaire régionale. Ces réunions stratégiques offrent un espace de dialogue de haut niveau autour des questions liées à l'agriculture, l'alimentation et au monde rural en Méditerranée, avec la participation des grandes organisations internationales actives dans la région.

↪ [Page internet du CIHEAM](#)



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