Dear Subscribers Plus, Full-Service Light, and Full-Service Subscribers:

Attached are our 2023/2024 Target Zone Charts & Summary Analysis Report – 11.30.2023

***** In 2023, we witnessed an ever-increasing number of factors dominating the agricultural arena, which directly affected grain prices and input costs. As the world became numb to the Russian war with Ukraine, traders became bored, while governments worked to manage grain prices and food price inflation. That allowed traders to fall back to the algorithms, trading grains from a purely technical aspect.**

While politics will be front and center through 2024, with the spearhead being the U.S. Presidential election, we will see many unpredictable twists and turns. For producers, we will need to focus on Mother Nature, as she is going to have her chance to play her Trump Card.

Our long-term view for the 1st half of this decade has not changed. As we wrote in last year's Summary Analysis, major production limiting events lie ahead over the next 3 years. Based on our research, with the number of major cycles culminating during the forecasted timeframe, the remaining years in the 1st half of this decade will be wrought with weather events severely stressing global crop production. There is significant evidence that warrants concern that the next 30 years will have cyclical climate events, which will place major limitations on this world's ability to produce the food necessary to feed all its people.

Weather will be an even greater market influencer in 2024. As we are well aware, Mother Nature is the only one who can reduce global grain stocks faster than any other ongoing event on this planet. She can drive prices higher or lower, and faster and farther, than any other single market moving event. Therefore, our central focus in this year's TZC Market Factor Analysis for 2023/2024 will be on Mother Nature, her historic and repeating trends, which will determine whether you will produce a crop, how much of a crop that will be, and what prices will be in the cards for you.

Target Zone Chart Summary

Due to the significance of this year's anticipated weather anomalies, we will provide a supplemental update to this initial analysis in the Q1 of 2024. From the beginning, we have realized that with the ever-so-quickly changing landscape caused by weather extremes, as well as how traders react or do not react to them based on government market interference, forecasting price probabilities has become even more difficult.

Last year, we went on the facts. We were perfect on wheat prices, but the corn and soybeans only made it into our forecasted Middle Third Price Level. We did not anticipate the games governments were going to play, especially our own, to manipulate and manage price appreciation. We realize we need to accept this intrusion as a constant from our government, we were somewhat surprised to see it from many other nations in 2023. They call it managing food price inflation. As risks to food production rise these next 3 years, we look for "food price inflation controls" to be applied by more nations. Understanding world governments **MUST** keep food prices under control to save their stations in life and by adding this to our TZC price projections, our upside price parameters will be capped.

We do wish to add a caveat here regarding government control of your grain prices. Over the next 2 to 3 years, we forecast that a number of food producing nations will be hit with severe droughts and floods. Remember, our forecast in 2020 was for increasing weather risks to production, creating greater extremes in weather and greater volatility in grain prices. We see it getting even more "climatic" ahead.

We also need to accept the fact that the First World Nations do not care about the Third World Nations. The Elites who wish to Rule the World only care about themselves and their End Game. Remember, "their" world cannot be sustained with 7 billion human garbage disposals. Their World Vision says their world can only handle 4 billion people. Their thought process is any means to an end, as they believe it is justified. One of their 1st attempts was with Covid, which failed. We believe it was because they lost control of it in its early stages of development before it was ready to be released.

Another part of their plans is for self-enrichment and control. Boy, did they hit the billion-dollar jackpot with Covid. As far as control, nearly 100% of their followers fell for it. This will only spur them to draw from the same play. This will continue, as long as there are enough sheep who will blindly obey.

That makes 2024 the year with the greatest variables in weather and in politics. Everything is on the table in 2024 in U.S. elections. It is not like you have not seen the build up for it over since January 2020. It will be anything necessary to hold onto power. They have the results of the Argentine election. The consequences of their actions are not calculated, nor of concern to them. Winning the 2024 Presidency will be all that matters. Can you envision anything that could slam grain prices lower? Would a war with China do it? What about Marshall Law or a quarantine shutdown? Like we said, we believe anything is possible in 2024. 2016 was not supposed to

happen. That made a real mess in their plans. So, just plan ahead. We will not be shocked by significantly higher grain prices later in 2024, only to see them slammed lower by human intervention.

The GGFC ***(Growing Global Food Crisis)***, which we have been talking about for 3 years, continues to build. But the governments must keep all bad things hidden from you. It is their nature to do so. Like just last week, with Brazil suffering from its worst climatic conditions in recorded weather history for Brazil, Agroconsult raised Brazil's soybean crop to 161.6 mmt. Is this being honest or is it a statement to mislead?

When one sees manipulation firsthand, flip your thoughts to price and then starvation. Is starvation in Third World Nations a matter of price, a matter of supply, or a combination of both. If we accept the fact that the Elites do not care about the people in Third World Nations, would you believe that they would care if you died? We know for a fact that if you do not agree or accept their rules for you, they will just as soon have you gone.

We are muddling through a thought process here about price, food, and food security. Truth tells us it never matters until that last bushel. Simplified, they in power will do their best to keep prices suppressed as long as there is some grain around somewhere. It is only when fear sets in that prices will skyrocket. Governments, and those controlling the governments, cannot let fear occur, so their lies must continue.

If at any time supplies reach a point where the market absolutely needs you to sweep the bin floor to get them every bushel you can, then prices can hit Sue Martin Levels. Until then, the powers that be will be controlling the happening. Think back to March 2008, when the squeeze took MN wheat to $25.00. That is when they needed every kernel. The cash price popped $5.00 in 2 days. Futures could not keep up. Futures rose the limit every day for at least 9 days back then.

We will need weather patterns like the 30's, like the Dust Bowl Days, for 2 consecutive years for global stocks and just-in-time buying habits to propel prices to the heights Sue has suggested. If we in the 1st World Nations are not suffering from real food shortages, prices are not going to make it to those astronomical levels. As you are being pre-warned, if grain prices do make it to insane levels that will generate obscene profits for your operation, do not blame us for not making this recommendation in advance that you should be looking and locking in these prices in for as many years as you can! We said that in 2007 for 2008 and in 2011 for 2012. We are saying again that within the next 24 months, there will be some great pricing ahead and some great profit generating opportunities. Let's make sure we recognize them, lock them in, then give thanks for having been given that opportunity.

Think back to 2 years ago when soybean stocks were very tight, and the USDA kept telling us that demand was falling and proceeded to cut crush demand to balance the numbers. We argue against this, believing profit margins are too great to slow crush demand.

Traders do not care. They do not think like "we" think. They blindly walk in lockstep with government numbers, like the blind little soldiers they are. They do this because it works and it's simple. Remember that if everyone follows the same "computer" models", the same algos, the same methodology, they will make money.

That is why we are jumping in bed with their models, but only with one leg, and lowering our Upper Third projections from what we believe global weather patterns will do to grain production this year and next. We underestimated the government's control and manipulation of price. We will not do that again. ***If we believe governments (plural) are going to lose control of price, we will address this issue with you at that time***.

Moving forward, global and century old weather trends will be the main drivers of price in the next few years. Things are just beginning to heat up, literally! When global production history was overlaid with global weather trends, the story told was shocking. If we accept these trends, which we are, grain prices will have little choice but to lift higher in 2024, led 1st by soybeans.

Man-made market disruptions will continue to be a contributing factor, making grains' story in 2024 and 2025 even more compelling. It is just that the trade has gotten bored with man-made market disruptions. The market needs Mother Nature to step in, which she will.

July 24 Corn: $4.25 - $5.10 / $5.10 - $5.95 / $5.95 - $6.80

Do you see our projection for corn as too high for the Upper Third? We have argued for the last few months that corn will have trouble getting off its proverbial butts, until U.S. 2023/2024 corn carryover stocks fall below 2 bb. One of our reasons for corn's potential is that corn exports have been underestimated. Demand will be much stronger in 2024 than what the USDA is currently projecting, pulling U.S. carryover stocks below 2 bb. Notice corn export sales these last few weeks. Starting in July through September, here are weekly export numbers, which have been pitiful, up until recently:

July: 9.9 mb, 18 mb, 9.3 mb, 12.4 mb
Aug: 4.2 mb, 5.9 mb, 9.2 mb, -0.9 mb
Sept: 2.8 mb, 36.8 mb, 22.3 mb, 33.1 mb
Oct: 71.5 mb, 35.8 mb, 34.7 mb, 53 mb
Nov: 29.5 mb, 71.2 mb, 54.6 mb, 76 mb

If we are correct, China is stepping up its buying due to its risk analysis to Brazil's Safrinha crop. Brazil's old crop and new crop futures are rising, adding a risk premium. U.S. corn prices have become more competitive, driving more purchases to the U.S. Plus, the USD has turned lower, also making U.S. grains more competitive in the world market.

Second, Russia will be hammering away at Ukraine's infrastructure all winter, working to freeze them out. China has historically obtained a large percentage of their corn imports from Ukraine.

Third, with Ukraine's corn production constantly being reduced, China is now relying on Brazil's corn production to fill the void. China was blessed last year with a large crop out of Brazil. Such will not be the case in 2024.

We could have projected even higher prices for corn, but there are too many negatives which will place a cap on next year's rallies. While the corn market will see a number of reasons to get up and run, the Bears will have their reasons to sell future rallies. With Brazil now one of China's top suppliers of corn, corn's prices will hinge on South American weather like it has never been before. When Brazil's Safrinha crop comes up short in 2024, then U.S. corn production will be front and center. That will come front and center with the acreage report on March 29th, 2024.

July 24 Soybeans: $12.50 – $14.00 / $14.00 - $15.50 / $15.50 – 17.00

Thanksgiving week did its best to confuse those who believe soybeans have a good chance of moving higher, even substantially higher. Remember that technicals, or algos, will rule as long as possible. Traders would rather rely on computer programs than to have to worry about fundamentals. As long as traders can trade price off chart support (S) and resistance (R) points, they will strongly resist change until they are forced too. Knowing this to be true, Jan24 soybeans continue to fail above $13.80. Thus, until the price can close above that price point and above the psychological price of $14.00, the money will continue to trade off S and R. One analyst stated that soybeans could fall to $10.00 or rise to $20.00. We do not see where this is of any value to you. What he is saying is he has no clue. We have stated 3 years ago what we saw occurring over the next 5 years and the reasons behind our forecasts. That reasoning for those facts has not changed. What has changed is how the world reacts to man-made, price moving factors. Learning how quickly people get bored with anything is important to understand. When a rally begins, eventually traders get tired of the same old news. Call it what you want, overbought, timing, swing objectives, seasonals, it does not matter. Eventually, traders are going to walk away from a major rally, go short, and likely stay short for some time.

The best rally is a demand rally. That is part of the reason for the rally in soybean meal. Demand shifted away from Argentina to the U.S. But it is not a true demand rally, since Argentina ran out of soybeans to crush, throwing that demand to the U.S. It is not new, increasing global demand.

Demand for U.S. soybeans is picking up from China, but that is only because China is worried about Brazil's soybean crop. Delayed plantings, then replanting, will push their final planting date back for when the 1st loads of exportable soybeans are available to them from Brazil.

One way to determine the truth to crop problems in Brazil is by watching Chinese demand for U.S. soybeans. South American weather will decide the fate of corn and soybeans' winter/spring price highs, leaving the door open for U.S. weather to mold its future story.

Rapidly increasing biodiesel demand will be with us for years to come. This is a new bullish factor moving forward and took the leadership away from soybean meal the 1st half of 2023. Traders may struggle in computing soybean valuations, with the constant meal/oil spreading which seems to take place on a daily basis. We know by the crush spread margins that crushers are making a killing. The immense profits could easily have them adding $1.00/bu to $2.00/bu to the producer's bottom line. Their other choice is to put those immense profits into new crush facilities to generate even more profits. Their choice is easy.

The longer-term benefits come to the producer in a short-crop year, when all this new demand is chasing fewer bushels. With crop losses coming to Brazil's soybean crop this year, the acreage battle in the U.S. on March 29th of 2024 will be interesting. A dry spring in the U.S. in 2024 will reduce soybean acres, adding another reason for soybeans to spike again, later in 2024.

July 24 K.C. Wheat: $5.25 - $6.00 / $6.00 - $6.75 / $6.75 - $7.50

The first part of 2023 was a fun time for wheat. We got some great sales made for the 2022 and the 2023 crop back in 2022. As we often hear most farmers say, we did not sell enough! Prices probed above $9.00 three times the 1st seven months of 2023, before traders just pitched in the tent, selling every rally since.

Russia is being the instigator, shoving wheat into the marketplace, constantly undercutting global prices to get rid of their large 2023 crop and all the wheat they confiscated from Ukraine. Timing and volume suggest that Russia will soon be out of wheat to export, opening the door for the belated, seasonal rally to begin for wheat. It is getting more belated as every day passes!

This year's weather trends are not forecasting as many threats to global wheat production as they were last year. There are problems, but traders are trusting their algos, tired of all the shenanigans being played by governments. They have "sat it out" since the July high, strangling the market while taking in big bucks as they push the market lower and lower. Due to the lone fact that global wheat production is once again forecasted to fall below global use, gives many traders the idea that something significant is going to occur in wheat prices in 2024. We will throw that back to Mother Nature to give wheat the push it needs.

Over the last 6 months, traders have popped, then sold any attacks on Ukraine's ports by Russia. With winter approaching, little change will be seen to wheat crops in the Northern Hemisphere, allowing Russia to pepper away at Ukraine's infrastructure by air and sea. Nothing will come as a surprise to the trade over the next 5- months. It will be a slow building leak, which lulls

everyone to sleep. So, if you care and pay attention, any surprise in the wheat market will not sneak up on you.

****** As previously mentioned, we will be supplementing this Summary Analysis in the Q1 of 2024. The primary reason is due to the climatic conditions we expect to witness, which are 1st forecasted for South America. If the current stressful conditions in Brazil continue along current trends and through Q1 of 2024, we will anticipate something similar developing in the U.S. later in 2024. As market conditions warrant, updates on projections will be provided, if needed. We will also be sending additional text message updates specifically to TZC subscribers, on an as needed basis.***

****** Note that when we enter the Upper Third of our projected ranges for July 2024 futures, besides making old crop sales, sales need to be made for new crop, 2024 production. The rule of thumb is 50% of whatever amount of old crop sales you are making. Your sales target for pre-sales of your 2024 production will normally be 50%. Keep that in mind when making old crop sales. Once every 3 to 5 years for new crop sales, we will have no sales recommendations or 100% sales recommendations. Otherwise, it is usually wise to be making presales of new crop grains when pricing old crop grain in our Upper Third Target Zones. By doing so, that will move your pre-sales of new crop grains to 50% before harvest. Always market with price potential in mind, how that fits within your marketing scheme, cash flow, and your ability to manage cash grain at the lowest cost possible.***

You will note below our **Top 3 Market Moving Factors for 2024** are all weather based. In a sense, we feel we should apologize for We believe global weather trends will give Mother Nature the edge in price determination this year. The majority of our focus will be spent on these, our Leaders in 2024.

The World's Economic Situation is a building issue. What does one say about the world's economies when they are all morally corrupt and financial insolvent? It is of growing concern and if/when they blow all at once, 2008 may well be seen as a precursor to the inevitable.

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***** As a review for our Newcomers, we will go back to how this developing story began. Background information is important for readers to fully grasp the complexities of the evolving weather story. Marketing grain in weather markets is difficult, not only due to the increasing volatility in prices, but also due to the emotional roller coaster ride it creates for many producers. Understanding the long-term nature of the coming event is critical, as enormous profits can be generated if what we forecast comes to fruition. If we are correct in our understanding, this will be an unfolding event not sequestered to the United States. Thus, if this is a global, century-old event we will be witnessing, unfolding before with our**

own eyes, being forewarned of these happenings will give us a leg-up as to how better to market our current production and future crops.

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It began in 2020, a narrative we wanted all to follow. We began by telling how we were entering **A New Era.** *This **New Era** would be the exact opposite of the years 2013-2020, when overproduction had prices falling hard, stuck in a much lower price range. The 1st half of this new decade 2020 – 2025 will be one where you will see much greater weather extremes and much greater price volatility. Of course, there will be subtle variations of this due to other external forces which arrive from time to time.* ***(Those external forces turned out to be government decisions.)***

One will need to weigh the risk of high prices versus the risk of a Black Swan event or short-term production increases, which can drop prices from lofty levels quickly*.*

*"**It is time you change your mindset!**" Mentally, we have been beaten down. After 8 years of low to even lower prices with little if any profits at times, one develops a marketing strategy to preserve assets and avoid risk at all costs.*

Having had 2 years which have offered great prices for our crops, 2021 and 2022, we hope one's past mindset has adapted. While high prices are great, managing them is much more difficult. ***Do you take the bird in the hand or bet on higher highs? Can you afford to do that? Are you better off taking at least some of the profit off the table? Each operation is different. Each manager has a different mindset.***

Market actions and world events tell you it is a new world, ***with many new risk factors awaiting the untrained and uniformed****.* ***If you have concerns that Black Swan is waiting for you to slip-up or you become fearful of the risk of higher highs versus lower lows, make sales. The Good News is you will have more chances in the future to sell at great prices. What may well be the greater risk factor is if you can produce a crop.***

The jury remains out for the weather trends in 2023. We are not in agreement with the so-called experts. We were right these last 2 years, and they were wrong concerning the development of an El Nino after Christmas. Data leans heavily in favor of more drought losses in 2023, but that forecast goes against what should be normal. We are looking beyond recent weather trend "normalities" to provide you what we see lies ahead and give full details as to why. It is our hope that we present our understanding clearly and accurately, and that our order of importance is close to correct.

Now that we have brought our Newcomers up from the past, here are what we see as our Market Moving Factors for 2024.

Market Moving Factors For 2024

1) Global Weather Trends
    a. Grand Solar Minimums
    b. Gleissberg Cycle
    c. El Nino flipping to La Nina
    d. Triple Cycle Convergence
    e. Natural Climate Variability
2) Global Production Shortfalls
    a. South America
    b. Europe
    c. China
    d. United States
3) China's Demand or Lack Thereof
4) World Economies
5) Biofuel Demand Equation
6) Inflation
7) Ukraine/Russia/Europe/China/U.S./Israel
   (Israel/Palestine War a Potential Future Black Swan Event)
8) USD
9) Terrorist Attacks on Gas/Fuel Pipelines & Cargo Vessels
10) U.S. Acreage & Projected Production
11) Avian Flu & PRRS
12) China Taking Taiwan
13) Trends
14) Twitter

#1 – Global Weather Trends A-E: Global weather trends are affected by many influences that many do not understand and even fewer think about. For all of 2023, forecasters continued to forecast El Nino conditions and they never arrived. Spring and summer should have been wet. They kept forecasting rain. Yet, what we got was exactly the opposite, the hottest and driest stretch from April through June that many could ever remember. Even this fall they keep forecasting big rain events, with many locations coming up far short of the precipitation amounts they were forecasting. Parts of the Midwest are currently experiencing the driest conditions in memory of the older producers.

This comes to us from historically old and cyclical weather trends. The one we will focus on is called the Gleissberg cycle, first identified in 1862, which strengthens and weakens in an 11-year

cycle over the course of a century. We tie that into the sun's dark spots cycle of every 11 years, as well as 88, 200, and 2,400 years. What has always stood out to us is how they repeat along these time periods. The ones most all of us older folks can recall are 1934/1936, 1954/1956, 1974/1976, perfectly spaced, 20-years apart. Based on these cycles, 2025 appears to be the sweet spot where 3 different cycles hit, which should make it a scorcher of a year!

The Suess-DeVries cycle lasts about 200 years, with the Hallstatt cycle running about 2,400 years. Within just these 4 cycles, the sunspot cycle is the most erratic, making it tricky for physicists to predict future sunspots. These cycles seem to have an effect on swaying the sun's magnetic pole.

Reviewing history, one of the largest coronal mass ejections from the sun, or the spewing of plasma, was in 2001, a sunspot maximum. Calculating an 11-year cycle, that puts us into 2023. Large sunspots tend to warm the earth. Keep that thought in mind as we move forward.

This swaying effect also tends to create more volcano eruptions and earthquakes. **Grand Solar Minimums** also tend to create more shifts in the earth's tectonic plates and thus, more earthquakes and more volcanic eruptions of size. The last really big one was Mt. Tambora in Indonesia back in 1815. It was the largest volcanic eruption in recorded history, which registered as a VEI 7, the highest possible rating. That eruption expelled 36 cubic miles of ash, pumice, and other rock, and aerosols, including 60 megatons of sulfur, into the atmosphere. That prevented sunlight from reaching the earth's surface, cooling the global temperature by some 5.4 degrees Fahrenheit. In Eastern North America, 1816 was the year without a summer. Cold events led to crop failures and starvation, caused by periods of heavy snows, and killing frosts June, July, and August. So, when they keep trying to scare you with global warming, understand that it is not as bad as global cooling. The global death rate from too cold versus too hot is 20:1. Starvation from too cold will amass many times more deaths.

The Grand Solar Minimum cycle, which is the cold phase, is to peak around 2040. The sea surface temperature cycle is expected to turn down after 2025, with the Atlantic Ocean moving into a cold phase, along with the Pacific Ocean. The has not occurred since the Maunder Minimum.

The Beaufort Gyre, a massive wind-driven current in the Arctic Ocean, is one of the 2 major ocean currents in the Arctic Ocean, located north of the Alaskan and Canadian coast. Thanks to rising air temperatures, steadily disappearing sea ice, and the annual melting of 270 billion tons of ice from Greenland's ice cap, the gyre is no longer functioning as it has done for more then 5-decades. Scientists are anticipating a sudden change in the Beaufort Gyre, which will lead to significant cooling in the North Atlantic region.

The Beaufort Gyre, like all things on earth, has a repeating, cyclical pattern, which shifts every 5 to 7 years, temporarily spinning in a counterclockwise direction, expelling ice and freshwater into the eastern Arctic Ocean and the North Atlantic. But for more than a dozen years, which is not normal, this carousel of ice and, increasingly, freshwater, has been spinning faster in its usual clockwise direction, all the while collecting more and more freshwater from 3 sources: melting sea ice, huge volumes of runoff flowing into the Arctic Ocean from Russian and North American rivers, and the relatively fresh water streaming in from the Bering Sea.

The Beaufort Gyre holds as much fresh water as all the Great Lakes combined, with its clockwise rotation preventing this enormous volume of ice and cold, freshwater from flushing into the North Atlantic. The Woods Hole Oceanographic Institute has labeled this anticipated reversal of the Beaufort Gyre as imminent and labeled the foreseen surge of icy fresh water as a "ticking time bomb", noting that even a partial flush of that growing reservoir of just 5% could temporarily cool the climate of Iceland and northern Europe, having a major impact on commercial fisheries in the North Atlantic. Add in a VEI 6 or VEI 7 during this period, 2035 to 2045, we would be looking at a major global temperature drop and a possible repeat of a year without summer. ***(One does not want a VEI 8, a mega volcanic eruption. That would be an extinction event.)*** Remember this is not just one cycle repeating. This is several cycles merging during the same time period, each of which enhances the effects of the others.

When you begin to understand how complex all these cycles are and how they intertwine, you will better understand why most meteorologists struggle to get weather forecasts correct. They have openly argued that "things" are not all lining up to give us El Nino conditions. That is absolutely true. But when stating the actual facts, why do they not research that truth so they can understand the current happenings? In the same light, understanding just a parcel of what we have written should help you understand why "climate change", as prescribed to by the elites, is just a scare tactic to get you to jump through their hoops. If you do not believe that, could you believe if they are talking, they are lying?

*** **As this decade's weather events represent our on-going story which began in 2020, some information has been brought forward to bring our new Subscribers up to speed.**

Bringing all this back to the present and to the 3 cycles which are beginning their merging now, we need to back up to the Tonga volcanic eruption back on January 15, 2022. This was the **largest ever recorded** with modern equipment and shot water vapor into the stratosphere and mesosphere, instead of sulfur dioxide. **This event was totally unprecedented and will have a continuing effect on weather patterns through 2025.** Again, there has ***never*** been an eruption like this one in at least 1000 years. Of all volcanic eruptions VEI 6 or larger, with this one a VEI 6, the Tongan eruption made it into the **mesosphere** with water vapor, as it occurred below the ocean's surface.

****** The Tongan eruption triggered a tsunami and a sonic boom that twice-circled that globe, which was captured in satellite imagery that showed a huge ash cloud and steam thrust into the atmosphere. They discovered a near 1-cubic kilometers of seafloor displaced the equivalent of 2.6 million Olympic-sized pools. The eruption from Tongan was like a shotgun blast, which reached record heights and was the 1st ever seen to break through to the mesosphere.***

A volcanic eruption that shoots sulfur dioxide into the stratosphere produces a cooling effect, which causes an El Nino effect within a 12-month period of time. It has been documented that when this occurs, the sulfur dioxide allows heat to be released into the atmosphere.

In all this, one needs to understand how upper air flow is generated. What happens is that land cools and warms faster than water, or the earth's oceans. The effect of sulfur dioxide getting blasted into the stratosphere is that it alters the high-pressure systems that cause westerly winds, which tends to create the El Nino effect.

Shooting water vapor into the stratosphere, or even into the mesosphere, **would do the opposite**. It would create a warming effect because water vapor traps heat in, not allowing it to escape into the atmosphere, opposite of what sulfur dioxide does. *This is all speculation since this has never occurred before* but because the effect of sulfur dioxide and water are exact opposites, their reasoning is sound.

This would mean the water vapor aerosols injected into the mesosphere on January 15, 2022, will hang up there for up to 3 to 4 years. It is said it takes about a year for the effects of this water vaper to be felt on earth. January 2023 is the end of Year 1. Thus, Tonga's effects would begin in 2023 and run through at least 2025, if not even through 2026. The Tonga "affect" would ***enhance*** the ***Gleissberg Cycle*** drought conditions being seen in Brazil today.

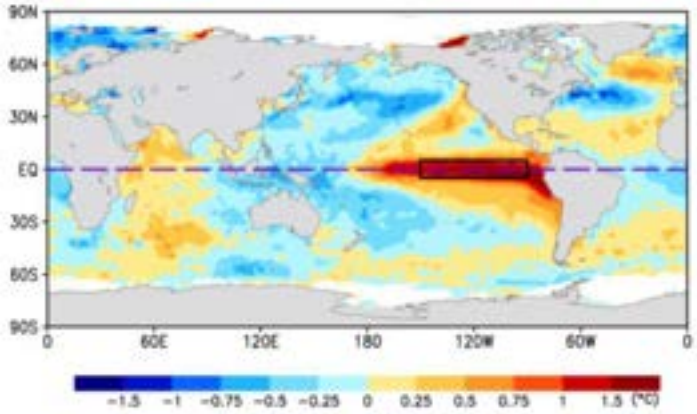
That is what we believe we are witnessing in Brazil. Plumes of water vapor in the mesosphere are drifting above Brazil and other areas in the Southern Hemisphere, enhancing their current drought with insanely hot, spring temperatures. Much of Brazil has been 100+F in October and November, with some areas over 110F. These have not been a shot here and a

shot there of heat. It has been a constant for many, with evening temperatures also setting records. Imagine something like this in the Midwest from April 15th to June 15th. How could our crops sustain themselves with limited precipitation at best?

If this is what occurs, odds greatly increase that the El Nino induced drought effects will reduce crop production in South America. On the flip side, the Gleissberg Cycle should flip the current, confused El Nino pattern back to a La Nina event in 2024 in the United States. We have not even talked about what this pattern should do to Europe, Africa, and China. But to date, the Tonga effect seems to be enhancing the current El Nino conditions in certain parts of the Southern Hemisphere, not in the Northern Hemisphere. Current ENSO data shows that El Nino conditions are growing stronger in the Southern Hemisphere. If El Nino conditions in fact create drought conditions in Brazil and the Tonga volcano will enhance its effects, Brazil's crops are at extreme risk over the next 2 to 3 months.

Within our equation in the Southern Hemisphere is what is known as El Nio Modoki, a Japanese word that means "a similar but different thing". A conventional El Nino begins with unusually warm waters in the eastern Pacific, all the way to the coast of South America. It triggers changes in climate for the U.S. and many other parts of the world. This canonical El Nio Modoki is prominent in tropical South America, which is associated with a dry signature. During such an El Nio Modoki event, we see strong negative anomalies, also in subtropical Southern Africa.

In the El Nino Modoki, the warmer SSTs are in the central Pacific, rather than the western Pacific, while the 'normal' El Nino would have a SST signature like the one below.



If we are wrong and this Tongan volcano eruption has no effect on the current weather patterns in Brazil, the odds increase that we get a bit of a reprieve within this longer-term drought cycle. That could be expected, because we have ***never*** experienced severe crop losses during an El Nino event. ***(Then we wrote)*** After the reprieve in 2023, drought would come back in 2024 and 2025.

(Did we have a reprieve from drought in 2023 or did crops get saved by greatly improved genetics and timely rains?)

Few realize how detrimental this volcanic eruption would have been to the world had it not gone off underwater. It was the largest eruption recorded by man. All the ash blown into the stratosphere would have blocked so much of the sun's heat, the earth would have been thrown into a deep freeze. ***2023 would have been our year without a summer. Thank the Lord for this blessing.***

We have talked about the Grand Solar Minimums in past MNU's. Most are unaware that the upcoming Grand Solar Minimum could wipe out all the claimed global warming for decades to come. For several decades now, the maximum number of sunspots seen in a cycle has been declining.

The last time sunspots disappeared altogether was during the so-called Maunder Minimum, a 70-year cool period in the 17th and 18th centuries, forming part of the Little Ice Age. The Maunder Minimum which ran from approximately 1645 to 1710, was the most recent occurrence of what are known as Grand Solar Minima, or periods of very low solar activity, that recur every 350 to 400 years. The time for another minimum is now due. This comes at the same time as our Trifecta and the Gleissberg Cycle. When several events culminate during the same time, the total of all the effects are generally enhanced.

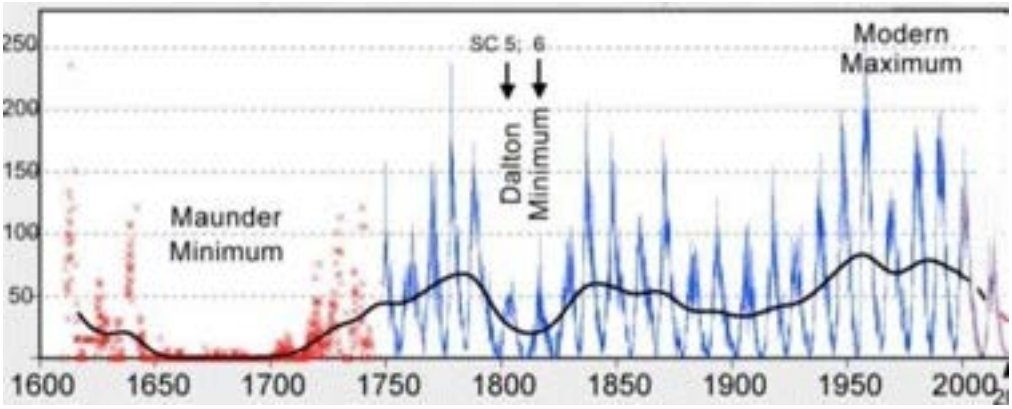
The upcoming Grand Solar Minimum, part of the Grand Solar Cycle, is forecasted to run from ***2020 to 2053***, with global temperatures falling by up to 1.0 degrees Celsius or 1.8 degrees Fahrenheit by the late 2030's. That is as much as the world has warmed since preindustrial times and would put the mercury only 0.04 degrees Celsius or 0.7 degrees Fahrenheit above the frigid temperatures recorded in 1710 at the end of the Maunder Minimum.

During this time, alpine glaciers in Europe encroached on farmland, the Netherlands' canals froze every winter, and frost fairs on the UK's frozen Thames River became a common sight. **Solar scientists have calculated that the sun's heat and light output during the Maunder Minimum was *about 4-times its normal rise or fall* of the normal 11-year cycle**.

A more recent prediction, based on a longer 210-year solar cycle, is that of Russian astrophysicist Habibullo Abdussamatov. He projects a more extended period of global cooling than the other scientist Zharkova of Landscheidt, ***lasting as long as 65-years, with the coldest interval around 2043***.

There are a number of scientists forecasting different timing of these events. If the general consensus is correct, the conclusion is simple: tough times lie ahead. A temperature fall of 1.8 degrees Fahrenheit would have drastic effects on agriculture, causing crop failures and widespread hunger. The need for extra heating in both hemispheres would come at the time when it is likely that much of our heating capacity, largely supplied by fossil fuels, will have

been eliminated by idiot Global Elitists claiming they are combating climate change, if we allow them to have their way.



From all indicators, the **Gleissberg Cycle** of solar activity shows up in records over the last 100,000 years, which repeats every 86.5 years. Separate investigations reveal a repeating pattern of 87 years. One researcher put it simply, normally this cycle is from 86 to 88 years, but apparently can vary upward or downward by a few years. Looking at our past, particularly at **drought times on the Great Plains of America, they found an astonishing repetitiveness in serious drought times that were encountered every 87 years**.

The Dust Bowl drought was from **1932 to 1939** and was **one of the worst environmental disasters of the Twentieth Century anywhere in the world**. The main problem was that America was the breadbasket of the entire world at that time, largely determining the price of wheat.

Exactly 87 years earlier ***(1934),*** or in 1847, the USA had a drought so bad that it was apparently **linked as one of the causes of the decimation of the bison**, which were massively plentiful back then.

Again 87 years earlier, there is evidence from records of a serious drought at that time, causing the government to take some actions on taxes to provide relief for farmers.

As you think this through and follow the reasoning, you realize that **we can expect major droughts and significant food shortages in this decade to come on the 40 to 50 latitudes**.

We have found nothing on record that can give us any clues as to how these events would affect nations in the Southern Hemisphere. We have followed weather trends for decades, tracking what we have seen as a relationship between South American weather and U.S. weather. **We have found a correlation.** We will extrapolate from this past relationship and track to see if this continues and if so, the only change we would expect would be an enhancement of those

conditions. If it would be wet, then even wetter, with greater flood potential. If dry or droughty, even worse droughts and more heat, like what Brazil is witnessing.

If we were to compare it to the past 89-year droughts in the U.S. and apply it to the current drought phase in Brazil, then Brazil's drought would be of great duration. If it would end suddenly and turn wet, never returning to a drought, there would be no correlation between Brazil's current drought and what we expect in the U.S. **If Brazil's drought sticks, we would conclude we're next.**

The question history teaches us is by the end of this decade, will people finally realize that the disasters caused by these drought times are not man made? Attempts have been made to explain 20th century global warming exclusively by the component of irradiance variation associated with the Gleissberg Cycle. These attempts fail because they require unacceptably greater solar forcing and are incompatible with the paleoclimatic records.

We began 2020 by telling all who would listen that we are entering a ***New Era*** of droughts, along with much higher grain prices and much greater price volatility. That long-term forecast was based on historical evidence of century old trends, which have been consistently and reliably repeated.

Using 1934 as a focal point, as it was the worst drought year from 1932 to 1939, and by adding 89 years, that **strongly suggested that 2023 would most likely be a major drought year. If we use 1936, that will make 2025 the more likely probability.** Other variables can throw this off, meaning there is no way that we can look at a specific year at this time. ***Current and growing global drought conditions are the classic warning of something developing.***

As we have been writing, we are looking at a **Triple Cycle Convergence.** When several events culminate during the same time, the effects of all are generally enhanced. Let us start with the Maunder Minimum, which ran from approximately 1645 to 1710, its most recent occurrence. It recurs, or cycles, about every 350 to 400 years. From 1645 to 2025 is 380 years, nearly dead center. It is due to begin again in **2025**. What does it do again? **It begins by beginning to build a Little Ice Age.** The Maunder Minimum Cycle is at its beginning.

Then we have the Gleissberg Cycle, which recurs every 87 to 89 years. We look for the Tongan Volcano eruption to enhance the effects of the Gleissberg Cycle. The Gleissberg Cycle's peak influence ***(drought)*** centers in **2025, *with drought conditions varying in different parts of the globe all through this decade*.**

Our Trifecta is part of all these cycles, part of the Gleissberg Cycle and part of the 11-year and 22-year La Nina cycles ***(Little cycles within larger cycles, all within a much larger part of the Grander cycle.).***

And there is yet another cycle converging within this same timeframe. In 2025, we will be moving into a synchronous, cold Pacific, cold Atlantic, sea surface temperature cycle. The last

time we experienced that cycle was from the end of the 1960's and into the 1970's. That created colder winters and shorter growing seasons during those times, which were very challenging. ***(Those years I remember oh so well! That was a very miserable cold time in the winter, with record lows being set. We watched the thermometer fall to -25F and remain under 0 degrees for days.)***

This is an extraordinary time when we can experience something no one living has experienced before, all these cycles converging at one time. The last time was nearly 400 years ago! And worth repeating, they enhance each other! We expect the worst of times and the nastiest of times, in the years and decades ahead.

What we need to fear most is cold. The woke crowd will look like fools trying to explain Natural Climate Variability. Just pull out a copy of the front page of the Des Moines Register from May of 1973, when they were forecasting global freezing, with glaciers grinding south out of Canada and into the U.S. For those who remember, it really was that cold back then.

Crops grow better when there is more CO2, along with warmer and wetter growing conditions. If you want to achieve a **Global Food Crisis**, blame CO2 levels, find ways to remove it and reduce its level in the atmosphere, reduce fertilizer availability by raising NG prices so high NG/NH3 processing facilities will have to close, call commercial fertilizers an environmental hazard and ban their use, **if you can,** then add in Natural Climate Variability and you have a Perfect Storm.

The net result is much higher grain prices where grain producers can get rich, as well as the Mega Companies which are supplying farm inputs. All except the rich will suffer. ****** These forecasts are all based on long-term, weather trend analysis, with some human-related influences included.***

We have stated that **Natural Climate Variability** can throw the timing off for which years will bring the worst droughts in the decade of the 20's. One variable that has already occurred is the Tongan volcano eruption of January 15th, which was the largest ever recorded with modern equipment and shot water vapor into the stratosphere and mesosphere, instead of sulfur dioxide. **This event was totally unprecedented and will have an effect on weather patterns in 2023**. *(We believe we are witnessing the consequences thereof in Brazil at the present moment.)* **Again, there has *never* been an eruption like this one in at least 1000 years.** Of all volcanic eruptions VEI 6 or larger, with this one a VEI 6, the Tongan eruption made it into the **mesosphere** with water vapor, as it occurred below the ocean's surface.

With natural climate variability, we will need to be watching how frigid this winter becomes. How far south will the cold drop? How cold will it be in Europe?

Last year Europe's butt was saved by a record warm winter, some 40 degrees above normal at times, exactly opposite of what was forecasted. Remember how NG prices skyrocketed over 1000% when the U.S. took out the Nord Stream pipeline in September? ***(This had them racing***

to the U.S. for LNG. Who benefited from the U.S. government's intervention?) They would not have been able to make it through the winter, with many freezing to death, but Mother Nature came to the rescue.

How dry or wet will it be in Brazil/Argentina due to natural climate variability, droughts or floods enhanced by the merging of 3 historically old, repeating weather cycles? What happens in South America or Australia can give us an early indication of a strengthening or weakening El Nino or La Nina from the Tongan Volcano. We believe the drought in Argentina and Southern Brazil will be enhanced by this volcanic eruption. Again, from never experiencing this phenomenon before, this is the best analysis by science.

#2 – <u>Global Production Shortfalls</u>: How was global weather in 2022? The summer of 2022 was the hottest and driest in hundreds of years in some parts of the world. Some of those experiencing this were France, Nevada, Iraq, China, California, Netherlands, Switzerland, Morocco, Italy, and Germany.

In Europe, the summer's drought may be the worst the continent has experienced in 500 years. The period between June and August was the hottest on record. We have now had consecutive droughts for the last 5-years, and this year is the worst Europe-wide drought in hundreds of years. It is not just less rain, *<u>it's also that it's **gotten much warmer**, so the overall soil moisture has decreased</u>*.

China experienced an extended period of high temperatures that lasted more than two months, the longest since records began in the 1960's. Extreme heat and a severe lack of rainfall meant China's biggest river, the Yangtze, shrank. During August, there was 60% less rainfall in the river's drainage area than normal. Some parts of China were said to have had their worst drought in 500-years. In 2023, China received below normal rainfall nearly every month. Drought conditions are building in China, and no one is reporting it.

Large parts of South America are in the grip of a serious drought. Signs of this drought began to appear in southeastern Brazil in mid-2018, and had spread into parts of Paraguay, Bolivia, and northern Argentina by 2020. The drought worsened in Brazil in 2021 and 2022, spreading further south into Argentina in 2022.

The drought in Argentina extends north into southern Brazil and into Paraguay, Peru, and Bolivia. Water shortages run rampant, no hay for livestock, and besides not being able to plant row crops and small grains due to the lack of moisture, vegetables like potatoes, broad beans, or yams are going unplanted. ***Argentina ended up with a 1 in a 100-year drought last year. Their corn and soybean crops were off by 50%. Imagine how bad a drought would need to be for U.S. corn and soybean crops to be slashed to 90 bpa and 26 bpa, respectively?***

Argentina received over 3" of rain in February, a critical time for their soybean production. The U.S. soybean market fell over $1.50/bu on that rain. Right after that rain, the blow torch drought

of 105+F returned. That heat sucked out all that moisture, traumatizing an already, severely damaged crop. Never forget, even in a severe drought, rain still falls.

The last two decades had seen the most extreme drought conditions in 1,200 years in the American west. Lake Powell, the 2nd largest reservoir in the U.S. which straddles Arizona and Utah, was at its lowest level in 2022 since it was filled in the 1960's.

Drought conditions were so bad in eastern Ethiopia, northern Kenya, and Somalia in 2022, it led the UN to warn that some 22 million people could be at risk of starvation. They were in the 3rd year of very low rainfall, coupled with high temperatures in that part of the continent. In Somalia in 2022, the rainfall in the March to May season was the lowest in the last 6-decades.

In most of these drought areas, not far away you will find much higher than normal rainfall over a much shorter period of time, creating extreme flooding events. A World Bank report in 2021 noted that overall "relative to 1970-1979, the numbers of droughts and floods were nearly threefold and tenfold respectively, by 2010-2019".

We have noted before that slower upper air flow creates warmer and drier conditions, as well as much higher rainfall events. Most just say more extreme weather events. We say these events are all tied to a centuries old weather phenomenon which is repeating. It does not happen like "BAM", it is on us. It builds over the years. It is a trend. You can see how the dryness is setting in over the globe, as well as flooding events, stronger and more persistent winds, hotter summers, and colder winters. The worst will soon arrive when these trends reach their crescendo.

South America weather is now front and center. Our forecasted events are unfolding in real time. Our analysis suggests the odds are extremely high of reduced yields in South America again this year, with the majority of crop losses centered in Brazil.

Scattered rains are falling in Brazil, after 2 months of far below normal rainfall in Northern and Central Brazil, with temperatures constantly above 100 F and in some areas, above 110F. This is their spring, not summer. Cool and dry, crops can make it with some rainfall. We showed that here in the U.S. again with the late reprieve our crops had. Can you even phantom how any crop can survive on little to no precipitation with temperatures constantly above 100F?

The rain that fell came from a cold front from the south, which rode farther north, into Brazil, than normal. The AOI, Atlantic Oscillation Index, a measure of how wavey the jet stream is. That was so wavey, it allowed that cold front to move farther north than usual. That was a one-off rain event. Brazil's rains come from Amazon Monsoon pushing moisture into Northern Brazil. Those are a permanent feature that gives Brazil its repeating rain events. Those have yet to begin firing on all cylinders. If you follow us on Twitter, you have seen the maps we have posted showing the extremely dry air over Brazil and just off the coast of Northern Brazil. And to understand the size of Brazil, Northern Brazil is nearly half the size of the U.S.

"South America's soybean planting window lasts nearly four months; in the U.S., it lasts about six weeks," Scheve says. "Because of Brazil's north-south axis, some fields in the southern part of the country could be planted on the same day fields in the north are harvested."

The rain that has fallen in Brazil this last week is not that much. Their soils are not deep and black. They have very sandy soil. Rain goes in, it goes down, and then out. Their soils, with this heat, need moisture daily. They entered this growing season with a moisture deficit near 15", and with 100+F heat. Now you get 1 to 3 inches and the trade acts like it's a game changer. What the trade is doing is managing its book, its short positions. They do this all the time when they get it wrong. That is what makes the market.

Consider the facts for Brazil. This appears to be the worst start to Brazil's growing season since records were kept. That goes back to 1950. Also, the U.S. produced over 90% of the world's soybeans up to the mid-1970's.

The last time Brazil had a hot dry start was in 2015, but nothing like this, soybean yields being down around 11%, with corn yields down from 15% to 20%, depending on the region. This year's start is so much worse!

Typically, when Brazil's growing season begins hot and dry, that trend continues. If our 3 coinciding events only enhance what is normal, then the coming months should be worse than would be normal. If normal is all that occurs, Brazil's soybean and corn production will be down a minimum of 10% and 17%. If we get the enhancement of this heat and moisture drought as expected, take those percentages up to 20% and 30%, at a minimum.

Everyone always talks about rainfall in a drought. Some were calling Brazil's recent rain event a trillion-dollar rain. That is a joke. It is only if the rains continue to fall. That is not what occurred in Argentina last year.

They forget about the heat. The heat in Argentina last year suffocated their production. It is doing a much better job in Brazil at the moment, with temperatures higher than what Argentina experienced during their summer months. Brazil's heat is insane and constant, nothing like we have ever experienced. Check the thermal condition index ***(TCI)*** for Brazil. This comes from satellite imaging. It shows how much stress is on the crop from heat. This dates back to 1979.

The TCI is registering the highest and greatest stress ever seen, by a long shot, since 1980. The vegetative health index ***(VHI)*** is the worst ever recorded for Brazil. This is factual data, not someone's opinion. This is comparative data over more than 40 years. It is the worst vegetative health and worst thermal conditioning ever recorded for Brazil's growing crops. This on-going heat is just devastating Brazil's crops, let alone the lack of rainfall in many growing areas.

We will repeat what we said about the U.S. crop, which suffered so much from heat and drought through mid to late June. If you starve a crop for the first 45 days of its life, it cannot fully recover, no matter how good conditions are afterwards. The same applies to humans.

To the south of this heat/drought is near 80 days of above to way above rainfall in Southern Brazil. We are hearing of massive replanting that needs to take place in Southern Brazil. Add that to the need of 20% to 30% of Brazil's other acres needing to be replanted and Brazil has a real mess on its hands. Then to hear that Agroconsult raised Brazil's soybean crop to 161.6 mmt. That is above last year's production of 159.7 mmt.

We call a blatant lie to deceive. Private consultants in Brazil who have already said Brazil's corn production will be down 10 mmt. Then this week, others came out, dropping Brazil's soybean crop from 163 mmt to 155 mmt.

Remember, Brazil is only planting their 1st crop corn at this time. Their Safrinha crop does not go in for months. Many of their 1st soybean plantings are getting ripped out. Many are waiting for enough rain to plant something or to replant soybeans. Many must now decide that if they replant soybeans, they most likely will not plant a Safrinha crop afterwards. If the replant to cotton, it will then just have one crop, too.

Many replanted acres will be going to cotton. Mato Grosso, an area 34% larger than Texas, is already forecasting a minimum increase in cotton acres of 8%. This will be coming out of their soybean acres. And Agroconsult is raising their soybean crop production? Whether they go to cotton or replant soybeans, their Safrinha crop is getting cut more.

Normal has always been if Brazil gets too much rain, Argentina goes dry, and vice versa. Is this year going to be an outlier? To date, we have had a wet sandwich, with N and C Brazil to dry, Argentina too dry, and the meat, or the wet part of this sandwich, being S Brazil. **What occurs in Argentina in 2024 matters to our understanding of this unfolding event**, as we have described it. Again, normal would be for Argentina to receive abundant rainfall, as long as N and C Brazil remains mostly overly dry and overly hot. **If Argy remains warmer and drier than normal due to the merging of our 3 historically old and repeating weather cycles, we know normal expectations are out the window.**

Around **Europe**, the war in Ukraine was the story maker. Now Ukraine is on the side burner, not the back burner. Their 2023 grain production was greater than what most expected and they did a better job of getting it exported out of the country. But their 2023 production was still

lower. Ukraine's Ag Ministry says that grain exports have declined to about 12.7 mmt this year. That compares to 17.6 mmt of grain exports by November 30, 2022. Of that amount, it was 5.8 mmt of wheat, 5.9 mmt of corn, and 870k mts of barley.

We look for Ukraine's 2024 production to continue in its downward trajectory. Ukraine is the 4th largest breadbasket in the world. In the 2019/2020 marketing year, Ukraine was the 2nd largest exporter of grain in the world, next to the U.S. Ukraine is one of the guarantors of global food security. Taking Ukraine's food production off-line remains a central issue, with serious consequences to the entire world, more so to the poorest of the poor. With declining food production from Ukraine, the GGFC will continue, aided by rising global weather risks to food production.

Europe's drought remains an on-going story but is not in the headlines. Their subsoil moisture remains very short in most locations. Recent rains have raised their surface moisture profiles. Europe's fall crops did not go in under the best conditions and Russia's fall plantings went in under even worse conditions. There will be little trade talk about this until the spring thaw, which will arrive in late February or March.

China will have the greatest concern regarding lost food production from Ukraine, as it was a significant exporter of grains to them. With China's growing drought risks, disease issues in hogs, and a sharp decline in their GDP, they can least afford to have disruptions in their food supplies.

China's 2023 drought trimmed the tops off some of their crop production. China was importing over half of Ukraine's exportable corn. They turned to Brazil in late 2022 and through 2023, to make up for those lost Ukrainian corn bushels. Brazil and China were blessed with a big Brazilian corn crop in 2023. If our expected production reduction hits Brazil's corn and soybean crop for 2023/2024, what is China to do? The U.S. has extra corn, which will help U.S. prices a bunch, but we do not have the soybeans.

Few are privy to real production numbers out of China, which would include drought losses. Unlike the U.S. government which likes to tell the world about how much grain we have, China keeps its supply numbers a closely guarded secret. The best the U.S. can do is snoop out their possible production, using satellite imagery, guesses on livestock numbers, tracking grain purchases from whoever, their internal prices, and state auctions of grain which is unusually done when the CCP is working to control internal prices.

China's actions of shifting their grain needs to other exporting nations is not waking other countries to understand that a broken supply chain is not as bad as having a **GGFC**. Just-in-time delivery is a bad thing but if there is nothing to deliver. As for countries which must import food and grains to survive, with China being the biggest one with the greatest needs who understands this the best, if you do not have a strategic grain reserve in times of insufficient global production, you are screwed. We still believe when other needy nations wake to this fact, that will constitute "new" demand. That does not work when supplies are insufficient to meet what

was normal demand. As scarcity becomes more obvious in the future, it will be like the run-on toilet paper when the retailer puts up a sign that reads, “Limit One”.

The **United States** continues with several issues which need to be resolved before next year’s crops go in the ground. Low river water levels in the U.S. do not see the rains necessary to give them much lift before freezing temperatures replace this issue with a seasonal norm. The on-going fall drought will need to see a cure by early April, or risk being carried forward into the 2024 growing season.

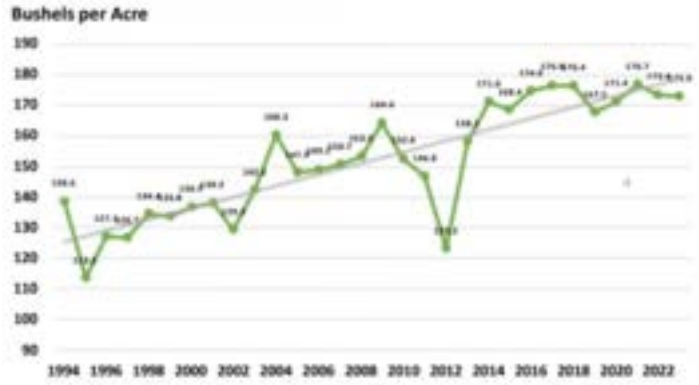
The same discussions will abound in 2024 if the current moisture deficit is not cured by then. Most of South Dakota received good late season rains to give them hope for 2024. Not so in Illinois, whose crop year ended with little to no significant moisture, providing them drought conditions that some say are the worst they have ever seen. If it is another dry spring, some will strongly consider switching some corn acres to soybeans. Some will do sorghum. A good portion of the U.S. wheatbelt is looking at far better moisture conditions than they were at this time last year.

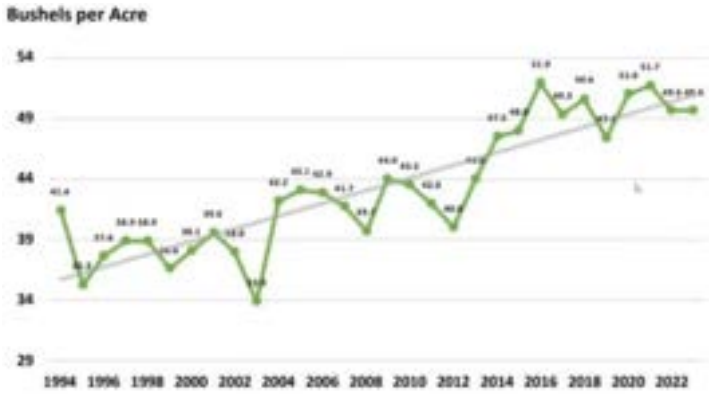
If you look at the current drought maps, 37.44% of the lower 48 states are in drought this week. That equates to 250.7 ma of major crops in the U.S. that are experiencing some level of drought. 41 U.S. states are experiencing Moderate Drought (D1) or worse this week. That is up 2 states from last week, showing us drought expansion. 54.8% of the U.S. was in drought in September 2012.

If the Tongan eruption does what we project, the U.S. will have another year of below trendline yields in corn, soybeans, as well as other crops. If this occurs, prices will hold current levels and rise substantially in 2023. What is substantial? That would need to be more than “normal”. A normal rise would be at least 20% off this fall’s lows. From $4.50, that would be more than $0.90, or above $6.40. For soybeans, that would be 20% above $12.50, or $15.00.

If South America crops see a significant reduction like we forecast, as well as the U.S., how high prices would rise would be an interesting question. How end users decide to chase bushels would be a major factor as to how high prices could rise. We know with China, when it comes to making sure their people are fed, price is not a question. Most forget that players like China can pre-buy/hedge their future cash purchases on the board, long before they must purchase the physical commodity.

If you look at a chart of trendline yields for U.S. corn production like you would at any commodity chart, one could conclude “price”, if yield was price, has topped and is readying to turn lower. From an abstract thought, if this is a century old, on-going, building drought cycle, this would seem to make sense. By the numbers, yields seem to be topping out, under 178 bpa. From 2015, yields were 168.4, 174.6, 176.6, 176.4, 167.5, 171.4, 176.7, 172.3, and currently 2023 production is projected at 174.9 bpa. Under our current scenario, one should not expect a final yield greater than 175 bpa for 2024 and for soybeans, no more than 50 bpa.





We have stated that we should fear how high the U.S. national yield could rise if we ever had a good weather year for crops. It would be well north of 190 bpa, if not closer to 200 bpa. If we are right, yield suppression is here due to natural and normal climate variability. Genetics keep getting better. When the blanket comes off, yields will be scary. That blanket could get pulled off in 2026. Be prepared.

#3 – <u>China's Demand or Lack Thereof</u>: The market chatter always includes China's demand for U.S. grains, or the lack thereof.

With the Ukraine war, we all thought this would increase grain demand from China to the U.S. China did its very best to avoid buying from the U.S., setting up other channels of supply. In came Brazil and out went the U.S. A fantastic corn and soybean crop in Brazil this year was a big negative to U.S. grain prices. But that story should be changing this year.

With Brazil's current weather woes, China has acknowledged that risk and has increased its soybean purchases from the U.S. over the last 30-days. The current reprieve from recent rains in Brazil may also have China slowing down future purchases, waiting to see what weather issues may occur in December. If there are none, future buys may be of a more limited nature. If Brazil's soybean crop falls even 10%, that would take 15 mmt off the global balance sheets. Last year at 102 mmt and now at 115 mmt, global stocks could easily fall under 100 mmt, a psychological number that traders would notice.

On the corn side of China's import ledger, purchases from the U.S. have been extremely slow. China did import a record amount of corn from Brazil over the last 16 months. Whether they were stockpiling extra, we do not know. We will discover how much corn China will need from the open market by how much of a shortfall Brazil has with their 2024 crop. A large reduction could place the world on notice that the global corn balance sheet is dramatically changing. Last year global stocks were reported at 300 mmt. This month that number was 315 mmt. If Brazil's production falls 20% from an estimated 137 mmt, production would come in down 27 mmt to 110 mmt. U.S. production in 2024 could easily fall 5%, dropping another 500 mb off global carryover stocks.

#4 – <u>World Economies</u>: What do you say when they are all bankrupt, both financially and morally? World economies are beginning to rollover, dying on the vine.

Based on the issues in the U.S., the over printing of money, the overreaction to Covid, its declining housing market, interest rate increases are likely over. Today's inflation number was below expectations, flat month-over-month, and 3.2% year-over-year, signaling no further reasons to raise rates. Interest rates have been knocked back over the last few weeks. This is also tied to the USD, which we will cover next.

All this has been headwinds for commodities. Now flipping lower, they become tailwinds for commodities. This is one of the reasons we are forecasting higher prices ahead for grains. This will create inflationary pressures in commodities. If nothing else were to change from here, grains would slowly work higher.

With the U.S. involvement in 2 wars, this administration is making nice with China, not wanting a conflict in 2024. At least, their actions suggest this. And it appears China is playing nice, going along with that, by making some large purchases of U.S. soybeans. If Brazil's weather continues to cause concern, they will be bigger buyers. A weaker dollar, lower interest rates, bodes well for increasing U.S. exports. And if Brazil's crop is a flop, China needs to be very nice, should they need the food stuffs the U.S. has.

China's economy is turning south, much of which is being caused by a rise in Flu/Covid issues and from the sharp downturn in their housing market. Building cities with no inhabitants has been a thing for them, but eventually one runs out of money. This has been a growing problem for China, with housing demand coming from growing middle class wealth, demand for housing in cities, a preference for investing in property rather than stocks, and easy credit for eager developers who use their connections with local governments to buy up land to develop into housing.

China's property market has accounted for as much as 30% of the economy but fell into crisis more than 2 years ago after a government-led clampdown on developers. Investment in real estate fell last year for the 1st time in a decade, and with no bailout from Beijing in sight, the property downturn is likely to drag on, posing a major threat to China's growth prospects over

the next 3 to 5 years. The fix is matching the supply of housing with much lower demand, which is waning because of an aging population.

China introduced a "de-stocking" policy nationwide to reduce oversupply, including slowing the pace of land sales in cities and encouraging developers to lower housing prices to spur demand. Absorbing the excess capacity will hurt China's economic growth, expecting it to be shaved by 1.5% every year until at least 2026.

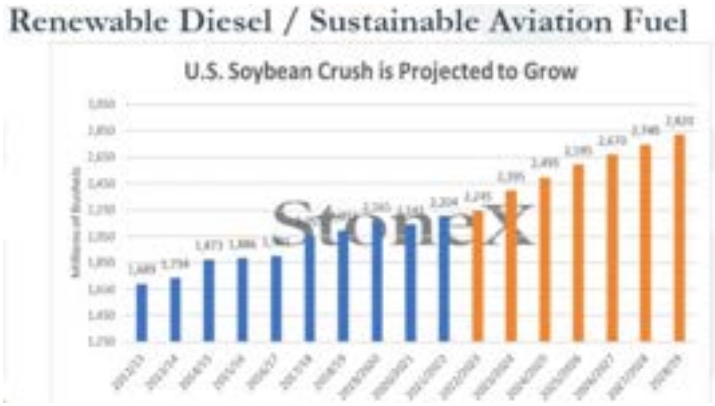
Potential economic losses from lower demand caused by the rising Flu/Covid cases is another threat to China's economic growth. Such events are felt worldwide, as investors fall into a risk-off mood, selling for the sake of selling. We feel that was part of the reasons for the sell-off in grains the Friday after Thanksgiving, as well as Agroconsult raising the soybean production estimate.

We can also look at any nation at war, which weakens economies and encourages increased deficit spending, which is never a good thing. That is unless your nation has a war-based economy, where your military industrial complex takes in billions in tax dollars, allowing them to keep hiring workers while most of its citizens see their economic positions grow smaller and smaller with every new government mandate, regulation, and tax increases to pay for their new wars.

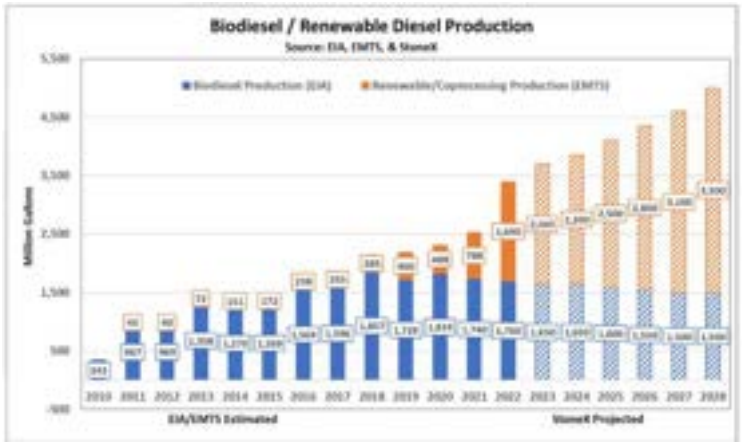
#5 – <u>Biofuel Demand Equation & SAF</u>: SAF, ***Sustainable Aviation Fuels***, is made from renewable biomass and waste resources, which have potential to deliver the performance of petroleum-based jet fuel but with a fraction of its carbon footprint, giving airlines solid footing for decoupling greenhouse gas (GHG) emissions from flight. SAFs lower carbon intensity makes it an important solution for reducing aviation GHGs, which make up 9% to 12% of U.S. transportation GHG emissions.

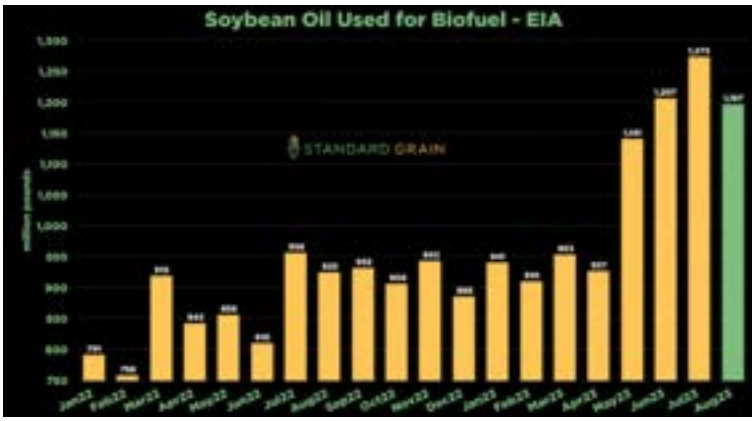
It is estimated that 1 billion dry tons of biomass can be collected sustainably each year in the U.S., enough to produce 50 to 60 billion gallons of low-carbon biofuels. These sources include corn, oil seeds, algae, other fats, oils, and greases, agricultural residues, forestry residues, wood mill waste, municipal solid waste streams, wet wastes, and dedicated energy crops.

While the list is extensive for different biomass inputs for SAF, our interest is how corn and soybeans will be used in this mix. The most talked about is soybeans and the number of crush facilities springing forth in the U.S. to fill this need. As you can see from the 1st chart, the largest yearly gain in crush is seen from September 1, 2023, to August 31, 2024. That is this marketing year! Look how demand jumped for soybean oil from last May to July and August.



To see how close they were, here is last year's chart. Not so aggressive of a rise.





Acres needed to fill this need will increase in the years ahead. With U.S. carryover stocks already tight, any crop losses in Brazil, if not made up by Argentina, will cause U.S. prices to jump. As soybean demand from SAF grows in the U.S. in the years ahead, U.S. prices will become more sensitive to production shortfalls in South America.

#6 – <u>Inflation</u>: Inflation is tied to government spending, supply chains, and a good part to energy prices. You may be thinking inflation has run its course, but we will disagree. When the government is so kind as to remove fuel, food, and housing from the CPI ***(Consumer Price Index)***, you know you are being played for a fool.

The Fed disclosed the current annual inflation rate has fallen to 3.2%. They had also disclosed previously they believed inflation would be with us for a long time, likely hanging in the 3% range. Knowing we should double the government's posted rate of inflation to be somewhat close to "more correct", 6% may be in the ballpark.

Thus, over the next 4 years if total inflation was 25% and today's low for corn came in around $4.60 and soybeans at $12.50, the lowest prices these 2 commodities should trade too with all things being equal, would be $5.75 and soybeans to $15.60. With the USD just turning and heading lower and it being very trendy, these sound like great values to end users 4 years from now.

There is some thought that after this inflation move runs its course, we could see deflation. That is something that the government would not accept. Inflation is a nasty theft from consumers that governments love. They will work hard to make sure they get this "take" from you. What you will see is the slowing of inflation. If they can get it down to 2%, they will tell you all is great. The reality is that it is a lie, their lips were moving. That 2% is in reality 4%, at least. The translation is you will have 4% less buying power every year this inflation rate is maintained. Unless you get a 4+% increase in pay every year and the government does not find a way to raise taxes on you, you will be going backwards, eventually falling out of the middle class if you were there to begin with.

There is a fear of a recession. That would be expected after so much deficit spending. If you want to have some type of barometer to be able to ascertain if a recession is imminent, you could look at different investments in the stock market. Look at how banking is doing, or pharmaceuticals, housing, technology, energy, or commodity funds. You will see some doing quite well and some tanking. As long as it is a mix, the odds are no recession is at hand. When the country is in a recession, the economy is in a downturn. The financial sector will generally be in a downtrend, too.

#7 – <u>USD</u>: The USD is very trendy. That stems from government policies or actions. Once they are made, if they are very influential to the value of USD, that will set its trend. Until such a time as that policy is changed, or another policy is set which countered the earlier one, the USDs trend generally stays in place.

The downturn of the USD off its high of $107 in October, appears to be tied to a number of changes. One may be the Fed's decision to not raise rates. It may also be partially tied to the view the Fed may have handled the inflation issue, at least getting it under control for now. How much the new war with Israel ties into it, we are not sure. But the USD has turned lower and has moved below significant support, signaling traders will be selling rallies. Its next major support levels are $100 and $99.

Then there is the national debt, which stood at almost $22 trillion when Trump left office. Now it's nearing $34 trillion! In fact, the amount of money owed by the U.S. government is more than all the money in existence! If you add in all the household debt owed by consumers, which would include student debt, auto loans, credit cards, home mortgages and others, that number rises to $50T. Unfunded Social Security and Medicare Promises were over $163T in 2022. The total dollars out there is nearing $22T and that does not include corporate debt. And with all that, we have not even reached into the balance of the world's debts outside the U.S.

While the previously mentioned facts are involving idiots who control U.S. purse strings, their habitual nature should undermine the value of the USD. If this is the beginning of the end of the dollar's reign on high, this downturn could last for many, many years. It would take a very strong President, with big kahunas, to turn this ball's downward trajectory around.

While we certainly do not want the USD to collapse, **<u>a downward tilt is beneficial for U.S. commodities, making them cheaper to other nations</u>**. On the other foot, if they can begin to collapse the USD, the government could use that as an excuse to bring forth their digital currency. Maybe that's the plan. Bankrupt the United States and rebuild it in your own image. Didn't a certain President pledge he would remake America, even if it took a puppet to do it? Some plans take time to get set in stone. Everything for a reason, with the shrewd and cunning.

#8 – <u>Ukraine/Russia/Europe/China/U.S./Israel</u>: This is quite a group. If these nations are fighting, is it really WW III? When have the major powers been going at it like this and taking sides? Maybe the #1 nation could just take their ball and go home?

How much disruption can come to world trade, grain movement, grain production, and grain prices, if someone screws up and pushes the wrong button? One hell of a lot!

Look at it another way. Who can least afford to have such a screw up? One would be the American farmer. Many balance sheets would be turned upside down within weeks if something blew up in the wrong place.

The Chinese people cannot afford a war with the U.S. If the U.S. would set up a food/shipping embargo on China, American farmers, Brazilian farmers, and the Chinese people would all be losers.

Seems to us we need to be looking at this situation not who would win, but for who would lose. Why is it that those who did not start the war become the ones who suffer? Understanding this truth helps us understand that few leaders, if any, do everything they can to protect their citizens. Maybe the Presidents of Poland and Hungary are some of the few. If they do not care if we die or are financially harmed, then we try to look through their eyes.

What is their game? For the U.S., it is to have a continuous war, but not two. The U.S. would be more willing to give up Ukraine to give up Israel. So, we see Ukraine having to negotiate and give something to Russia if they want to survive. Russia is beginning to escalate the war, going hard after infrastructure, shipping, rail, ports, power stations. They will do their best to freeze them out and starve them out this winter.

We see the Ukraine/Russian war as an event which will continue to erode food production in Ukraine, the world's 4th largest breadbasket. It makes the world's global grain stocks smaller but as long as other nation meet trendline yields, the world can survive. Tighter global grain stocks make for jittery and more volatile markets, where weather markets gain much more attention.

For Israel, they need to dig out Hamas and then find some way to control Palestine and keep them out. They say no Muslim country would accept any Palestinians because of the risk they pose to their country. Who should know Muslim's better than other Muslim's? Hate has been instilled in all their children. That forecasts a forever war for Israel. Look at how the hate has been perpetuated in the U.S. amongst so many Palestinians. We do not see where this war will affect U.S. grain markets, but it will have an affect on the Presidential elections in the U.S.

To avoid a conflict with China and Taiwan in 2024, it appears the U.S. and China are trying to make nice for now. President Biden did not bring up any sensitive topic when he met with Xi in China, nor did he when they met this month in Woodside, California. Romney jumped on Biden for the lack of any comprehensive strategy on China when they met.

Our conclusion is that no country wants to take the gloves off, likely knowing if there is a direct conflict, nukes become a possibility. No nation of sound mind wants that yet. At least, not until one nation decides it would be the clear winner or they elect a crazy person whom no one can

control or all are afraid of. That question is one that no one may ever be able to answer, deferring to the conclusion there may never be one.

#9 – Terrorist Attacks on Gas/Fuel Pipelines & Cargo Vessels: With the Ukraine/Russian war eventually coming to a head, whoever is losing will do the most unexpected to change the tides of war. Our worry has always been Ukraine would blow gas, fuel, and oil pipelines, which crisscross its nation. While the hurt will be on all nations that benefit from these lines, Ukraine would be looking at the revenue Russia would not be getting if/when these flows stop.

This act of sabotage would not directly hit U.S. grain prices, though they could likely spend a few days in **"risk off"** mode. Such an act of desperation by Ukraine would signal to the world they believe they have no hope of winning. Word is out that the U.S. does not wish to deal with two wars and is beginning to put pressure on President Zelensky to negotiate a settlement.

When you research the war news, most news is that Ukraine is gaining the upper hand. We believe that is propaganda, what they want you to think. They want you to think all those billions of taxpayer dollars are doing the deal. Yet, more and more ships are docking, getting loaded with grains, and are heading out. It makes us think there is a backroom deal to get food out to keep grain prices as depressed as they can. Kill each other all you want. We will even supply the weapons to kill more citizens, but do not disrupt exporting foodstuffs out of Ukraine. Would you believe such a deal could be struck?

Then there is a report Vladimir Putin has signed a record national budget aimed at boosting the military amid staggering losses on the battlefield. Our 2nd fear is that if you back the Bear up against the wall, tactical nukes against Ukraine becomes an option. If those were put on the table, grain prices would absolutely take a sharp dive.

We have written this before. Putin cannot afford to lose this war. He is betting his nation's and his own future on it. Likely, he is betting his life! He will do all it takes to win. Losing is not an option. A mutual agreement where Ukraine gives up some territory is the only way Ukraine is going to survive. That way all the Big Players walk away with a win and Washington will still have a cesspool in Ukraine to launder money through.

#10 – U.S. Acreage & Projected Production: March 29, 2024, way off in the future but always a market moving report because it is also a quarterly report. Guesses are already out there for what U.S. producers will be doing, just so the government can print big number to depress prices some more!

Initial guesses are 91 ma of corn, soybeans were placed at 87 ma, with wheat at 48 ma. Usually there is about 180 ma of corn and soybeans. That number is falling slowly, down to 178 ma this year. What was also a surprise is that they lowered their beginning yield number. They have never done that before. Trendline increases take it up 1.5 bpa to 2 bpa per year. Last year they started at 181.5 bpa. For 2024, they lowered it to 181.0 bpa. We will need to see if that number gets adjusted before their finally number is put in print in March of 2024.

91.0 ma X .91 harvested acres = 82.81 harvested acres. Take those times 181 bpa = 14.988 bb. In 2022, total production was 13.715 bb. This year with 94.9 ma planted X 174.9 bpa, the USDA says production was 15.234 bb. If we can get exports up more this year, as well as feed and ethanol, carryover due to the fall in acres would fall below 2 bb next year.

As we work to figure out months in advance what U.S. farmers will plant next year, what Brazil produces for a crop will weigh on the decisions South American farmers make, or are forced to make, over the next 4 to 6 weeks.

With Brazil reducing their corn crop 9% from last year's before they even plant it, their 2024 production will be sizably lower than last year. Brazil is now experiencing their worst spring planting season since records were kept. While all eyes are focused on Brazil's soybean crop, not many are talking about the problems a late planting does to their Safrinha crop or to how it can also reduce total acres even more.

Weather trends we follow point to even more disruption to production in South America's 2024 crop. Beside no acres of any crop being locked down as of the end of November, we will make a stab of what will be. We are going to drop Brazil's corn and soybean production by 15% to 20%, each!

By the March 29th Planting Intentions Report, we will have a much better handle on how good or how bad Brazil's grain production will be. If we are right on the reduction in grain production of both corn and soybeans, soybean prices will have traded over $15.00/bu before this report is released. This will encourage more soybean acres in the U.S. We are not saying U.S. farmers will make that shift, but they will be giving it a serious look.

For Brazil's Safrinha crop, they will not know their final production possibilities for another 4 to 5 months. We will have a good idea of the switching of acres and how many acres will and/or will not get planted in 2 to 3 months. If final production is looking as poor as we project now come March 2024, U.S. corn prices will have found its legs. Then the battle for acres will begin. The thought should remain about how many acres soybeans will be pulled away from corn acres in 2024.

We look for total corn and soybean acres to attempt to reach the levels they were working towards last year but failed to achieve, due to several circumventing issues. That total would be 180 ma. Our reasoning is that with wheat prices so cheap, more wheat acres will be converted to soybeans or corn, raising USDAs initial projections. One should not ignore the pull the increasing crush capacity that is being grown in the U.S. that will have on soybean prices and the demand for more acres.

#11 – <u>Avian Flu & PRRS</u>: Avian Flu hit bird populations around the world over the last year, killing 10's of millions of birds. This raised egg prices over 500% for a time, while cutting feed demand. As the chart below shows, the H5N1 virus has shown up in wild birds in all states.

This is a breeding ground for the infections to spread to commercial flocks, given the right conditions. This flu season for birds increases during colder months when flocks spend more time enclosed. How bad this year's infections will be is dependent on outside conditions and prevailing winds. Another year like the last one could raise chicken prices substantially, as well as egg prices again, adding to inflationary pressures.

And it is already beginning. This week in Union County, Ohio, a layer flock of 1,349,000 birds will be destroyed due to bird flu contamination.

The hog industry cannot gain a foothold on PRRS. Every winter and into spring, PRRS flares up. Current forecasts would suggest PRRS will be a problem in 2024. If our forecast is correct, cold shots will arrive, some quite deep. But their frequency will be less than usual. That should give a small reprieve to hog growers, as they ready themselves for another battle in 24.

#12 – <u>China Taking Taiwan</u>: This issue has been on many minds over the last few years, though with all the other war news making the headlines, it has been sequestered to the back pages. While this remains a possible threat and if it were to occur, it would cause immediate and severe, longer-term consequences to all U.S. agricultural producers. Therefore, we cannot dismiss this possibility as we look at future price probabilities.

The good news is that it is #11! Being this low on our list means we see the odds of this possible "Black Swan" event as very low. With this having been on "our" front burners for such a long time, preventative plans have been in the works by the U.S.

But for those nations who would be front and center in this potential conflict, it continues to be in their headlights. Because of this, they have been and continue to react like this event can and will occur in the immediate future. As long as they keep pushing forward with their aggressive maritime military buildup, the risk to China builds against China with each passing day.

Our reference to they refer to Japan and the Philippines. **<u>Japan</u>** is undertaking its largest arms buildup since WWII, in a race to deter Beijing from war in East Asia. Japan identified China as

its chief adversary in its 2019 defense white paper, worried that Beijing's flouting of international norms, pressure on Taiwan, and rapid military modernization posed serious security threat. That anxiety has intensified since Russia invade Ukraine, weakening Japanese public opposition to rearming. The idea by pointing to 2027 as the moment when East Asia's power balance may tip in favor of China, Japan's government can rally support for greater defense spending. The next time Communist Party delegates gather in Beijing, 2027 is the next major milestone on China's military modernization roadmap and the centennial of the founding of the People's Liberation Army. At a congressional hearing last year, U.S. Indo-pacific commander Admiral Philip Davidson said that China's threat against Taiwan could "manifest" that year.

For Japan, losing Taiwan to mainland Chinese control could be a disaster because it would jeopardize key shipping lands that supply nearly all Japan's oil and many of the materials it uses for manufacturing. It would also give the Chinese navy unfettered access to the Western Pacific from bases on the island.

So, you can see, the China/Taiwan threat is a much bigger thing to Japan than it is to the U.S. Also, Japan is allied with the U.S. and a great trading partner. The U.S. would go to bat for Japan just as it has for Israel.

Lastly, Japanese military bases, airports, seaports, and other logistical hubs could also be tempting targets for Chinese missile strikes because they would be staging grounds for U.S. forces.

With tensions rising in the China Sea, the Philippine Coast Guard has launched a new strategy against China's aggressive actions by publicizing the truth. By using video and eyewitness accounts to document China's harassment of its personnel and civilian populations, the Philippines is playing diplomatic and public pressure on China, making it increasingly difficult for Beijing to defend its claims of peaceful action in the South China Sea. By these actions, the Philippines is using lawfare to undermine China's legitimacy before the world.

In the past, the Philippine Coast Guard would sit on its information for weeks or months before publicizing China's transgressions. Now they are more likely to spotlight China's transgressions in real time. By doing so, Chinese actions in the shadows are now checked, which forces them to come out in the open or openly lie to the public. The Philippine Coast Guard has also invited Western journalist aboard its craft to witness Chinese aggression firsthand.

The battle for their internationally observed and designated territorial rights has been growing in intensity, with China attempting to lay claim on "disputed" islands, which confronts its reginal rivals over their competing claims in the strategically important and resource-rich waterway. The central issue is China ruthlessly asserting ownership over almost all of the waterway in defiance of an international court ruling against it. China has been pushing this aggression for over 20 years, occupying a number of obscure reefs and atolls far from its shoreline across the South China Sea, building up military installations, including runways and ports. Due to the increasing problems/assaults China is intentionally committing in its attempt to take control of

all the navigation routes in and around Southeast Asia, the U.S. is regularly sending its Navy destroyer of freedom of navigation operations close the contested islands, leading to fears that the South China Sea could become a flashpoint between the two superpowers.

There is a reason for this on-going battle. The 1.3 million square mile waterway is vital to international trade, with an estimated third of global shipping worth trillions of dollars passing through each year. It is also the home of vast fertile fishing grounds. Much of its economic value remains untapped. According to the EIA, the waterway holds at least 190 trillion cubic feet of NG and 11 billion barrels of oil. Whoever controls these resources and how they are exploited matters. The attitude that it is all mine is always a catalyst for war. Beijing claims "indisputable sovereignty" over almost all of the South China Sea, and most of the islands and sandbars within it, including many features that are hundreds of miles from China. The Philippines, Malaysia, Vietnam, Brunei, and Taiwan hold competing claims, but are not overextending their reach, remaining an distance within accepted international norms.

Besides the struggles the above-mentioned nations have against China, they are not alone. China has managed to piss off much of the world. India's relations with China have suffered a series of blows over the past decade, punctuated by the deadly border skirmishes of 2020. India's army chief reports that China has been accruing significant capacities for force mobilization over the years. To counteract this threat, Indian troops have been preparing for any contingency on its nation's border with China. The chief went on to describe China as a "totalitarian state", with a multi-pronged strategy to displace the U.S. as the world's leading superpower. India is also beginning to arm its island chain on its southeast and southwest coastlines, hoping to eventually be able to control its navigational waterway around its nation.

By signing the Aukus pact in September of 2022, Australia revealed where it stands in the world: It is taking the side of the U.S. over China. This was a big move for a country in the Asia-Pacific region. The security deal with the US and the UK gives Australia a huge defense upgrade from the world's most powerful military.

Australia did not have to take a stand but in recent years, China has been suspected of interfering in Australian politics and of cyber-attacks on key institutions. Tensions were further inflamed

last year when Australia called for an investigation into the origins of the coronavirus. When that occurred, China released a flurry of sanctions against Australian exports.

That was when Australia had its "a-ha" moment with China, its dawning realization that all these things that had preceded were not benign. They realized China had become surprisingly hostile and that they needed to improve its defenses quickly, and in a big way.

Aukus is a big coup for Australia, giving them access to nuclear-powered submarines and long-range missiles with U.S. technology. This super-enables an otherwise pedestrian middle-ranking military capability of little consequence beyond its border.

In a way, all these nations are participating with the U.S. to strengthen their defenses. For the U.S. with Australia, it is a pretty big deal to share the crown jewels of its defense technology. But in the Big Picture, which is where we at 247Ag always seeks to go, it is a "one-off" trade and a crucial move in its wider efforts to keep China at bay.

We did not need to write this much on this issue, but it has been pressing "what if" concern for many because if this Black Swan took off, the financial sting would be more like a baseball bat to one's skull; difficult to recover from. It is our hope to give you a little respite from this worry. We will repeat, these shared concerns have a continuing buildup which only increases the risks to China if they go after Taiwan. The longer they wait, the greater the risk of a long, drawn-out confrontation on multiple fronts. This is not what China wants, nor can it afford it. Due to how extreme volumes of trade flowing through the South China Sea, all must realize that would come to an immediate end. As a nation, China would be on its knees in less than a year if those imports were cut off.

Our conclusion is that nothing will occur in 2024 in regard to this potential Black Swan event.

#13 – <u>Trends</u>: We believe in trends. We believe everything trends. People who identify trends and jump on them early generally do very well. My personal favorite is my father's saying that in a drought, all signs fail, and in wet weather, all signs fail. It took me over a decade to understand that. The saying that is more widely known today representative of his say is dry begets dry and wet begets wet. Most likely understand what that means. Explained more scientifically it means in dry weather, the lack of humidity in the air limits rain chances. In wet weather, the high humidity increases rain chances.

Another one would be a Bull market. The best Bull market is a demand led Bull market. It will have the most legs, or length, or duration to it.

Going back to weather, weather trends tend to stick. Again, dry begets dry and so on. Weather history shows it has many trends, like we overly detailed in #1, consisting of 9 pages. In context, much of section #2 was detailing the end results of the different weather cycles detailed in section #1.

The consistency of these weather cycles has been well documented over the past centuries. One would be foolish to ignore history. Those who learn from history are less likely to repeat the many common mistakes made in the past. What we work to do is extrapolate from that history, yield potential from other nations when these century-old global trends come into play.

As you have come to understand, we believe several of these very influential trends are already in play. The heat Brazil has seen these last 2-months is unprecedented in their climatological history. There drought was anticipated from the rising El Nino, enhanced by the Gleisberg Cycle, and further enhanced by the Tonga volcanic eruption of January 2022. If we have read this right, dry begets dry. Apply that to the current trend and Brazil will be in for a lot of hurt over the next few months.

This El Nino is scheduled to peak in January 2024, February at the latest. The effects of this weather event usually do not begin fading for several months after it peaks. The longer-term cycles laying over the top of this El Nino will not peak for another 18 to 30 months, enhancing the longevity of this El Nino into 2024.

We would like everyone to follow this analysis. If we are right, it will give us a good read on the summer weather probabilities in the U.S. For those who made it this far, give us a call in March 2024 and tell us how spot on we were, or were not. If you do, we will know you made it to the end of this read!

If this forecast is even halfway on point, then what we expect for this winter and early spring for the Midwest is normal to below normal precipitation, with normal to above normal temperatures. Such a scenario would maintain the current, below normal soil moisture conditions, leading to the conclusion for below trend yields for the Midwest in 2024.

#14 – <u>Twitter</u>: Go there or miss out! https://twitter.com/247dotAg

As you can tell by the length of this analysis, there is way too much going on in the world for a producer to gather and the fully comprehend, much less analyze all the data to gain a good perspective on how and when to price one's grain production, when you already have what most would call a 24-7 job already!

Most tell us they are too tired at the end of the day to sit down and research marketing information, let alone take time to read our MNUs, which only come weekly! That is why we suggest you do a quick check on our twitter feed. Most of our posts come with photos, so you can do a quick and efficient analysis of the information we are presenting. A quick glance can quickly tell you if you find it relevant to your marketing needs.

<u>Our twitter information is in addition to what we provide in our MNUs. Due to the volume of data we review, what we post on twitter might not find it in our weekly updates</u>.