

Black Sea Crop Update

23 February 2022

This update was finished last night and was planned to be emailed out this morning, complete with our analysis and possible implications on the grain trade, but events have overtaken our report.

Overnight Russian President Vladimir Putin announced a "military operation" in Ukraine's eastern Donbas region, immediately followed by reports of explosions across Ukraine, including the capital, Kyiv.

At the time of writing, it is being reported that Russian forces have entered Ukraine from the north, south and east, and there are reports of deaths at military bases and explosions near major cities.

Ukraine has declared martial law and broken diplomatic links with Russia.

The situation is changing rapidly, and we will endeavour to process and report on the implications as they happen; we will keep you updated as much as we can.

In the meantime, please find the rest of our report, including our current yield forecast, agribusiness news, and weather reports.

This year we will continue to provide regular yield forecasts and crop condition updates along with agribusiness news summaries, market information, fieldwork progress, weather updates, and long reads when applicable.

We appreciate your support; thank you.

Mike and the team

Crop forecasts

Russian wheat

Our first Russian wheat forecast is 85MMT based on an estimated 29.5MHA yielding 2.88MT/HA.

We think Russian farmers have planted around 17.5MHA of winter wheat, but until the Ministry release official figures next month, it's not entirely clear.

The crop is in good condition with none of the late cold and ice damage we saw last year.

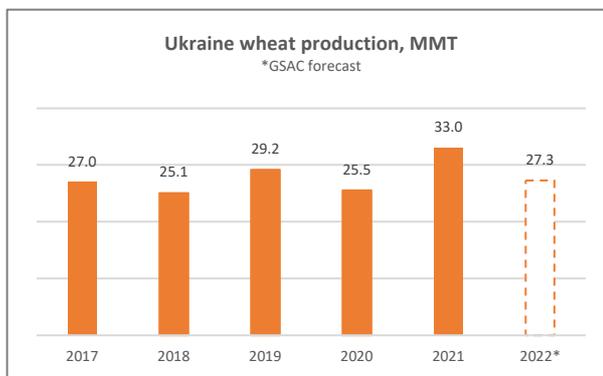
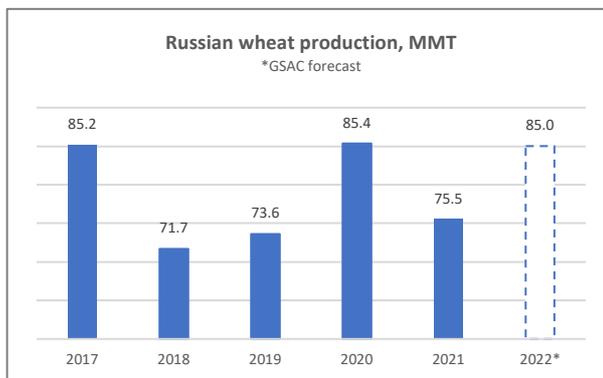
Spring wheat hectares will be difficult to call this year because although the long term trend is down, other factors have come into play, including the export tax, high input cost, high current wheat prices, government policy to increase crop hectares, and current events.

At this stage, I'm estimating spring wheat plantings will be up slightly on last year at 12MHA, but we will revise that and yield forecasts as planting numbers firm up.

Ukraine wheat

Our first forecast for Ukraine wheat is 27.3MMT based on 6.7MHA yielding 4.09MT/HA.

Conditions in Ukraine look good, with wheat coming through the winter so far pretty much unscathed.



Russian spring planting underway

Sowing of early spring crops has begun in Russia's Southern and North-Caucasian federal districts; to date, about 20.3KHA have been planted. In addition, fertiliser has been applied to 474.3KHA. About 19MHA of winter crops have been sown, and 97% reported in good and satisfactory condition, which is higher than last year's figures. The Ministry of Agriculture reports that preparations for fieldwork in Russia are proceeding normally, and farmers are provided with sufficient seeds, fuel, and fertiliser.

Russian food prices a concern to the 'Minister of Agriculture

The Russian Minister of Agriculture, Dmitry Patrushev, said work is currently underway to stabilise the food market, specifically bread, sugar, milk and vegetables. In addition, he is planning to allocate funds to purchase cattle feed to help keep prices for raw milk and dairy products under control.

Russia is making a lot of effort to control food prices, which have increased significantly in recent years. We will include a regular Russian food price index in future reports.

Russia restrict fertiliser exports

Russia introduced a temporary ban on ammonium nitrate export from February 2 to April 1, 2022. They say the warm winter has brought spring sowing forward by several weeks, which created increased demand for nitrogen fertiliser, particularly in the South.

I would suggest this has little to do with agronomy and has everything to do with protectionism; I also suspect we may see more of this sort of thing from Russia.

Seasonal fieldwork begins in Russia

Farmers in the Southern and North-Caucasian Federal Districts have started applying fertiliser to winter crops. Russia's winter crop area stands at 19MHA and, according to Roshydromet, about 97% of crops are in good and satisfactory condition, which they report is higher than last year's level.

Buckwheat hectares will be increased in Russia

Russia plans to sow more than one million hectares of buckwheat this spring, an increase of 5.5% in 2021. In 2021 Russia harvested 921.4KMT of buckwheat, up 3.2% from the previous year. Buckwheat is a staple food in Russia, and the Ministry of Agriculture seem determined to ensure there are sufficient supplies, presumably to ensure the price remains stable.

Grain exports from Ukraine are without delays

Ukraine's Minister of Agrarian Policy, Roman Leshchenko, was reported last week as saying "Currently, there are no obstacles to the export of grain from Ukraine, despite alarming reports of a possible blockade of Ukrainian ports due to military exercises of the Russian fleet near Ukraine". Export rates correspond to the record harvest in 2021 and exceed last year's shipments. For the first two weeks of February, exports included 548KMT of wheat, 98KMT of barley, and 2.25MMT of corn.

Ukraine's Ag Minister called on growers not to reduce the area of sugar beet

Minister of Agriculture, Roman Leshchenko, appealed to the Association of Sugar Producers via his Facebook page not to reduce the sugar beet area for 2022 because of the rise in fuel prices. He said in the event of ultra-high natural gas prices; the Government will find a balanced solution for the sugar beet industry in gas pricing for the period of sugar beet production in factories.

Ukraine's Ministry of Ag discussed the grain market with agrarian associations

The Ministry presented preliminary MY21-22 S&D numbers on cereals and legumes. Total gross grain harvest 83.8MMT, including 32.1MMT wheat and 40MMT corn. Exports July-Jan 2022: wheat 17MMT, including 11MMT milling wheat and 5.6MMT feed wheat. The projected balance of wheat exports is 8.2MMT, including 2.0MMT milling wheat and 6.2MMT feed wheat. Deputy Minister of Agriculture, Taras Vysotsky, said there is a slight decline in grain exports, therefore no risks of excessive wheat exports.

Ukraine exported 39.2MMT of grain in the current 2021/2022 MY

February 7: Ukraine exported 39.2MMT of grain crops (+9.68MMT in the same period last MY), including 17.2MMT wheat (+4.0MMT) and 18.0MMT corn (+4.2MMT).

Ukraine foreign trade up

Ukraine's foreign trade of agricultural products increased by 24% in 2021 compared to 2020 and reached nearly \$35B, or 25% of total foreign trade turnover. The main exports of agricultural products were cereals, oil, oilseeds, meal, vegetable fats and oils. Exports went to China (15.5%), India (7.1%), Netherlands (6.4%), Egypt (5.8%), Turkey (5.3%).

Recent bad weather in Kazakhstan shouldn't be a problem

Unstable weather conditions in Kazakhstan over the last few weeks, high winds, heavy snow, and a bone-chilling minus 28C in central and east. Kazakhstan grows mainly spring crops, so no problem, but there is a bit of winter wheat grown in the South - about 5% of the total crop.

Rostov crops good

Russian Ministry of Agriculture report Rostov cropping of grain and leguminous crops will be 3.5MHA, including 2.9MHA of winter grains. Almost 100% of all sown winter crops have sprouted and are in good condition.

Kazakhstan 2022-23 exports predicted up

According to the Ministry of Agriculture, Kazakhstan hopes to export 9.0MMT of grain and flour in the next marketing year, upon the current MY forecast of 7.3MMT and 6.5MMT the year before. Not clear where that extra yield will come from, but it's suggested a drop in domestic consumption combined with Russian wheat imports will contribute.

Weather

Winter has been good so far this year, with few very cold snaps and a decent level of insulating snow cover that will replenish soil moisture in due course.

A couple of places to keep an eye on; parts of Romania, Moldova, and Ukraine are on the dry side; I spoke to a couple of farmers there last week that said it is dry but not a concern at the moment.

North Kazakhstan is also on the dry side; nothing major but worth noting.

As always, spring and early summer rainfall will be vital to continuing yield formation.

Weather forecast

Russia - Forecast of agrometeorological conditions for the third ten days of February 2022. (www.meteoinfo.ru)

European part - In the predominant territory of the European part of Russia, conditions for wintering winter crops will be generally satisfactory. In the southern regions of the Southern and North-Caucasian federal districts, weak vegetation of winter crops is possible during the daytime.

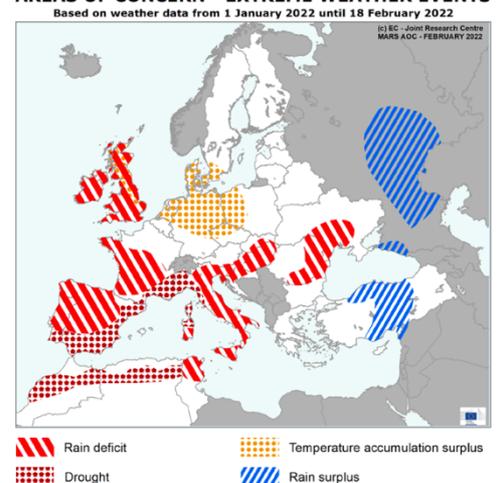
Asian part - In most agricultural regions of the Ural Federal District and Western Siberia, conditions for wintering winter grain crops will be mostly satisfactory.

USDA weather summary for January

Western FSU - Mild weather prevailed, with locally dry conditions in south-central Ukraine contrasting with widespread rain and snow elsewhere. Temperatures during January averaged 2 to 3°C above normal, with unseasonable warmth during the first half of the month more than offsetting a mid-month cold snap.

Precipitation — mainly in the form of snow — averaged 100 to 250 per cent of normal from Belarus and northern Ukraine eastward into Russia. Conversely, southern Ukraine trended drier (as low as 33 per cent of normal),

AREAS OF CONCERN - EXTREME WEATHER EVENTS



though moisture reserves remained favourable for dormant winter wheat and rapeseed following a wet December.

Eastern FSU - Seasonal cold and snow prevailed over the north while highly variable rain and snow were observed in southern cotton and winter wheat areas. During January, widespread snow was reported across central Russia and northern Kazakhstan despite temperatures averaging 2 to 4°C above normal. Even with the relative warmth, nighttime lows still plunged to or locally below -30°C, especially during the first half of the month. Agricultural activity is non-existent in these locales during the bitterly cold winter months. Farther south, conditions were highly variable across the cotton belt (Uzbekistan and neighbouring environs). A ribbon of near- to above-normal rain and snow (100-260 per cent of normal) from central Uzbekistan northeastward into southern Kazakhstan was

interspersed with dry conditions (less than half of normal) over parts of Turkmenistan and Kyrgyzstan. More importantly, the 2021-22 Water Year (September-August) has been markedly better than last year in the watersheds of the Amu and Syr Darya Rivers — vital for summer crop irrigation — as well as croplands of southern Kazakhstan, western and central Uzbekistan, western Tajikistan, and northern Kyrgyzstan. Conversely, growing areas in northeastern Uzbekistan's Fergana Valley have reported less than half-of-normal precipitation since September despite favourable rain and snow during January, though winter wheat remained dormant; winter wheat typically breaks dormancy in early March, at which time crop-water demands will increase

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Special report – Ukraine Russia

Following Russia's invasion of Ukraine and a steady stream of requests about what the implications might be, I have made a few notes. Please remember these are not predictions but possible scenarios based on what we know. Feel free to use or share but please acknowledge the source. Green Square Agro Consulting is a consulting business specialising in agri projects and forecasting crop yields in Russia and Ukraine. Mike Lee, Director.

Wheat

Ukraine's wheat crop is nearly all planted in the autumn and currently stands at 6.5MHA.

Spring wheat is planted from now through March and was forecasted to be around 175KHA, bringing the total wheat area to 6.7MHA.

This is down significantly on last year but broadly in line with the long term trend.

If the situation on the ground escalated to a position that farmers could not apply fertilisers or pesticides and assuming they could harvest it (July), there would still be a wheat crop, probably something like 16-17MMT.

This compares with 26-27MMT we currently forecast if farmers are unencumbered to manage their crops.

Ukraine requires 9-10MMT of wheat for domestic consumption.

Depending on the scenario, that will leave between 6-7MMT or 16-17MMT available for export through the 22-23 marketing year (July to June).

Corn

Corn is planted through April and May.

Most farmers will have seed purchased, and it should be on farm.

A lot of fertiliser is imported from Russia; earlier this month, Russia introduced a temporary ban on ammonium nitrate exports from February 2 to April 1, 2022. This was probably more about high fertiliser prices and Russian protectionism than forward thinking, although ammonium nitrate is a very effective explosive (see 2020 Beirut fertiliser explosion).

The current unencumbered forecast is 37MMT from 5.5MHA, with domestic consumption about 7MMT, leaving 30MMT for export through the 22-23 marketing year.

This could drop to zero if farmers cannot plant the crop, but a middle ground would be fewer hectares and lower yield from fewer inputs giving a possible crop of 19MMT, with exports down to 12MMT.

Exports

Russia controls ports in the Azov Sea by controlling access through the Kerch Strait. The Azov is a shallow sea limiting shipping to shallow drafts, often transferred to larger shipping in deeper water.

However, most grain exports originate further west through the Black Sea ports from Kherson, Mykolaiv and Chornomorsk, and the deepwater berths at Yuzhniy and Odesa.

There has been talk of closing the Bosphorus to shipping to restrict the Russian navy or Russian trade, which leaves a couple of things to consider.

A lot of Black Sea wheat goes to north Africa and the middle east who rely on regular shipments to keep bread prices low. Presumably, these regions would kick back hard against any blockage.

Plus, as grain prices go through the roof, which they are already starting to do, the commercial pressure to ship grain will be tremendous.

Having said that, insurance and risk tolerance of ship owners willing to enter ports in a war zone is more likely to affect exports.

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Black Sea Crop Update

4 March 2022

We condemn and reject this war, and we hope and pray for an immediate cessation of hostilities and an end to the bloodshed.

We had planned to be in Moldova this week before driving to Odessa to check on wheat before heading home and writing up a report with our updated yield forecast.

That's not happening now.

We have been in touch with all our colleagues who are clearly concerned but currently safe, and we will continue to report on what we can when we can, including predictions where we can make rational assessments.

Let us have any questions, and we will do our best to answer them.

We appreciate your support.

Thank you

Mike and the team

Crop forecasts

For the time being, our current wheat forecasts remain unchanged from the previous week, at least until we can get a better handle of the situation of the ground.

Forecast summary - wheat	This week MMT	Last week MMT	% change
Russia	85.0	85.0	-
Ukraine	27.3	27.3	-

Agribusiness news

Ukraine wheat

Ukraine's wheat crop was planted last autumn and stands at 6.5MHA, with an estimated 175KHA of spring wheat planned for March. The amount of grain produced now depends on how much nitrogen fertiliser will be applied and how much of the crop can be harvested.

Most large agricultural companies will have fertiliser on site ready to be applied; whether they can use it is another matter.

So far, I have only seen the Continental Farmers Group in western Ukraine report they are applying fertiliser, but I assume where there is one, there will be others.

As I said last week, if fertiliser is not applied, we could see the Ukraine wheat crop fall from a forecasted 27-28MMT to 16-17MMT, with the export potential falling from 16-17MMT to 9-10MMT through the 2022-2023 marketing year (July to June).

Ukraine corn

Around 60% of seed will be on farm now. There should be some seed in the internal supply chain, which could make it to farms in time for planting in May, But it doesn't look likely anymore will make it into the country.

Our forecast before the invasion was 37MMT from 5.5MHA, with domestic consumption about 7MMT, leaving 30MMT for export through the 22-23 marketing year.

Depending on circumstances, we are now looking at reduced hectares and a lower yield, which could drop to zero if farmers cannot plant the crop.

However, we currently think a middle ground is possible, such as 17.5MMT from 3.2MHA, leaving 10MMT available for export, assuming a route is available. We will revise this as and when we receive better information.

Ukraine exports

All ports are closed, reports of bridges destroyed to slow the progress of Russian tanks, high likelihood Black Sea port infrastructure will be damaged.

I've heard of four ships flying neutral country flags hit by missiles. The lack of international condemnation might suggest this was overzealous defending by Ukraine, but equally, it could be Russia. Either way, ships are not entering ports, and exports have stopped.

Russian wheat

Our forecast for Russian wheat is 85MMT based on an estimated 29.5MHA yielding 2.88MT/HA.

We think Russian farmers have planted 17.5MHA of winter wheat and had aimed to plant a further 12.0MHA of spring wheat.

Russian harvest

While Russian farmers should be able to plant this year's spring wheat crop, it's not given that harvest will progress normally.

Already a stack of Russian banks have put overdrafts on hold, which many farms rely on to ease cash flow issues, particularly in the run-up to harvest.

Russian exports

There are currently seven Russian banks that will be cut off from the global financial transaction system, SWIFT, from 12 March. This will affect grain export transactions, or put it bluntly, how will farmers get paid?

Undoubtedly traders will find a way but presumably with greater risk and cost, which will need to be discounted through lower farm gate prices.

Add to this that Russian banks put a hold on overdrafts, and there are unlikely to be any pre-harvest deals, Russian farmers are facing potential big problems.

The sanctioned Russian banks are VTB Bank, Bank Otkritie, Novikombank, Promsvyazbank, Rossiya Bank, Sovcombank, VEB, Russia's development bank.

Next year Russian spring crops

Looking forward and we have been told that less than 50% of corn and sunflower foundation seed is in Ukraine and Russia, and that is unlikely to increase.

Foundation seed is grown to multiply seed for commercial planting the following year, so a lack of foundation seed now means there will be a shortage of commercial seed for planting next year, spring 2023.

Russian poultry

Not our usual topic for discussion, but I just wanted to highlight potential issues for Russian poultry producers.

Currently, Russia imports around 700 million hatching eggs per year, or 15-20% of the total requirement. As sanctions and SWIFT is closed down, it's safe to assume trade will cease if it hasn't already.

Given that it takes about two months from egg to producing a chicken, Russia's supply of chicken meat could fall 20% by May.

In all likelihood, the Russian hatching egg business will quickly take up the slack, but there is a similar issue with the import of poultry breeding stock that will kick in around six months and pork production with the import of gilts and boars.

A reduction in food supply, rocketing costs, high interest rates; it might be economics that stop this war that few seem to want.

Mike lee

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