October 2014, Volume 19, Number 5

THE FARMER'S EDGE

Hurley & Associates
Agri-Marketing Centers

Thoughts on New Technology in Agriculture: Unmanned Aircraft Systems

By Dr. Robi Stark

Drones, UAV (Unmanned Aerial Vehicle), RPAS (Remotely Piloted Aircraft Systems), UAS (Unmanned Aircraft Systems) … many names are used today to describe what is believed to be one of the most promising technologies or tools to be used in the context of precision agriculture. I prefer the term UAS, because it is really a system that consists not only of the platform but also of the sensor and additional components. We frequently meet UAS on the news, on the shelf (some dealerships are already offering them or a service that is based on them) and starring in every scientific, agriculture and farm show today. I recently attended two major conferences: The International Society of Precision Agriculture conference in Sacramento (scientific oriented) and the InfoAg Show in Saint Louis (business oriented); they were loaded with UAS activities - sessions, demonstrations and exhibitors.

So what is it all about? What are they good for? What can be done with them today? Where are we heading with this technology – will they be a game changer in modern agriculture?

I don't know if I have all the answers and I definitely have many questions. However, since I was asked to provide a short piece on this topic, I decided to approach the questions differently than a person involved directly in the agricultural world. I'm a remote sensing specialist. I'm not a farmer, not an agronomist and not a UAS manufacturer or a service provider. You might say that I'm an outsider (literally; I'm not even a U.S. citizen). However, with my vast experience working both for civil and defense markets, I was part of a think tank that had to develop applications and solutions while bridging the gap between users and technology.

So I would like to put aside for one moment the UAS and try to identify in which direction agriculture is moving today. In recent market research[1] the authors mapped the market drivers, mapped opportunities and, of course, mapped technologies. The report found profitability and enhancement in yield to be two of the most important drivers for the precision farming market, as the growing demand for food production is making farmers look for new ways

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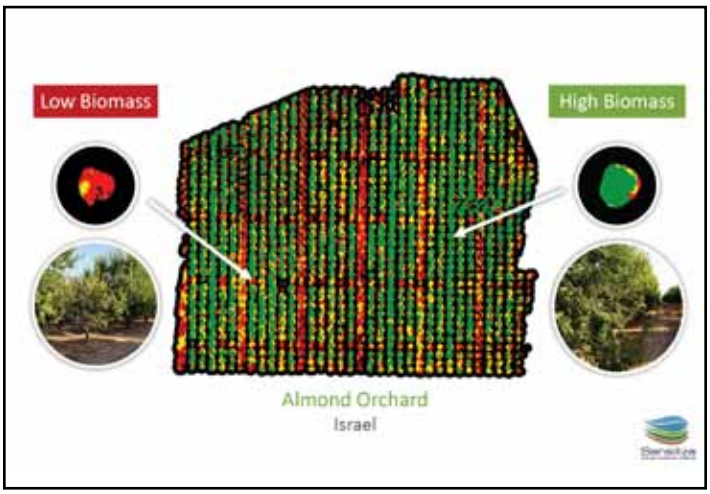

An almond orchard in Netivot, Israel. Sensilize was asked to map the biomass of the orchard and identify the areas that require additional attention. Thanks to Robin's (Sensilize sensor) high sensitivity and high resolution (up to 10 cm per pixel), we were able to not only locate the stressed trees but also locate what part of the tree is infected.

to enhance their production. This is only one side of the equation and one may look at it as the end of the process. When examining a farm operation today and while trying to see the process through the eyes of the farmer, what matters to him is firstly "de-risking" the growing process. It doesn't matter what you grow, whether it is soy, corn, rice, cotton, orchards, almonds etc., from the moment you plant the seed or the tree, you need to refer to this as an investment. If you follow the required steps, and the weather is not severe or other unexpected events occur, at the end of the day you will be able to get your expected higher yield and a fine profit, and fulfill your initial aims of yield enhancement and profitability.

So how does one go about doing this? How is it possible to achieve the above goals? In practice, naturally, not everything is ideal and there are variations within the fields that we can refer to as "inherent properties" such as topography, soil type, etc. These variations influence the "behavior" of the crops and therefore, it is necessary to have a better knowledge of the fields, recognize and understand the specific areas that require additional attention at any given time, and not to refer to the field as a whole. Understanding this should be addressed in some manner.

Here, technology comes to our aid. Variable Rate Technology (VRT) has evolved from the need to manage existing field variability. VRT refers to any technology that enables the variable application of inputs. VRT mounted on equipment allows the input application rates to be varied across fields in an attempt to, site-specifically, manage field variability. This type of strategy can reduce input usage and environmental impacts along with increasing efficiency and providing economic benefits.

To implement the above, one should have good and reliable prescription maps and implementation means (machinery). In my opinion, the gap is caused by insufficient input data; there is a need for tools that can map a field quickly at a convenient time (for the grower) and that can provide the specific agronomic site information required.

The solution relies upon two technologies that are available. Using them together in the correct and smart way will support the above needs. These technologies are remote sensing and unmanned aircraft systems (UAS). Remote sensing is a well-known technology that has been in existence for decades and is known as a tool to provide information about a target without any direct contact with it. This is how information is delivered today in the agriculture market by using space borne and existing airborne platforms. The "breakthrough" rests on the transformation which has been achieved by applying UAS, previously used in the military realm, to the civil domain. When compared to traditional airborne platforms, UAS has the ability to provide data at a higher temporal resolution, lower economic cost, avoid cloud obstructions, and provide more flexible data acquisition, while keeping high accuracy potential (Remondino et al., 2011)[2] . Table 1 summarizes the advantages of using an UAS.

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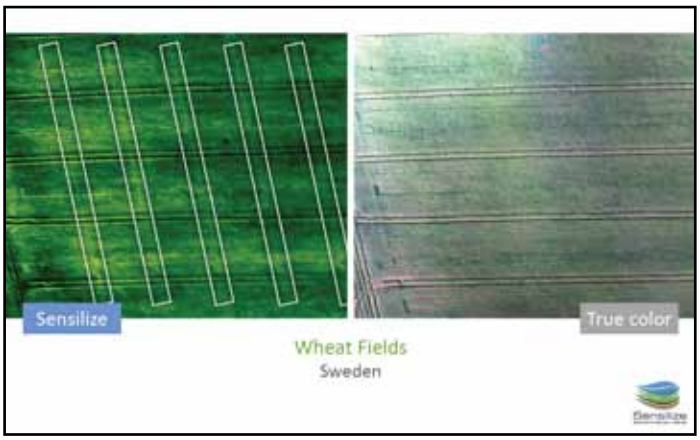

Wheat field in southern Sweden – we managed to map the whole drainage system (indicated by the elongated rectangles (left image) indicating the buried pipes). The amazing fact is that the pipes are buried in the soil at a depth of up to 50cm. It was achieved by mapping slight differences in the vegetation response or pigmentation caused by change in soil texture underneath the field.

A Robin camera mounted on a quad-copter hovering over a peanut field in the South of Israel.

The variety of platforms that exist, from rotorcraft to fixed-wing, their various sizes and their ability to carry various payloads will make them one of the future working tools of the industry. There is no doubt that this is one of the emerging technologies in precision farming which could be a game changer in the industry in anything related to acquiring updated data about the fields, crops, soil etc. According to a 2013 report by the AUVSI[3], precision agriculture will lead civil UAS adoption.

The applications in which a UAS can be used with agriculture are vast. New applications can be found every day. UAS can be used for mapping and scouting fields, management of spatial variability across management zones thus allowing proactive activity on time. They can be used for post application monitoring of agricultural activities such as determining germination rates, issues related to stress detection and identification of irrigation problems. They can also help with detection of disease symptoms at an early stage. They can be used for damage assessment, for insurance purposes and also as a tool to be used for farm maintenance conditions (boundaries, fences, buildings, drainage). They can be the farmers' eye in the sky that can monitor everything that is going on in the field.

Parameter	Satellite/ Airborne	UAS
Spatial resolution	• Typically in the range of 20-50 cm/pixel	• Ultra high, up to few cm/pixel
Temporal resolution	• Limited by the availability of aircraft platforms and orbit coverage patterns of satellites. • Unfavorable re-visit times	• Very flexible • Imagery is available on-demand • Short revisit time
Spectral resolution	• Limited; lacks the spectral resolution required for many quantitative remote sensing applications	• Narrowband multispectral imaging sensors
Minimum-area sale requirements	• 100's to 1000's km^2 need to be purchased per order	• Not relevant
Costs	• High operational costs.	• Low cost

Table 1 – Using a UAS in comparison to airborne and space-borne data sources.

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Thoughts on New Technology in Agriculture: Unmanned Aircraft Systems

By Dr. Robi Stark

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All this is very exciting. The options and opportunities are widespread. Several dealerships already offer to sell platforms, usually small quads (rotorcrafts) for self-use. A number of companies offer UAV based services. It is everywhere. I suggest slowing down a bit; I have a few guidelines that should be considered before using UAS in agriculture. I would go one step back and try to understand the applications and work backwards from that to see if a UAS can solve problems that arise. I would examine this from several directions: Platform – what is the suitable platform to be used over my areas? Is it suitable for agricultural use? What is the purpose for which I would like to use a UAS? What is the best UAS model to use? Once these questions are asked, in my opinion the following conclusions follow.

> Agriculture is a serious business. To be a farmer you have to be a professional and therefore when you provide services that have implications on the decision-making of farmers, crop advisors or managers you must do this on a professional level. Hence, the conclusion is that the business of operating UAS should be done only by professionals that have the knowledge to operate, maintain and service a UAS.

December 2013. Sensilize founders, Dr. Robi Stark and Dr. Yoav Zur are testing a SmartPlanes UAV platform in Sweden.

The second issue is the data that can be gathered using a UAS. To me, this is the most important and significant issue of all. Without having good data that can later be transformed into reliable updated agronomic information that can assist and enhance the knowledge of an Ag professional when a decision is required, there is no true justification for the use of a UAS. It is all about the data. We are not looking for "nice pictures."

Absence of good data will obstruct the creation of an historical database, to allow for follow up on changes during a specific growing cycle and variations between several seasons. The platform is just the vehicle to collect the data. People should start to examine the use of UAS from the data and sensor aspects. Today, only a few companies (such as the French Airinov[4] and the Israeli Sensilize[5]) offer a professional sensor (multispectral) that can truly collect data about soil and vegetation properties. It doesn't end with data collection. There is also a need to have fast, reliable smart data analysis and processing.

So, when one offers a platform, it is most important to understand what the sensor is and what can be achieved by using it. Issues such as sensitivity (which allows identification of minor changes in vegetation

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state), calibration (which allows comparison of data from different periods), resolution, both spatial (pixel size) and more important spectral, (allowing for the use of better algorithms and analysis), need to be taken into account. Airinov with their 4 bands sensor complies. More recently, Robin, Sensilize's seven band unique sensor (the only one available commercially in the market today) will allow, together with a reliable UAS platform, provision of meaningful information to support the customer's needs.

To conclude, UAS will become a significant tool available in the future toolbox. But one has to consider and look carefully not only at the platform. The sensor is more important. And yes, it should be based on a professional service provider.

[1] "Precision Farming Market By Technology, Components, Applications, Global Forecast & Analysis (2013 - 2018)" by MarketsandMarkets

[2] Remondino, F., Barazzetti, L., Nex, F., Scaioni, M., and D. Sarazzi (2011). UAV photogrammetry for mapping and 3d modelling - current status and future perspectives. UAV-g Conference on Unmanned Aerial Vehicle in Geomatics. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, XXXVIII-1/C22, Switzerland.

[3] "The Economic Impact of Unmanned Aircraft Systems Integration in the United States", AUVSI Report. March 2013.

[4] www.airinov.com

[5] www.sensilize.com

Dr. Robi Stark has over 20 years of experience in remote sensing and a solid track record, specializing in both the civil and the defense markets, developing applications, device algorithms as well as building and operating hyper-spectral systems.

After receiving his PhD from Ben Gurion University of the Negev, Israel, Dr. Stark joined Bar-Kal Systems Engineering as the business development manager, positioning Bar-Kal as the leading hyper spectral company in Israel. Dr. Stark played an integral role in the acquisition of Bar-Kal by Elbit Systems, a world leading defense contractor. In 2012 he left Elbit and together with his colleague Dr. Yoav Zur, founded Sensilize, a remote sensing based solution to the agribusiness industry.

Recently, Sensilize was chosen as one of the 12 most promising startups in Israel in the Agritech industry for 2013 and in September 2014 it was placed in third position at the Startup Open Israel competition finals. Dr. Stark can be reached at: robi@sensilize.com

"Autumn. It's crispness, it's anticipation, it's melancholia, it's cool breezes replacing summer's heat. It's long days in the field, a harvest festival when work's done, a cheering crowd in a football stadium, chrysanthemums punctuating a somber landscape. It's Halloween highjinx, pumpkins grinning toothy smiles, the crack of pecan pressed against pecan. It's the first curls of woodsmoke, fresh blisters from pushing a rake. And it's very, very welcome."

Good Housekeeping Magazine

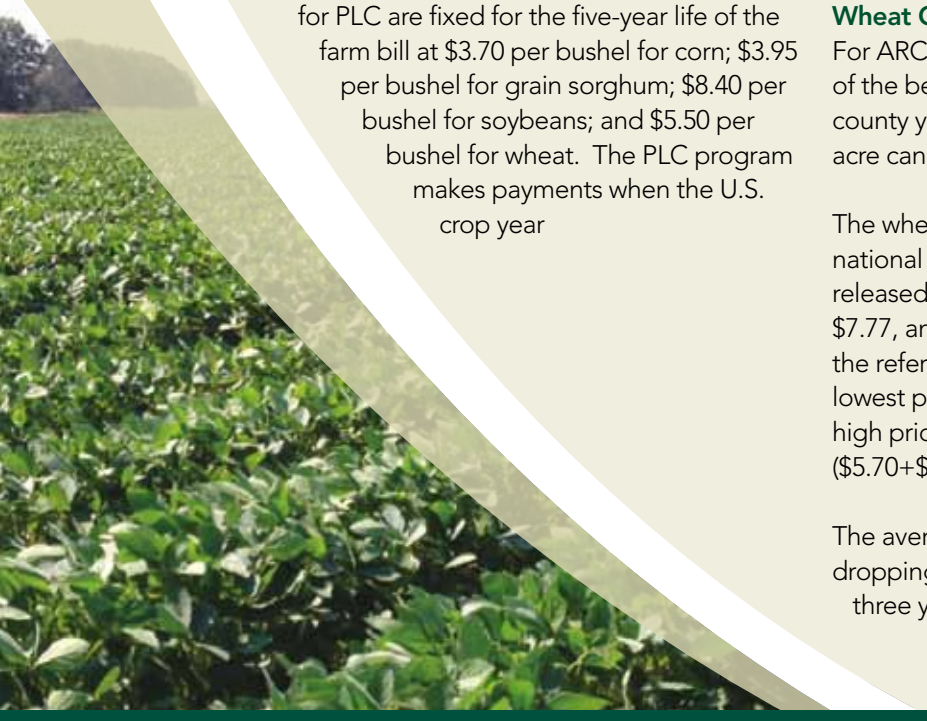
Farm Program Crops and the 2014 Farm Bill – The Future Comes Earlier Than Expected

By Ross Korves, Economic Policy Analyst

As the 2014 farm bill was debated, an ongoing question was – what happens when commodity prices return to reality with a big crop? When the Obama Administration began outlining the timeline for implementation, commodity program decisions for the farm bill were slated for late-2014 and early-2015. That is good timing for landowners and famers. There is plenty of time to study several more analyses and make good long-term decisions. Now, record crops in the Midwest are knocking on the door and $3.00 corn has arrived in most areas. Questions are being raised about PLC (Price Loss Coverage) and County ARC (Agriculture Risk Coverage). No need to panic. Additional good analyses are coming later in the year, but you can get started now thinking about choices.

Where They Came From

A good place to start is at the point where the two programs originated. PLC came from rice and peanuts producers where crop insurance is considered to be of limited value. Rice and peanuts have relatively high reference prices (compared to market prices) to recover some of the money lost with the end of direct payments. Corn, grain sorghum, soybeans and wheat had relatively less money to spend on PLC and have wide spreads between market prices and reference prices. Reference prices for PLC are fixed for the five-year life of the farm bill at $3.70 per bushel for corn; $3.95 per bushel for grain sorghum; $8.40 per bushel for soybeans; and $5.50 per bushel for wheat. The PLC program makes payments when the U.S. crop year average price is less than the crop's reference price. Actual yields in a year (individual farm, county, state or national) are not part of the payment calculation. Payments are made on 85 percent of base acreage for the crop. Farmers in the PLC program may also participate in the Supplemental Coverage Option (SCO) crop insurance program



ARC-CO is more like the crop insurance program that has worked relatively well for corn, grain sorghum, soybeans and wheat. ARC-CO is based on five-year Olympic averages of national market prices and county yields. If the national market price for the year is below the reference price for the PLC program, the reference price is used rather than the national average price. ARC-CO is a shallow loss program that pays when actual county revenue is between 76% and 86% of benchmark county revenue. The actual county yield is part of the actual county revenue calculation. Payments are made on 85 percent of base acreage.

Agriculture Risk Coverage - Individual Farm (ARC-IR) is a third program. It is farm specific and pays on 65 percent of the farm base. ARC-IC makes payments on the farm experience of all farm program crops on all farms within a state owned or operated by the same entity. That program is not included in this analysis.

Wheat County ARC

For ARC-CO the county revenue guarantee equals 86 percent of the benchmark revenue (average national price x average county yield per planted acre). Total payments per planted acre cannot exceed 10 percent of the benchmark revenue.

The wheat marketing year is June 1 to May 31 and the national average price for the 2013 wheat crop has been released. Wheat prices for 2009-13 are $4.87, $5.70, $7.24, $7.77, and $6.87. The 2009 price of $4.87 per bushel is below the reference price of $5.50, but the reference price is still the lowest price and thus is dropped from the calculation. The high price of $7.77 is also tossed. The calculation is then ($5.70+$7.24+$6.87)/3 = $6.60.

The average county yield is calculated the same way: dropping the high and low yield and averaging the remaining three years.

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The benchmark revenue is average yield times average price; and the county revenue guarantee is 86 percent of the benchmark. To simplify the explanation, this analysis assumes the actual yield is the same as the average yield of the three years. Then price is the only difference between the county revenue guarantee (86 percent of $6.60 per bushel or $5.68) and the actual revenue. The August 2014 USDA-WASDE has the midpoint of the 2014 crop marketing year price range at $6.30 per bushel.

If the WASDE price of $6.30 per bushel for the 2014 wheat crop is the actual average price and the county yield equal the five year average yield, there would be no payments under the PLC or the county ACR.

Some insights can be gained by looking ahead to the 2015 benchmark revenue guarantee. The 2010-13 prices are $5.50, $7.24, $7.77 and 6.87. Using the WASDE midpoint of $6.30 for the 2014 price, the benchmark price would be ($7.24+$6.87+$6.30)/3 = $6.80. That would be up $0.20 per bushel from the 2014 guarantee.

Looking still further ahead to the 2016 benchmark, the $5.50 price from 2010 is dropped from the analysis. If it is replaced by a price of $6.30 or lower for 2015, the benchmark price for 2016 would be unchanged. If the 2015 market price is higher than $6.30, the benchmark would be higher, unless it was above $7.77, which would be the highest of the five prices and would drop out of the calculation.

The benchmark prices will fall for 2017 and 2018 if current expected market prices hold, and the $7.00 plus wheat prices roll out of the calculations.

Corn County ARC

The ACR-CO for the 2014 corn crop is a bit uncertain now because the 2013 marketing year does not end until August 31. The national average market prices for the 2009-12 corn crops were $3.55, $5.18, $6.22 & $6.89 per bushel. The midpoint of USDA's estimate for the 2013 crop is $4.45 per bushel. The low price of $3.55 from 2009 is dropped as is the high price of $6.89 from 2012. The average price is then $5.28 (($5.18 + $6.22 + $4.45)/3). If yields are held constant, the revenue guarantee price would be 86 percent of $5.28 or $4.54 per bushel.

Nothing changes for the 2015 benchmark price using the midpoint of WASDE price range for the 2014 crop of $3.90 per bushel. The five prices are $5.18, $6.22, $6.89, $4.45, and $3.90. The low price is $3.90 from the 2014 crop and the high price is again $6.89 from 2012. The calculation is ($5.18 +$6.22 + $4.45)/3 = $5.28.

A calculation can be made for the 2016 average price included in the revenue benchmark using the WASDE price for the 2014 crop again for 2015. This calculation has considerable uncertainty in it. The five prices are $6.22 + $6.89 + $4.45 + $3.90+ $3.90. The low price is one of the $3.90s and the high price is again $6.89 from 2012. The calculation is ($6.22 + $4.45 + $3.90)/3 =$4.86 per bushel.

The average price in the benchmark revenue drops sharply in 2017 as the $6.22 from 2011 drops off. If yields continue to be good, they will offset some of the price decline. If you are more pessimistic than USDA, you can have a higher payment in the early years, but a lower guarantee in future years. Some policy analysts are using $3.60 per bushel for the season's average price for the corn crop harvested this fall. Keep in mind the payments cannot be more than 10 percent of the benchmark price.

Grain Sorghum County ARC

Grain sorghum has the same marketing year as corn. Prices for the 2009-12 crop marketing years were $3.22, $5.02, $5.99 and $6.33. The midpoint of the August WASDE price range for the 2013 marketing year was $4.25. The reference price of $3.95 per bushel replaces the $3.22 for 2009, but is still dropped as the low price year. The $6.33 price is dropped as the high price year. The calculation for 2014 is

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Change

By: David Hurley

The term "change" is all around us and especially in the world of agriculture. What a difference one crop year can make! As the combines roll bringing in this year's harvest, we hear reports of off the chart yields. This is on top of last year's good yield numbers and with South America's excellent harvest this past spring. This however is a good change. As producers, we want strong yields. It would go against our grain (no pun intended) to think otherwise!

Looking at the commodity markets, we see a few things happening. First, in the late 1980's an investor class in commodities arose. We call them "index funds." They buy commodities to hold them as assets. This group has grown in size ever since they came onto the scene. We also have a speculative group that trades commodities either way, up or down, known simply as the "spec funds." For the sake of this article, I will call them commodity investors. The commodity investors are exiting the markets in droves! The CRB index, which represents a basket of commodities, has fallen precipitously since the beginning of this year. Recently the CRB index broke lows that had held over the last few years. The bottom line is that investors are fleeing commodity investments due to their poor returns. I would expect this trend to continue to at least into the end of this year.

The next prominent happening in the world of agriculture is the rising U.S. Dollar. The U.S. Dollar index, the value of the U.S. Dollar vs. a handful of the world's strongest and most popular foreign currencies, has traded to its highest level in nearly four years. All else being equal, commodities tend to trade in opposite direction of the value of the U.S. Dollar. Pointing to this fact, note in 2008 and 2012 when most commodity prices were at extreme historical highs, the U.S Dollar index was at its lowest levels in modern history. There are reasons for this up surge in the USD value. Just turn on one of the more popular T.V. financial news programs and on a daily basis they will give you a number of reasons. I like to simplify things when it comes to markets.

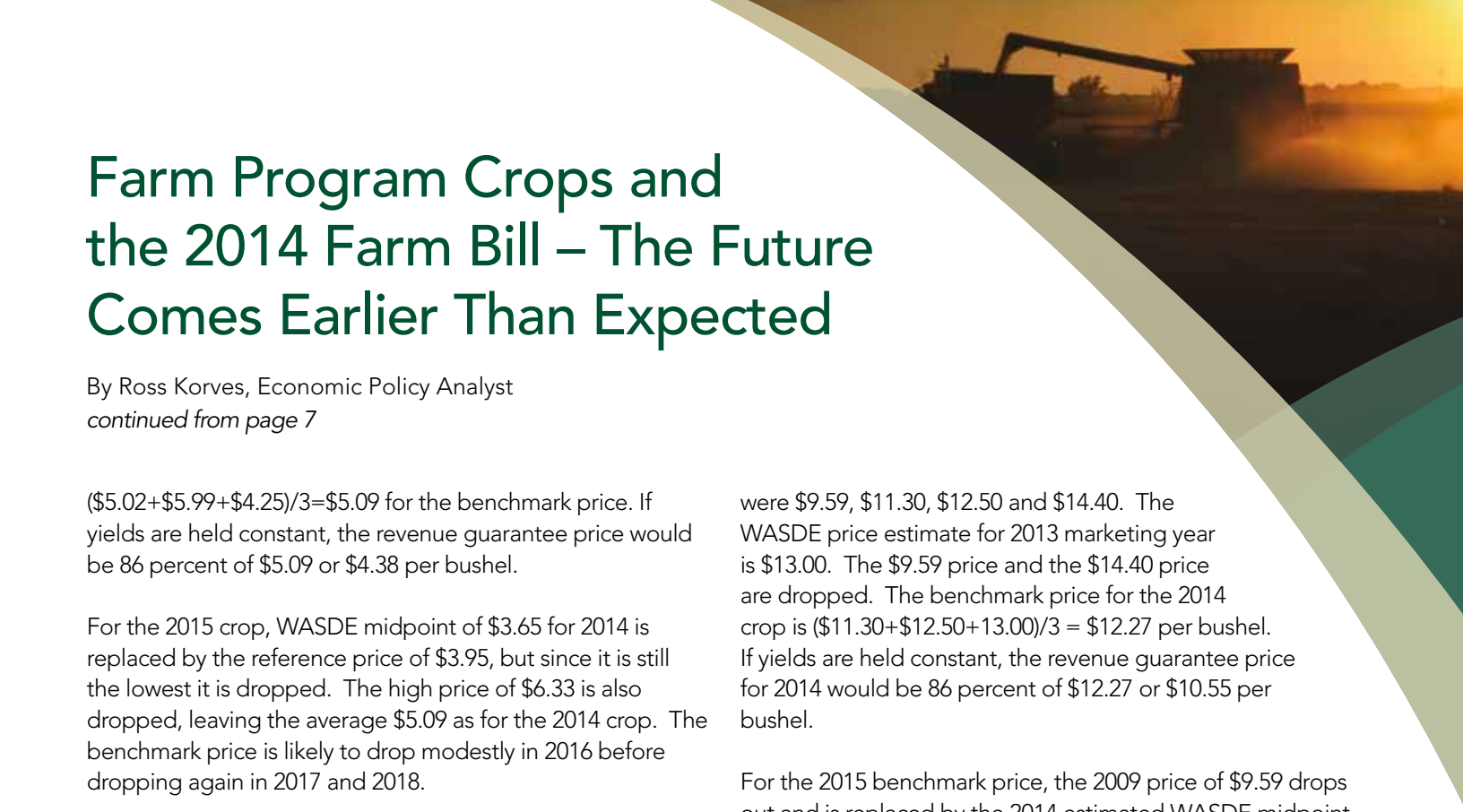
I like simplifying market directional movement into up, down, or sideways. Simply stated it would seem those who have assets still see the United States as the safest place on earth and wish to place those assets here. No longer abroad in places such as Europe... No longer in the emerging markets of Brazil, Russia, India, or China… No longer in the frontier markets of Africa or the Middle East… Safety has become paramount and the money is "coming home" so to speak. This is an uptrend that's likely just getting underway.

Those in agriculture have to deal with a myriad of "changes." Some change farmers see every day as they go to work producing the world's bounty of food. Other forces that bring change, such as commodity investors and foreign currency holders, are underneath the radar screen, stealthy, harder to detect.

Hurley & Associates was founded on the principle of knowing your operation's expenses and knowing what the markets offer in relation to those expenses. This allows us to incorporate tools from the futures and options markets as well as tools from the cash markets to build a solid market plan. That is a principle that will not change.

Setting floors to limit financial risk exposure is crucial. This will require using the tried and true play books of financial and market risk management. There will be opportunities and we must be ready to pounce when those opportunities present themselves. The market is in a state of change, going from a seven-year demand-driven bull market to a supply-driven bear market within the last six months. Change is hard but it's a lot easier to handle when we have a plan. A fitting comment for next year would be as Sergeant Phil Esterhaus used to say; "Hey, let's be careful out there!"

David Hurley is President of Hurley & Associates Inc. and has been a consultant out of the corporate office in Charleston, MO for over 23 years. David's long-time experience in working with clients and, particularly, in working with futures and options is beneficial to the company and our clients.



Farm Program Crops and the 2014 Farm Bill – The Future Comes Earlier Than Expected

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($5.02+$5.99+$4.25)/3=$5.09 for the benchmark price. If yields are held constant, the revenue guarantee price would be 86 percent of $5.09 or $4.38 per bushel.

For the 2015 crop, WASDE midpoint of $3.65 for 2014 is replaced by the reference price of $3.95, but since it is still the lowest it is dropped. The high price of $6.33 is also dropped, leaving the average $5.09 as for the 2014 crop. The benchmark price is likely to drop modestly in 2016 before dropping again in 2017 and 2018.

Grain sorghum has a lower market price than corn and a higher reference price under the PLC program ($3.95 versus $3.70). That plus the SCO crop insurance program may make the PLC program a better option for grain sorghum than for corn.

Soybeans County ARC

Soybeans also have the same marketing year as corn and grain sorghum. The average market prices for 2009-12 were $9.59, $11.30, $12.50 and $14.40. The WASDE price estimate for 2013 marketing year is $13.00. The $9.59 price and the $14.40 price are dropped. The benchmark price for the 2014 crop is ($11.30+$12.50+13.00)/3 = $12.27 per bushel. If yields are held constant, the revenue guarantee price for 2014 would be 86 percent of $12.27 or $10.55 per bushel.

For the 2015 benchmark price, the 2009 price of $9.59 drops out and is replaced by the 2014 estimated WASDE midpoint price of $10.35. That is also the low price for the five years and there is no change in the benchmark price. If the 2014 WASDE price is repeated in 2015, the benchmark price for 2016 would decline because the $11.35 price will be replaced by the $10.35 price from 2015. The benchmark price would continue to decline in 2017 and 2018 as the $12.50 and $13.00 prices drop out of the equation.

August 22, 2014

The Cost of Risk

By: Annie Huber

Consultants of the Brookings office recently had the opportunity to attend a workshop that focused on financial decisions for success, specifically in the Ag sector. It was a morning chocked-full of valuable information, excellent analysis, and thought-provoking statements. I packed my booklet full of good notes, but as always, there were a few points that really stood out. One of the statements made was in relation to "risk"- a word I am confident you have heard your Hurley consultant reference a time or two. We all have risk in our lives, whether it be personally or professionally, and we all make decisions on how we handle that risk.

Let's talk about the risks you encounter as producers in agriculture. Farming is one of the riskiest forms of business out there. You plant a seed in the ground, with hopes that it creates a plant, that produces a product, which generates an income to provide for your family. WHEW- talk about some faith! In that process there are many things that are out of your control; however, there are also steps you can take to create a better environment for success. For example, that seed you plant in the ground- you don't just place in the ground and forget about it. You give it fertilizer to make it grow and you spray chemicals to fight off the weeds. Some of you may

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The Cost of Risk

By: Annie Huber

tile to drain excess water away and some of you irrigate to give it the moisture it needs. You focus a significant amount of time, energy, and money on giving that plant the best chance it has to survive and produce a crop for you. But what happens next in that process?

If you are reading this, chances are you are a client of Hurley & Associates and so you are already ahead of the game in realizing the importance of the next step. You know that your job of producing the crop is vital … if you don't produce a crop, you don't have anything to generate income. However, if you produce a crop but don't have a plan to secure that revenue, you are missing half of your equation. Now that we have determined that the last half of the equation (marketing) is equally as important as the first half (production), what are you willing to do about it?

Often times in the market plans for our clients, we choose to use some sort of strategy that may involve a futures or options position. What comes along with those positions are two things: 1) an opportunity to manage risk and 2) a cost to do so. For some of you, the first part of that equation sounds great and the second half scares you to death. So let's think about this in reference to production. Would you choose to forego chemicals (your tools to manage weed risk) because there is a cost to do so? You may try to decrease that cost, but would you ever consider not using it at all? I'm pretty confident the answer to this question is hands-down "No." Why then do we let that be any different in the marketing portion of our operation?

One of the statements expressed in the workshop we attended, spoke with volume and goes hand in hand with the business we are all so passionate about. "While the cost to managing risk can be viewed as expensive, the cost to having risk can be deadly." Just think about that… It doesn't matter if we are talking about maintaining working smoke alarms in our home or an effective marketing plan in our farming operation. Those words are potent and true.

Now there is an endless world of choices behind that statement and a fine line of how much you choose to invest in your risk protection. Do you choose one $10 battery-operated smoke alarm or do you wire in a chain of alarms that talk to each other from room-to-room and activate a sprinkler system when set off? With respect to your farm operation, you should ask yourselves:

- How much risk can my business withstand financially?
- How much risk can I handle emotionally?
- How much am I willing to invest to know that I can lock in profits on a portion of my crop?
- How much of my crop do I need to protect to ensure I can farm again next year or for the next ten years?

The answers to those questions vary significantly across each of the operations we work with. Therefore, the marketing plans are different for each one of our farm families as well.

All in all, at the end of the day we are all here because we enjoy what we do. Let's be honest …you wouldn't be in this business if you didn't get a little rush of adrenaline from all those risks. I just ask that you don't leave it all to chance. As we all know, the business we are in isn't what it used to be. It is just that - a business. If you don't view it as that, you may eventually be working for someone who does. Don't let poor management, or lack thereof, prevent you from living the life that you love!

Annie Huber is a Farm Marketing Consultant with Hurley & Associates who works out of the out the Huron, SD office. She primarily serves corn, soybean and wheat farmers in central and eastern South Dakota.

U.S. Economy Leads an Anemic Global Effort to Overcome Doldrums

By: John A. Johnson

The world's economy generally lags that of the U.S. as anxiety on several fronts continues to bedevil investors. Unease over energy supplies seems to be creating the most global unrest as radical Muslims create havoc in the Middle East.

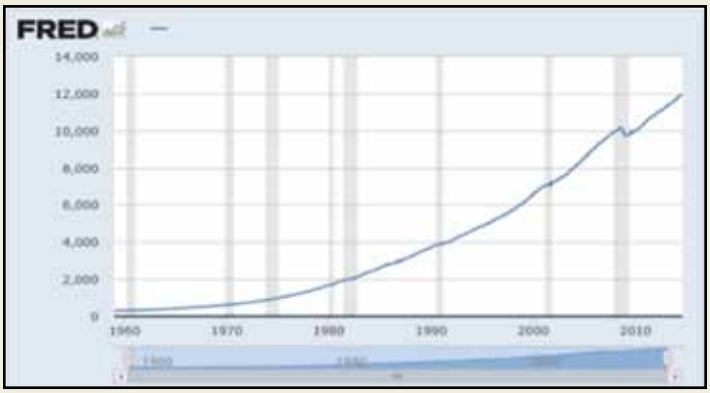
Russian and Ukrainian forces continue their standoff while the U.S. tries to gain momentum for economic sanctions against the Russians to discourage their perceived aggression in the area.

Meanwhile, in Hong Kong, rioters face police in the streets. They are demanding a more open democratic process for their elections. The protests stem from the fact that voters are only allowed to choose between government-picked candidates for various offices. Such protests in Hong Kong are not new, but seem to gather more support in each election cycle.

The European economy continues to struggle as the weaker southern European economies are still very problematic with high unemployment, stagnant GDP's and large government debts. The single currency idea, as in Euro, denies those struggling countries the ability to make monetary adjustments on an individual basis. The policies that are needed to jumpstart the PIIGS are not acceptable to strong economies such as Germany. At this time, the economically strong nations are in control of monetary policy.

In the U.S. economy, consumer spending rebounded toward the end of the summer as Americans bought more cars, electronics and furniture. Spending by the U.S. consumer rose by a seasonally adjusted 0.5% in August after no change in the prior month, the Commerce Department said Monday. This report was revised upward after the government had initially reported that spending fell in July. Sales of new cars and trucks helped fuel the gain in August rising to a recession high of 17.5 million vehicles on an annualized basis. Spending on other durable goods also jumped to a rate of 1.8%. Spending on services such as health care, personal items and haircuts helped post gains as well.

U.S. consumers enjoyed relief from the drop in gasoline prices, down 0.3% in August, as well as a halt to sharply rising food prices. July's 20-month high in individual savings of 5.6%, fell to 5.4% in August as spending rose faster than incomes.



Over the past year the PCE (Personal Consumption Expenditures) has risen 1.5%, down from a rise of 1.6% in the prior month and from the two-year peak of 1.7% in May. With inflation cooling off a bit, the Federal Reserve is likely to wait longer before it raises short-term interest rates for the first time since 2008. Meanwhile, inflation as gauged by the PCE price index was flat in August, though the core rate excluding food and energy edged up 0.1%.
The receding inflationary pressure is giving consumers more money to spend in real terms. Much of the relief that consumers are feeling from inflation is due to the world-wide rise in production of our basic commodities. Many new oil discoveries, along with improved technology to allow utilization of that resource, along with a huge global crop of corn, wheat and rice is making many of the most basic necessities much more affordable to the consumers of the world. Less price pressure from food and energy will do much to improve the economic outlook for us all, with the exception of our farm community.

HURLEY & ASSOCIATES
Agri-Marketing Centers

415 E. Marshall
PO Box 471
Charleston, MO 63834

Phone: (573) 683-3371
Toll Free: 1-800-524-0342
Fax: 573-683-4407
email: mail@hurleyandassociates.com
www.hurleyandassociates.com

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