

# MED-Amin

Réseau méditerranéen d'information sur les marchés agricoles

**CropGIS: a web app for crop biomass development visualization**

*Forecasting / Page 2*

**The GAP project boosts turkish agriculture and exports**

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## Edito

Cette année encore, la météo a été le principal moteur des ajustements de prévisions de production céréalière. La chaleur prolongée et la sécheresse dans plusieurs régions d'Europe ont pesé lourd sur les cultures de blé de cette campagne 2017/2018, en particulier dans les régions du nord/nord-est. Dans l'hémisphère nord, les récoltes de blés d'hiver se sont achevées avec des perspectives de rendement plus faibles que celles attendues en début de saison en UE et en Ukraine. La production mondiale devrait être inférieure à celle de l'an dernier d'après le Market Monitor d'AMIS du 6 octobre (722 millions de tonnes, soit une baisse de 5% vs deux années précédentes) et les stocks diminuerait par rapport à leur niveau à l'ouverture. Les estimations de production mondiale d'orge sont en (léger) retrait de 3% vs 2016/2017 à 140 Mt (CIC, 3 octobre). Contrairement aux cours à terme du blé qui ont retrouvé des niveaux normaux après un maximum en août, celui de l'orge poursuit son envolée. Il s'établit à 256 US\$ le 2 octobre (sous-indice « orge » du CIC), soit +32% vs 2017. Inversement, les prévisions de production de maïs ont été augmentées, en grande partie grâce à l'attente de rendements exceptionnels aux États-Unis. Les conditions demeurent contrastées en Europe. Les perspectives pour le riz continuent à indiquer une récolte record en 2018. Les conditions de culture du riz en Chine et en Inde sont favorables, tandis qu'en Asie du

Sud-Est, les conditions sont mitigées. Avec des estimations de production de plus en plus affinées et fermes pour la campagne 2017/2018, les marchés devraient se concentrer davantage sur les flux commerciaux et leur implication sur les prix internationaux.

Dans l'espace MED-Amin, la campagne 2017/2018 a été exceptionnelle pour les cultures d'hiver dans nombre de pays de l'ouest (en particulier Maroc, Portugal, Espagne et en partie Algérie), alors qu'elle a été plus compliquée au Liban, en Tunisie ou encore au sud de l'Italie. Les premières estimations de récoltes nationales confirment ce constat. De nombreux événements météorologiques extrêmes ont été recensés dans les pays méditerranéens, avec localement des effets sur les rendements et/ou la qualité des grains.

Des décisions politiques ont également une influence sur les marchés céréaliers : en Egypte, le gouvernement a remonté ses prix d'achat du riz produit nationalement et a annoncé que 820 000 feddans seulement (340 000 hectares) seront autorisés pour la culture du riz, contre

un million l'an dernier, soit une baisse de 20% des surfaces afin de favoriser des cultures nécessitant moins d'eau. Face à une forte dévaluation de la lire turque et à un coût élevé des intrants, début septembre, le ministère du commerce turc a limité temporairement les exportations de farines produites à partir de céréales nationales afin de stabiliser les prix intérieurs. Les limites nationales aux exportations semblent reprendre dans le monde (Argentine, Russie ?...)

ce qui n'avait pas été le cas depuis des années, avec des tensions potentielles sur les marchés pour les pays importateurs (voir plus loin).

MED - Amin a continué cet été à rassembler des données sur les marchés céréaliers et a publié le [bulletin des avancées des récoltes et semis de l'été 2018](#). Le réseau a élargi son exercice de prévision qualitative des récoltes en collaboration avec le CCR/UE : la restitution de cet exercice, pour le moment interne au réseau, sera effectuée lors de la prochaine réunion du réseau MED-Amin au Maroc en janvier 2019.

**MER NOIRE****Ambivalence russe**

(Terre-net 03/10/2018)

La Russie discute d'un accord pour exporter du blé vers l'Algérie, mais envisagerait dans le même temps de fermer des points de chargement dans ses régions exportatrices.

Les prix du blé européen ont terminé la séance du 2 octobre dans le rouge après la nouvelle de la veille : les discussions se poursuivent entre l'Algérie et la Russie pour l'importation de blé de mer Noire.

Ces éléments contradictoires concernant la pérennité des exports russes cette année laissent une fois de plus nombre d'opérateurs dans le flou.

**ARGENTINA****New export taxes**

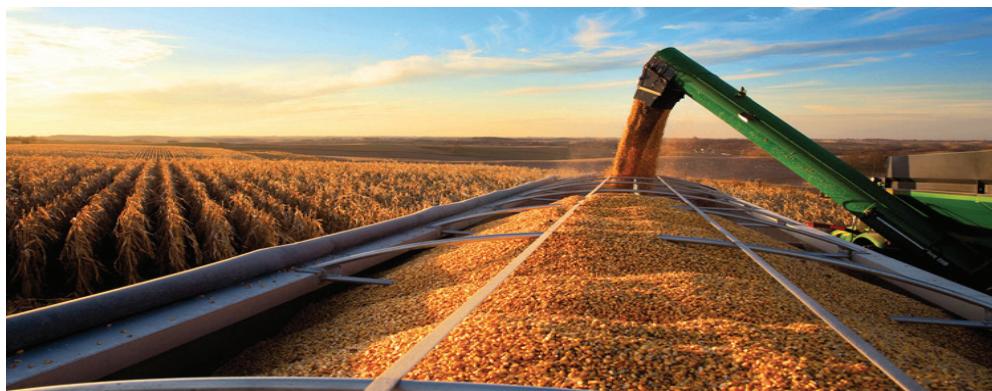
(Agriculture.com, 05/09/2018)

The Argentinian peso devalued over 100% against the U.S. dollar since the beginning of the year. President Macri announced the return of export taxes: 4 pesos for every dollar in exports with a roof of 10% with some exceptions like soybean, oilseeds. Under Agritrend, the new tax will reduce the corn surface in Argentina. "Wheat was already planted. Corn is yet to be planted in Argentina. And corn was punished again..."

**MAROC****Blé russe ou français?**

(UkrAgroConsult, 02/10/2018, Agri-Maroc, 20/09 et Le Matin Maroc, 13/09)

Répondant favorablement à la demande russe, le Maroc a annoncé la suppression de taxe à l'importation pour le blé tendre à partir du 1er novembre 2018 pour sécuriser l'approvisionnement extérieur et ce malgré une récolte 2018 record. Les céréaliculteurs français cherchent à retrouver le rang de premier fournisseur de blé tendre du Royaume alors que de son côté les entreprises russes cherchent à développer de nouveaux débouchés en Afrique du nord.



Credit: Creative Commons

**CropGIS – A web application for the spatial and temporal visualization of past, present and future crop biomass development (2018)**

Spatial information on crop status and development is required by agricultural managers for a site specific and adapted management. Here, a prototype of a web application is presented for the visualization of biomass production of maize (*Zea mays*). The web application displays past biomass development and future predictions for user-defined regions of interest along with summary statistics. Biomass is modelled using the crop growth model (CGM) APSIM (Agricultural Production Systems Simulator) using meteorological data from 2001 to 2014. Information on current crop status and subfield heterogeneity is assimilated into APSIM through high-resolution optical satellite imagery. The use of recent satellite data and regional, historical meteorological data increases the reliability of the biomass information provided. Through its unique combination of high-resolution satellite imagery together with mechanistic crop growth modelling, this web application can overcome the often sparse temporal or sparse spatial resolution of biomass information, which is based on remote sensing images or on crop growth modelling alone. In comparison to other crop development forecast studies, which only consider the regression based on historical yield data and remote sensing

data (Almeida et al., 2006, Balaghi et al., 2008, Becker-Reshef et al., 2010a), the prototype results incorporate the possible meteorological development and its influence on the yield development. Consequently, the uncertainties also provide higher reliability and better reflect the reality compared to an early static forecast. With its high resolution biomass maps, it can be the basis for variable rate application as farmers can react site-specifically to plant development. Flexibility, accessibility and the open structure allow the web application to be extended to any crop represented in the APSIM, to other appropriate available satellite data and to other regions. It is planned to integrate further functionalities in the web application. In the future, predictions for more crop types will be available. First experiments for summer barley and canola showed valuable results and will be integrated, followed by other relevant crops like wheat. The integration into the web application can be seen as a simple step.

**Sources:** Miriam Machwitz, Erik Hass, Jürgen Junk, Thomas Udelhoven, Martin Schlerf, Computers and Electronics in Agriculture. 2018, <https://doi.org/10.1016/j.compag.2018.04.026>

**A Revenue-neutral Approach for Market Stability of Wheat Sector in Egypt (2018)****Tetsuji Tanaka (2018), Journal of Food Security.**

Food self-sufficiency has become a high-priority policy agenda for developing governments in conjunction with the food price volatility in recent years. Even though a food autarky has been long regarded as one of the most potent strategies to achieve national food security, the effectiveness of the policy has not been investigated using a quantitative simulation model. Egypt, the largest importer of wheat and a country where people rely on

wheat products for around one-third of its food consumption in terms of calorie intake (FAOSTAT), may be one of the countries that were hurt most by the turbulence of global food markets in recent years. In this paper, a multiregional stochastic global computable general equilibrium (CGE) model is used to analyze the benefits of a wheat self-sufficiency project in Egypt. The simulations show that Egypt becomes self-sufficient in wheat with a +24% in the import tariff. Such policy would

alleviate the volatility of household welfare and the consumer price of wheat in Egypt, and substantially enhances the resilience of welfare against an export ban on wheat by Russia. When considering productivity variability all over the world, welfare volatility stabilizes by 23%, and the worst welfare consequence is ameliorated by 34%.

<https://doi.org/10.12691/jfs-6-1-4>



Credit: Reuters

**FAO FOOD PRICES****The Cereal Price Index**(FAO [www.fao.org/worldfoodsituation/](http://www.fao.org/worldfoodsituation/), 04/10/2018)

L'indice a atteint une valeur moyenne de 164 points en septembre; il accuse ainsi une baisse de 2,8% par rapport au mois d'août, mais reste supérieur de 8% au niveau de septembre 2017. C'est le maïs qui a subi la plus forte baisse mensuelle de ses cours à l'exportation, puisqu'il a perdu 4%, en raison de prévisions tablant à la fois sur des récoltes très importantes aux USA et sur une offre abondante à l'échelle mondiale. Les cours du blé, après une forte hausse en août, se sont effrités en septembre, essentiellement à cause du niveau toujours soutenu des exportations russes. Les cours du riz ont fléchi pour le troisième mois consécutif (-1%), malgré l'appréciation du baht thaïlandais et les prévisions de ventes aux Philippines.

**TURKEY****Temporary limit on flour exports**

(World Grain, 07/09/2018)

The Turkish Ministry of Trade said on Sept. 6 that due to recent fluctuations in domestic flour prices it has introduced a regulation limiting exports of flour produced from grain grown domestically, outside of the IPR duty exemption mechanism, to 1% of total exports. The action was taken to stabilize domestic flour prices, protect consumers and prevent speculation, but is temporary and would be removed when domestic price stability returned. Turkey has been the world's top flour exporter over the last 5 years (1/3 of all exports).

**SCOOPTS****Pour plus de news sur les marchés céréaliers, suivez le Scoop.it MED-Amin !**

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[www.scoop.it/t/med-amin](http://www.scoop.it/t/med-amin)  
 ainsi qu'à partir du site web de MED -Amin :  
<http://www.med-amin.org>

**Massive Southeastern Anatolia Development Project boosts regional agriculture and exports** By The Daily Sabah, 26/09/2018

One of the world's largest and most comprehensive sustainable development projects, the Southeastern Anatolia Development Project (GAP) has so far boosted Turkey's agricultural production and significantly contributed to exports. The \$32 billion GAP, launched in 1977, is one of the world's largest and most comprehensive sustainable development projects, including efficient irrigation methods and a water infrastructure development scheme, has seen the gradual increase of investments each year, the project's President Sadrettin Karahocagil said.

Thanks to the irrigation covering 1 million hectares, there is a significant increase in the productivity of agricultural products, which has in turn pleased farmers in the region, Karahocagil added. The project area covers nine provinces (Adiyaman, Batman, Diyarbakir, Gaziantep, Kilis, Siirt, Şanlıurfa, Mardin, and Şırnak) which are located in the basins of the Euphrates and Tigris and in Upper Mesopotamia.

Underlining that there has been very serious development and change in the region compared to previous years, he said the welfare of locals has been improving daily, adding that export figures of the region have risen threefold in the

last 15 years. The share of the region in Turkey's exports increased from 2 % to 6 %, while exports rose from \$600 million to over \$10 billion.

"Turkey's exports also grew, both in terms of quality and quantity. The increase was not only current but also steady. There were good developments in business life. We reached a total of 2 million insured employees from 300 employees," he continued. Karahocagil explained also that most of the country's corn production is met by the provinces in the region, noting that there has been a significant increase in fertile soil due to irrigation. Currently, the region's provinces are producing 2.5 million tons of corn to meet the needs for both animal feed and starch. In addition, the region produces 10% of Turkey's wheat and the production grows exponentially."

As a core part of the project, Turkey planned to construct 22 dams and 19 hydropower plants. The first dam Turkey constructed as part of the GAP on the Euphrates was Karakaya, which began operating in 1988. Lastly, Turkey completed the construction of the Ilisu Dam but it has postponed the water-filling procedure to provide water flow to Iraq.

**On farm analysis of the effect of the preceding crop on N uptake and durum wheat yield in Med conditions (2018)**

*Yosser Ben Zekri, Karim Barkaoui, Hélène Marrou, Insaf Mekki, Hatem Belhouchette & Jacques Wery (2018), Archives of Agronomy and Soil Science.*

One of the challenges of eco-efficient agriculture is the development of operational farming practices to increase the level of agricultural production, use efficiently resource and reduce environmental impacts. Based on the efficiency frontier concept and the decomposition of resource use efficiency, we used a three-quadrant framework allowing to carry a functional

analysis of the cropping system. Using a data envelope approach, we established boundary curves which represent the maximum achievable performances (yield, N uptake) when N is the only limiting factor. This framework has been first implemented and tested using published data from 112 agronomic situations of rainfed durum wheat in experimental fields in northern Syria and then further applied on a data set of 245 agronomic situations in farmers' fields in two regions of Tunisia. The results

demonstrated the impact of preceding crops: durum wheat following legumes or vegetable showed a higher potential for N uptake but with only a minor effect on its conversion into grains. This positive effect of diversified rotation on potential N uptake by durum wheat is partly offset by increased N uptake gaps in farmer's fields indicating a higher effect of other limiting factors.

<https://doi.org/10.1080/03650340.2018.1514111>



## The State of Agricultural Commodity Markets (FAO Newsroom, 17 September 2018)



Food production in countries in low latitudes (many already suffering from poverty, food insecurity and malnutrition) will be hardest hit, announces the [State of Agricultural Commodity Markets](#) (FAO, 17/09/2018). Regions with temperate climates, on the other hand, could see positive impacts as warmer weather lifts agricultural output. Under the study methodology, crop yields are projected to rise due to climate change

in Canada (27%), some EU countries (16%), Mexico (8%), Russia and Caucasus (4%). In other countries and regions, yields are projected to decline, e.g. in North Africa (-6%), Near East (-3%), Turkey (-0.5%). Agricultural exports are projected to increase from North America and from Europe and Central Asia to the Near East and North Africa among others, which might drive to bigger payments problems in net food-importing developing countries.

The report addresses other consequences of climate change like the reduction in the nutritional quality of crops or the effects of sea level elevation on straits and coastal chokepoints where the majority of international cereals freight is performed. In light of this, the G20 have requested to expand the activities of the AMIS to include assessment of chokepoint disruption risk, congestion and climate resilience.

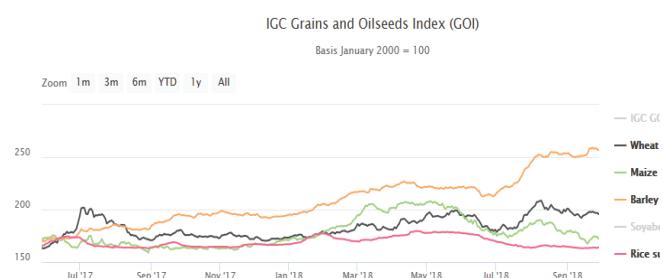
## Global Markets: What Is the Trend?

	Supply & Demand Sept 18		
	Global Index <sup>1</sup> (Sept 18)	From previous forecast (m/m)	From previous season
Blé/Wheat	196 ↘	▲	▼
Maïs/Maize	174 ↘	▲	▼
Riz/Rice	164 ↘	▲	▲
Orge/Barley	257 =	n/a	▼

<sup>1</sup>: Monthly average in USD, base 100=year 2000, ↗/↘ vs last month

(▲ : Easing ; ▼ : Tightening ; ↔ : Neutral, n/a : missing data)

Sources : AMIS Outlook - <http://www.amis-outlook.org> and International Grains Council for the Barley (02/10/18) and the graph below.



## Événements

04-06	11	18	30	11	18
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**Oldways Whole Grains Council Conference (Seattle, US)**  
A conference every other year, bringing together scientists, chefs, manufacturers, health professionals, foodservice operators, distributors and media who share an interest in whole grains.  
More info on <https://wholegrainscouncil.org/get-involved/attend-our-conference>

**Colloque FC2A (Paris, FR)**  
"L'agriculture française entre enjeux locaux et internationaux". L'agriculture française doit-elle miser sur des marchés de niche à forte valeur ajoutée ou continuer à disputer aux autres grandes puissances une place dans le marché mondial de l'alimentation? Comment les filières appréhendent-elles ces évolutions de court, moyen et long terme?  
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