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OHIO STATE UNIVERSITY EXTENSION

COSHOCTON COUNTY AGRICULTURE & NATURAL RESOURCES

September 30, 2020 Issue

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Harvest Outlook to be held on October 1 at 8:30 a.m.
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You Can't Starve Profit Into A Cow Or A Hay Field!
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Demand for Local Beef Remains Strong
The Pursuit of Happiness

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Hello, Coshocton County! It is a wonderful time in Coshocton County with corn silage harvest nearing completion, wheat being planted, and soybean, grape, and pumpkin harvest underway. It looks like our weather is setting up nicely for a good harvest season

The virtual Farm Science Review was a great success last week. Just a reminder that you still can access recordings of the field demonstrations and the hundreds of talks which were shared at the review at: https://fsr.osu.edu/ Barry Ward also released hist first look at our 2021 Crop Budgets and I have included them with today's newsletter.

Have a good and safe week!

Sincerely,

David L. Marrison

Coshocton County OSU Extension ANR Educator

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Decent Harvest Weather Likely to Continue into October

By: Aaron Wilson, OSU Extension
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2020-33/decent-harvest-weather-likely-continue-october

Ohio's weather has been dominated by high pressure of late, bringing with it a pattern of warm, sunny days and cool nights for the last couple of weeks. During this time, little to no rain has fallen across the state. As daylight hours are growing shorter, evaporation is not as strong as it is during the summer. Therefore, drought conditions are not rapidly expanding across Ohio. However, persistent dryness is evident across areas of northwest, southwest, and far northeast Ohio, where soils remain dry. The latest U.S. Drought Monitor indicates about 18% of Ohio is still experiencing abnormally dry to moderate drought conditions (Fig. 1). For more information on recent climate conditions and impacts, check out the latest Hydro-Climate Assessment from the State Climate Office of Ohio.

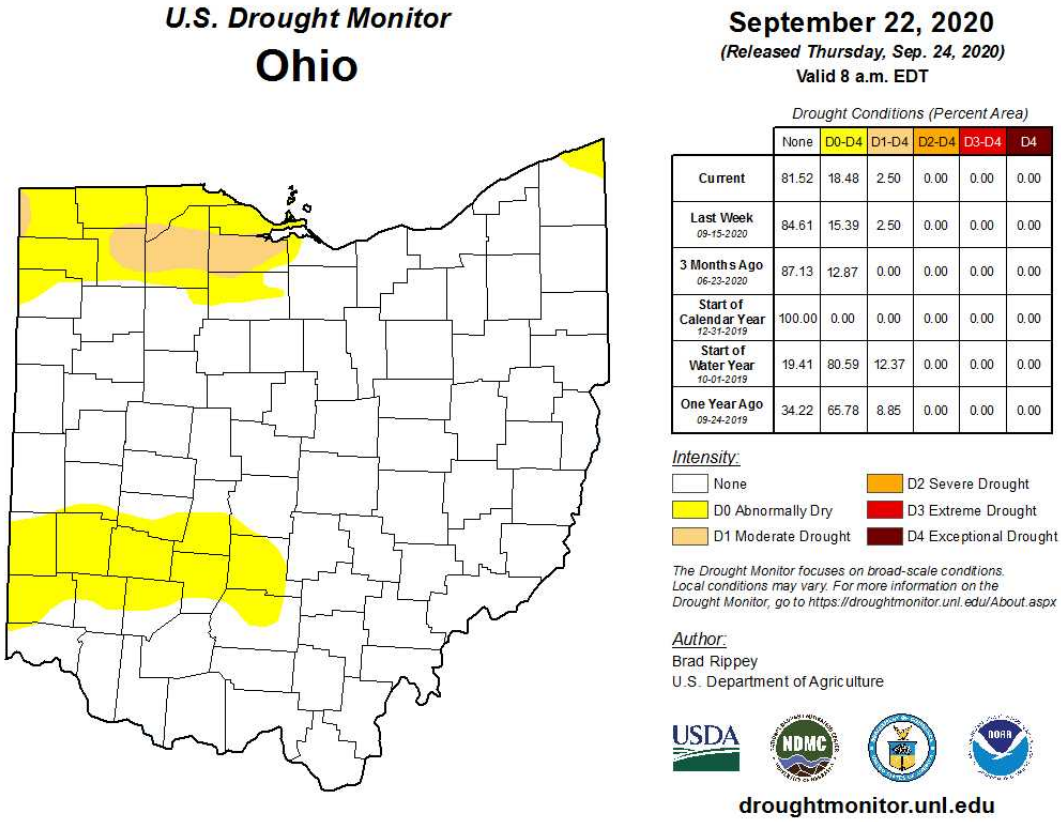

Figure 1: U.S. Drought Monitor for Ohio as reported on Thursday September 22, 2020.

Forecast

The first in a series of cold fronts is crossing Ohio on this Monday evening, with light to moderate rain showers. Behind this front, cooler temperatures will settle into the region for Tuesday and Wednesday with highs mainly in the 60s and lows in the 40s. A secondary cold front will move through late Wednesday, which will drop temperatures below average for this time of the year. Highs for Thursday through Sunday are expected to be in the mid-50s to mid-60s with lows in the mid-30s to low-40s. There could be a few spotty afternoon showers around during this period as well, especially across northern Ohio, but we are not expecting heavy rainfall totals. The Weather Prediction Center is currently forecasting 0.25-0.75" of rain across most of Ohio for the next 7 days, with slightly greater totals in the northeast (Fig. 2). Though widespread freeze conditions (32°F or colder) are not expected, scattered frosts are possible for the end of the week and over the weekend, especially in low-lying areas.

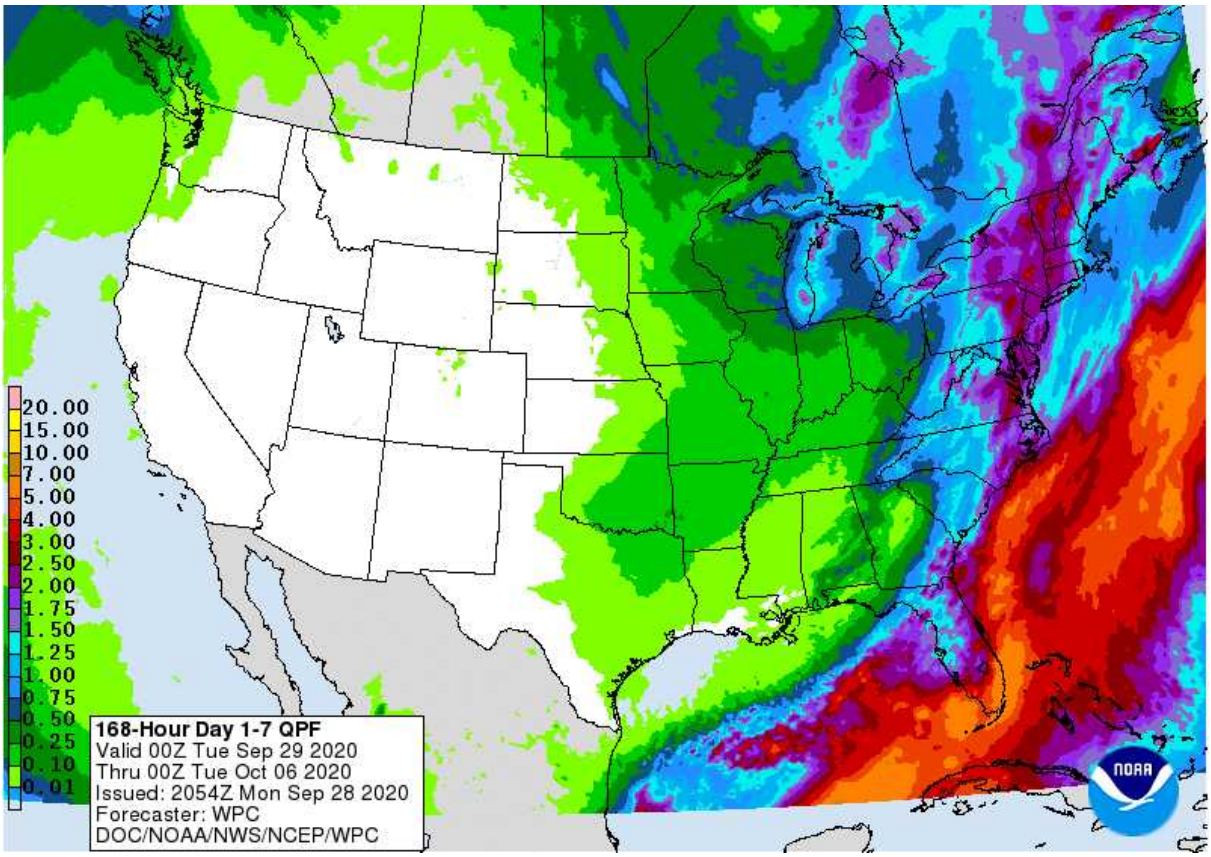

Figure 2: Forecast precipitation for the next 7 days. Valid from 8 pm Monday September 24, 2020 through 8 pm Monday October 6, 2020. Figure from the Weather Prediction Center.

The latest NOAA/NWS/Climate Prediction Center outlook for the 8-14 day period (October 6 - 12) and the 16-Day Rainfall Outlook from NOAA/NWS/Ohio River Forecast Center show near average temperatures and below average precipitation are likely (Fig. 3). Normal highs during the period are in the mid-60s to low-70s, lows in the mid-40s to low-50s, with about 0.75" of rainfall per week.

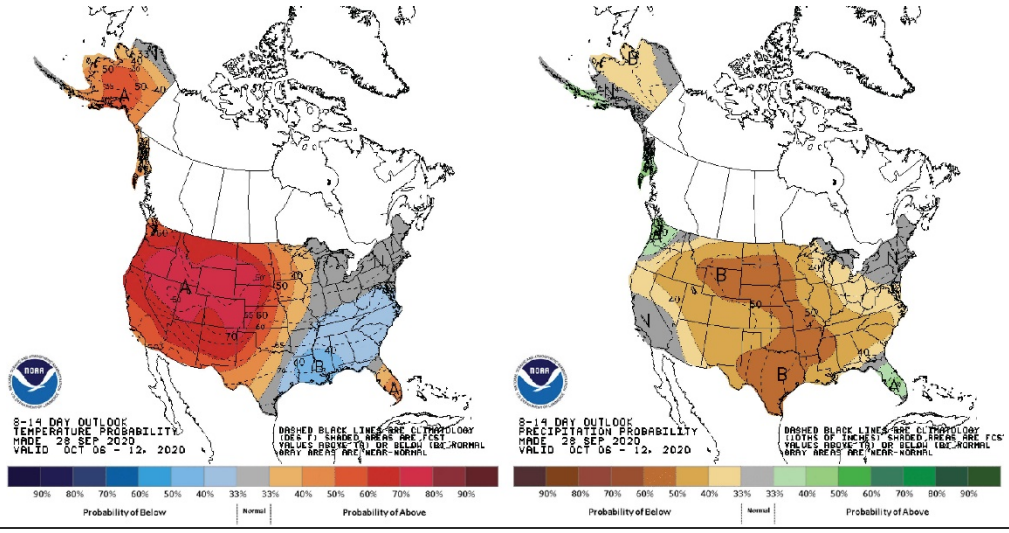

Figure 3: Climate Prediction Center 8-14 Day Outlook valid for October 6 - 12, 2020 for left) temperatures and right) precipitation. Colors represent the probability of below, normal, or above normal conditions.

Harvest Outlook to be held on October 1 at 8:30 a.m.

by: Ben Brown, Assistant Professor of Professional Practice in Agriculture Risk Management,
Source: https://u.osu.edu/ohioagmanager/2020/09/29/harvest-outlook-to-be-held-on-october-1-at-830-a-m/

Make plans to join OSU Extension for a Harvest Outlook covering climate and grain markets October 1, 2020 at 8:30 a.m. EST. Atmospheric specialist, Aaron Wilson, with the Byrd Polar and Climate Research Center at The Ohio State University will cover upcoming weather as harvest starts across the state and an outlook on climate for the quarter. Assistant Professor of Professional Practice in Agriculture Risk Management, Ben Brown, will cover the fourth quarter available grain stocks of corn and soybeans. The United States Department of Agriculture releases monthly forecasts of grain supply and demand, but the quarterly grain stocks reports provide performance checks. The September report serves as the conclusion to the previous marketing year, but also provides insight to current demand. Information and registration to this free webinar can be found at go.osu.edu/2020agoutlook.

Farm Office Live Scheduled for October 7, 2020

Join the OSU Extension Farm Office team for discussions on the latest agricultural law and farm management news. The next session will be held on October 7, 2020 8:00 - 9:30 a.m.

Farm Office Live will be back for a review of the latest on round two of the Coronavirus Food Assistance Program (CFAP), 2020 crop enterprise budgets, new custom rates and Western Ohio Cropland Values and Cash Rents survey summary, Ohio's COVID-19 immunity legislation, and other current issues in farm management. Join our experts for quick presentations and Q & A. Go to https://farmoffice.osu.edu/farmofficelive to register or view past webinars and PowerPoint slides.

2021 Crop Enterprises Released

At last week's Farm Science Review, Barry Ward (Director of the OSU Income Tax Schools and Leader, Production Business Management for OSU Extension) released the initial Corn, Soybean and Wheat Budgets for 2021. These budgets are attached to today's newsletter and past budgets can be found at: https://farmoffice.osu.edu/farm-mgt-tools/farm-budgets

You Can't Starve Profit Into a Cow or a Hay Field

By: Stan Smith, OSU Extension PA, Fairfield County (originally published in The Ohio Cattleman)

Have you fertilized your hay fields yet this year? In the spring issue of the Ohio Cattleman we suggested once first cutting is harvested it's a good time for an annual fertilizer application. If that opportunity was missed, fall is another opportune time to replace soil nutrients removed during hay harvest.

Considering we may have experienced lower than hoped for yields throughout parts of Ohio, it adds insult to injury that in some cases Mother Nature forced us to harvest mature, rained on, or otherwise poor quality first cutting hay this spring. Regardless, that hay still took with it lots of soil nutrients.

Fact is, each ton of hay that's removed from a field during the harvest process takes with it roughly 12 pounds of P2O5 (phosphorus) and 49 pounds of K2O (potash). That's regardless the calendar date and with little regard for quality of the forage that's harvested. In fact, many are surprised to learn since corn grain only removes about 0.20 pound of K2O per bushel, it would take a yield of over 600 bushels of corn to remove the same amount of potash that an average Ohio hay yield removes annually!
To maintain productivity and plant health, fertility that's removed needs to be replaced. Since P and K move slowly through the soil profile – perhaps only an inch or two a year – it's probably best that what's removed is replaced annually. And fall is an excellent time to replace those nutrients removed this year in the form of harvested hay.

Because nearly all the phosphorus sources presently available include some nitrogen, when fertilizing in the fall we also enjoy the benefit to grass based hay fields from the nitrogen that comes along with phosphorus based fertilizers. Nitrogen, when applied in mid to late fall after the top growth of cool season grasses begins to stop, helps store energy in the roots preparing the plant for winter. Enhanced fall root growth aids in the uptake of water and nutrients and carbohydrate buildup in the stem bases, promoting winter survival and spring regrowth.

The basics of fertilizing permanent hay fields are simple:

- Soil Test, always soil test! Fertilizer is too expensive to apply if it's not a yield limiting factor. If we don't know what we presently have, we can't possibly know what we might need! Contact your local OSU Extension office or fertilizer dealer for help finding a soil testing lab.
- Read the soil test report carefully or get help reading it. I'd discourage anyone from blindly accepting the fertilizer recommendations that sometimes are returned along with a soil test report. I'm not even certain I believe the little graphs sometimes found on the soil test results which indicate a sample might be high, medium or low in a certain nutrient. What I was told by one of Ohio's labs when I asked how their recommendations are generated is that after they establish the nutrient levels in the soil through their laboratory procedures, the recommendations are typically generated based on the opinions of the company who might have submitted the sample for the land owner. This means, unless you send in the sample yourself, you may get back a recommendation based on data other than what Ohio State and other Midwest university research might suggest is appropriate as published in the new OSU Extension Bulletin E-2567, Tri-State Fertilizer Recommendations. Ask your local Agriculture Educator for help in developing a recommendation if you have questions.

- If one insists on fertilizing without the benefit of knowing the present fertility levels of a hay field, or if you know your present fertility levels meet or slightly exceed critical minimum levels, then it's prudent to base fertilizer application rates on actual or expected crop removal. As was mentioned earlier, each ton of hay removed takes with it 12 pounds of P_2O_5 and 49 pounds of K_2O. No matter how you slice it, that's a ratio of roughly 1 to 4, phosphorus to potash. Without benefit of a soil test to tell us otherwise, fertility needs to be replaced in that ratio to fields where hay has been harvested.

To put it into a little different perspective, consider the average hay yield in Ohio is, and has been for decades something less than 3 tons per acre per year. At roughly a 1 to 4 ratio, 12 and 49 pounds respectively, multiplied times perhaps 3 tons of crop removal, it equals 36 pounds of P_2O_5 and 147 pounds of K_2O removed annually per acre.

To recap . . . you can't starve a profit into any animal or crop, sometime before winter dormancy is an excellent time to apply fertilizer to a hay field, and one ton of hay removes P and K in a ratio of roughly 1 to 4, or 12 pounds P_2O_5 and 49 pounds of K_2O. To maintain fertility, health and the productivity of your forages, P and K must be replaced with either fertilizer or manure nutrients . . . in a ratio of 1 to 4 or, 12 pounds of P_2O_5 and 49 pounds of K_2O, per ton of hay removed!

Alternative Forages

By Christine Gelley, Monroe County Extension

Alternative grazing and hay strategies have been gaining attention in recent years with the weather struggles and forage shortages that have caused issues throughout the United States. The reference to "alternative forages" pertains to out of the box ideas of what is considered normal. In Ohio, cool-season perennial grass-clover mixes are the normal forage offered to livestock in pastures and as hay. There are many other types of forage that can incorporated to existing systems to extend the grazing season and allow for a wider harvest season of wet forages.

Small grains (oats, rye, barley, wheat, etc.) and brassicas (turnips, radishes, rapeseed, etc.) are some of the easiest to incorporate as late-fall and winter feed. Warm-season annual and perennial forages can also be helpful in the mid-summer months to graze or harvest when conditions are hot, dry, and cool-season forages have reduced growth.

In the most recent episode of "Forage Focus" on YouTube, OSU Extension addressed how creating alternative forage plans can strengthen livestock operations. Reducing days livestock consume stored feed and increasing farm flexibility helps build resiliency in times of uncertainty and change. We shared information regarding the benefits and management of warm-season perennial grasses, warm-season annual grasses, small grains and brassicas. The video can be viewed online at: https://u.osu.edu/beef/2020/09/23/forage-focus-creating-alternative-forage-plans/.

There were also multiple talks offered during virtual Farm Science Review about alternative grazing and hay strategies that are still accessible at https://fsr.osu.edu. Go to the main page, sign up for My Show Planner with your email address, and gain access to all the free programs offered last week. Search for "Gwynne Forage and Grazing Education" and you will find the whole schedule of presentations to view at your convenience.

If you do not have internet access to view the presentations, please reach out to the OSU Extension Office for additional information on the topics of your interest. Contact Christine Gelley at 740-732-5681 or gelley.2@osu.edu.

Demand for Local Beef Remains Strong

By: Garth Ruff, Field Specialist, Beef Cattle, OSU Extension (originally published in the Ohio Farmer)
Source: https://u.osu.edu/beef/2020/09/23/demand-for-local-beef-remains-strong/#more-9499

Growing Demand

While 2020 has certainly been a challenging year for agriculture and especially those in the livestock business. However, direct to consumer meat sales have been a bright spot as a result of increased demand. Although a small percentage in the grand scheme of things, direct marketing of farm products has become a more popular route of merchandising livestock. For those with an established direct to consumer meats sales business, COVID-19 and the resulting reduction in national packing capacity, and limited meat supplies in the retail case, created the perfect storm for expansion of niche market opportunities.

The increased demand and volume of local beef, pork and other meats has also led to record throughput and demand for services at the small meat processors across the country. As I visit with the local meat processors across Ohio, many of them are taking harvest reservations well into mid-2021 and several processors have already set some beef appointments into 2022.

Follow the Rules

As new producers venture into direct marketing there are some things to keep in mind, particularly when it comes to food safety and the regulations that pertain to selling meat.

While some regulations may vary from state to state, generally in order to sell meat, it has to come from an animal that harvested in an inspected meat processing facility. A meat processor in Ohio will either fall under federal inspection by the United States Department of Agriculture (USDA), or state inspection by the Ohio Department of Agriculture (ODA). The biggest difference between the two inspection agencies is that USDA inspected product can enter interstate commerce, meaning it can be sold across state lines.

In Ohio there are also custom exempt meat processing plants. Custom exempt plants process meat for the producer's own use, the meat cannot be resold. These products will be labeled "Not for Sale".

When it comes to the storage and distribution of meat products, be aware that additional licenses may be required to ensure safe handling practices. For more information on Ohio license requirements, "Selling Food from the Farm: When do you need a license?" under the Ag Law tab at https://farmoffice.osu.edu

Understand Product Pricing

Regardless of how much you charge for a carcass or a cut of meat you must know two things: 1) your breakeven price; 2) how much money (profit) you want to make.

To determine a breakeven price, one must know their cost of production the below are potential factors that should be considered as production expenses on a per head basis. Don't under sell the value of practices that make your product unique. Keep in mind that most locally processed beef is not graded, be careful in how you advertise the quality of your product. Ungraded beef should not be promoted as "Choice", "Prime", or "Certified Angus Beef".

Cost of Production

Cost of Animal – If the animal was purchased, what did it cost? If home raised, what did it cost to keep a cow for a year?
+ Feed – Value or cost of feedstuffs and mineral that were either produced and purchased.
+ Veterinary – Any vaccinations, dewormer, other medications, veterinary bills.
+ Bedding and Supplies
+ Transport – Fuel, wear and tear on truck and trailer.
+ Advertising – Cost of acquiring a customer.
+ Value of Your Time – Value of time invested on average per head.
= Breakeven cost per head

Once you have calculated a breakeven cost add you desired profit per head and divide that total by the hanging carcass weight to determine a price per pound.

(Breakeven + Profit) / Carcass weight = price per pound.

Profit margin can be flat rate per head or a percentage of the cost of production. Determine a margin that suits your enterprise and your customer.

Often, the customer will want an idea of how much meat they will be paying for. Carcass weight can be estimated prior to harvest by estimating dressing percentage. Dressing percentage = (Carcass Weight/Live Weight) *100.

Grain fed, non-dairy type, steers and heifers will dress around 62% and closer to 59% for a dairy steer. Dressing percentage can vary depending on gut fill, muscling, fatness and cleanliness of the hide.

To determine prices for individual, retail beef cuts, the formula to calculate cost of production is similar, however the cost of harvesting, processing, packaging, and labeling the product must be accounted for. Time spent marketing and advertising can be considerably higher when marketing individual cuts.

When calculating the average price per pound of individual cuts, one must consider cutting yield. Cutting yield = (Pounds of retail product/carcass weight) *100. Cutting yield will be influenced by boneless vs. bone in product, muscling, amount of fat needed to be trimmed, and amount of fat in ground beef.

Summary

Direct marketing of beef to the local consumer can be a way to add value to your fed cattle enterprise, when done correctly. Continue to work with and develop a relationship with your local meat processor as we move into the coming year. Produce a beef product that has a quality eating experience and you will be sure to have return customers.

The Pursuit of Happiness

By: Emily Marrison, Extension Educator, Family and Consumer Sciences
Originally Published for Coshocton Tribune

Decades ago, I watched a countywide high school production of “You’re a Good Man Charlie Brown.” One of my favorite songs from that musical is “Happiness.” Maybe it’s because of the line “Happiness is two kinds of ice cream.” Though that is utterly true, I think the end of the song probably touches more people. “For happiness is anyone and anything at all that's loved by you.”

Last week I participated in a virtual convention for our National Extension Association of Family and Consumer Sciences. Our keynote speaker, Dr. Dave Schramm, gave us a few “Happy Hacks.” He had some great advice to share that I wanted to pass along to you today.

As a family life educator, he is a big fan of the power of positivity. I’ll make a disclaimer here that I don’t think being positive is the answer to all the world’s problems. However, I was introduced to the writing of Norman Vincent Peale as a teenager, and I do believe that our minds are powerful tools and weapons.

Dr. Schramm shared that research has found humans have three needs: safety , satisfaction, and connection. He quoted some work from psychologist Martin Seligman about three types, or levels, of happiness. The first kind of happiness is the pleasant life. It is mostly focused on yourself, experiencing positive emotions through seeking enjoyment and thrill. The second type of happiness gives you the good life as you assess your strengths and use them fully. These happy people talk about being in the flow or the zone with work or sports. The final type of happiness is a meaningful life. This is when our happiness does not come from putting ourselves first, but in serving others. It is a life filled with purpose.

He also shared University of California research about three factors that contribute to our happiness. Half of our happiness is determined by our genetic set point. Some people are naturally a little more Tigger, while some are a little more Eeyore. Only 10 percent of a person's happiness is influenced by outside circumstances like our job, how much money we have, what possessions we have, or the condition of our marriage. Forty percent of our happiness comes from intentional activity including both our thoughts and actions. Many people spend way too much time focusing on that 10 percent portion rather than the 40 percent.

Dr. Dave encouraged us to focus on the 40 percent that we can control with some Happy Hacks. Smile more. Seek out opportunities for random acts of kindness. Give thanks. Cherish your friends. They may sound simple, but research has demonstrated that these thoughts and actions do make a difference in our health and wellness.

In fact, he presented research from Brigham Young University that examined the top predictors for how long and how well we will live. These included things like clean air, medication for high blood pressure, being lean versus overweight, having cardiac rehab, getting a flu vaccine, exercise, quit drinking, and quit smoking. However, the top two factors were social determinants: close relationships and social integration.

Loneliness raises blood pressure to the point where the risk of heart attack and stroke is doubled – emotional isolation is a more dangerous health risk than smoking or high blood pressure. We agreed during the conference that the term "physical distancing" is more appropriate than "social distancing." In our current environment, we need to stay socially connected. Who has been on your mind you will write, call, or text today?

Today I'll leave you with this quote from Helen Keller, "True happiness is not attained through self-gratification, but through fidelity to a worthy purpose."

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CORN PRODUCTION BUDGET- 2021

Conservation Tillage Practices: N-Source - NH3

Reflects 2000 acres, Conservation Tillage Corn/No-Till RR Soybeans

Updated: **9//2020**

ITEM	EXPLANATION			YOUR PROD. NUMBERS	PRICE PER UNIT		YIELD (bu/A)[1] 140	175	210	YOUR BUDGET 215
RECEIPTS										
Corn[1]					***$3.70***	/bu	518.30	647.87	777.44	**795.50**
ARC/PLC Payment (paid October 2022)[2]							12.75	12.75	12.75	**12.75**
Crop Insurance Indemnity							0.00	0.00	0.00	**0.00**
Ad Hoc Payment							0.00	0.00	0.00	**0.00**
Grower or Market Premium							0.00	0.00	0.00	**0.00**
TOTAL RECEIPTS							531.05	660.62	790.19	**808.25**
VARIABLE COSTS										
Seed (kernels)[3]	28000	32000	34000	***34000***	***$3.25***	/1000	91.00	104.00	110.50	**110.50**
	Seed Cost Per Bag				***$260.00***	/bag				
Fertilizer[4]										
Starter Fertilizer							0.00	0.00	0.00	**0.00**
N (lbs.)	168.0	186.0	206.0	***206.0***	***0.28***	/lb	57.12	62.17	67.78	**67.78**
P_2O_5(lbs)	49.0	61.3	73.5	***75.3***	***0.41***	/lb	20.27	25.34	30.41	**31.11**
K_2O(lbs)	28.0	35.0	42.0	***43.0***	***0.27***	/lb	7.59	9.48	11.38	**11.65**
Lime(ton)		0.25		***0.25***	***25***	/ton	6.25	6.25	6.25	**6.25**
Chemicals[5] Herbicide							46.22	46.22	46.22	**46.22**
Fungicide							0.00	0.00	0.00	**0.00**
Insecticide							0.00	0.00	0.00	**0.00**
Drying[6]	***20.0*** % moisture at harvest			***0.039***	/cent/bu/point		27.32	34.14	40.97	**41.93**
Hauling[7]	***$0.155*** /per bushel						21.71	27.14	32.57	**33.33**
Fuel, Oil, Grease[8]							11.00	11.00	11.00	**11.00**
Repairs[9]							25.54	25.54	25.54	**25.54**
Crop Insurance[10]							11.00	13.00	15.00	**15.00**
Miscellaneous[11]							5.10	5.10	5.10	**5.10**
Hired Custom Work[12]							22.20	22.20	22.20	**22.20**
Hired Labor[13]							0.00	0.00	0.00	**0.00**
Int. on Oper. Cap.[14]	***7*** mo.				***4.00%***		6.82	7.40	7.85	**7.87**
TOTAL VARIABLE COSTS			**-Per Acre**				359.14	398.99	432.77	**435.47**
			-Per Bushel				2.56	2.28	2.06	**2.03**
FIXED COSTS										
Labor Charge[15]	***2.25*** hours				***17.00***	/hr	38.25	38.25	38.25	**38.25**
Management Charge[16]	***5%*** of gross revenue						26.55	33.03	39.51	40.41
Mach. And Equip. Charge[17]							75.22	75.22	75.22	75.22
Land Charge[18]	Rent						155.00	195.00	242.00	**242.00**
Miscellaneous[19]							20.50	20.50	20.50	**20.50**
TOTAL FIXED COSTS							315.52	362.00	415.48	**416.38**
TOTAL COSTS			**-Per Acre**				674.66	760.99	848.25	**851.85**
			-Per Bushel				4.82	4.35	4.04	**3.96**
RETURN ABOVE VARIABLE COSTS[20]							171.91	261.63	357.43	**372.78**
RETURN ABOVE VARIABLE AND LAND COSTS							16.91	66.63	115.43	**130.78**
RETURN ABOVE TOTAL COSTS							-143.61	-100.37	-58.05	**-43.60**
RETURN TO LAND							11.39	94.63	183.95	**198.40**
RETURN TO LABOR AND MANAGEMENT							-78.81	-29.09	19.71	**35.06**
RETURN TO LAND, LABOR AND MANAGEMENT							76.19	165.91	261.71	**277.06**

Values highlighted in gold may be changed to assist in computing "Your Budget" Column using macros embeded within the spreadsheet.

Values highlighted in light blue are cells embedded with macros and will be calculated for the user based on data entered. These cells may be input manually, but macros will be overwritten!

Values highlighted in gray are stand alone cells that require direct input from the user.

[1] Yield is based on Ohio NASS 20 Year Trend Yield for Ohio plus and minus 20%.
Price is based on current CME December Futures less $0.20 basis.

[2] Commodity Program Payment estimates were calculated by using a 40 year trend estimate for Ohio commodity specific yields and the 2021/2022 marketing year average price: USDA baseline: ARC-CO, ARC-IC & PLC.
Payments for corn, soybeans and wheat were weighted by the share of acres enrolled in ARC-CO, ARC-IC and PLC and then by the share of commodity specific base acres to the aggregate total. Both numbers were provided by the Farm Service Agency.

[3] Seed price based on traited seed corn, 80,000 kernels/bag.
Includes seed treatment at low level.

[4] Assumes maintenance application of P &K fertilizer needed, corn-soybean rotation, 3.8 O.M., 20 CEC, and soil test values of 25 ppm P/A and 125 ppm K/A. Fertilizer prices vary over time and area. Check with local sources for current prices.
Assumes NH3(82-0-0): $460 /ton MAP(11-52-0): $430 /ton Potash(0-0-60): $325 /ton
Nitrogen (N) rates based on the Maximum Return to Nitrogen (MRTN) approach. Corn Nitrogen Rate Calculator http://cnrc.agron.iastate.edu/
N cost includes cost of N-Serve.

[5] Based on use of: preplant Corvus plus atrazine, post glyphosate with ammonium sulfate (AMS).

[6] Drying costs are based on Ohio Farm Custom Rates - 3.9 cents per bushel per point of moisture removed - 5% moisture removed

[7] Hauling based on Ohio Farm Custom Rates charge per bushel - Farm to Market - 30 miles, one-way

[8] See 'machinery costs' tab for specific calculations. Lubrication costs are assumed to be 10% of fuel costs

[9] See 'machinery costs' tab for specific calculations.

[10] Crop Insurance: Revenue Protection (with Trend Adjusted Yield Endorsement), Basic (without SCO), 80% coverage level.

[11] Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc…

[12] Includes hired custom operations for dry bulk fertilizer application and anhydrous ammonia (NH3) application

[13] Part or all of labor may be a variable cost if paid labor varies with acres farmed.
Labor is considered a fixed cost if labor costs do not change with acres farmed.
Labor rate includes cash wages plus benefits.

[14] Interest on all variable costs, except drying, hauling and crop insurance

[15] Part or all of labor may be a variable cost if paid labor varies with acres farmed.
Labor is considered a fixed cost if labor costs do not change with acres farmed.
Labor rate includes cash wages plus benefits.
Labor hours: FINBIN, Labor rate: Ohio Farm Custom Rates

[16] Management Charge is calculated as 5% of total receipts.

[17] Machinery and Equipment Charge Reflects 2000 acres, conservation tillage corn/no-till RR soybean rotation.
See 'machinery costs' tab for specific calculations.

[18] Average based on "Ohio Cropland Values and Cash Rents" factsheet found at: http://ohioline.osu.edu/
Land charges vary throughout the state, check your local rates.

[19] Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc…

[20] Return Above Variable Costs equals total receipts minus total variable costs.
Return Above Variable and Land Costs equals total receipts minus total variable and land costs.
Return Above Total Costs equals total receipts minus total costs.
Return to Land equals total receipts minus total costs except land costs.
Return to Labor and Management equals total receipts minus total expenses except operator labor and management cost.
Return to Land, Labor and Management equals total receipts minus total expenses except operator labor and management and land costs.

Authors:
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SOYBEAN PRODUCTION BUDGET (Roundup Ready) - 2021

No-Tillage Practices

Reflects 2000 acres, Conservation Tillage Corn/No-Till RR Soybeans

Updated: **9//2020**

ITEM	EXPLANATION	YOUR PROD. NUMBERS	PRICE PER UNIT	YIELD (bu/A)[1] 43	54	65	YOUR BUDGET *67*
RECEIPTS							
Soybeans[1]			***$9.40*** bu	407.58	509.48	611.38	**629.80**
ARC/PLC Payment (paid October 2022)[2]				12.75	12.75	12.75	**12.75**
Crop Insurance Indemnity				0.00	0.00	0.00	**0.00**
Ad Hoc Payment				0.00	0.00	0.00	**0.00**
Grower or Market Premium				0.00	0.00	0.00	**0.00**
TOTAL RECEIPTS				420.33	522.23	624.13	**642.55**
VARIABLE COSTS							
Seed[3]	160000 seeds /acre	***160000***	***0.393*** /1000 seeds	62.88	62.88	62.88	**62.88**
Fertilizer[4]							
P2O5(lbs)	34.7 43.4 52.0	***53.6***	***0.41*** lb	14.34	17.93	21.51	**22.16**
K2O(lbs)	49.9 62.3 74.8	***77.05***	***0.27*** lb	13.50	16.88	20.26	**20.87**
Lime(ton)	0.25	***0.25***	***25*** ton	6.25	6.25	6.25	**6.25**
Chemicals[5] Herbicide				41.99	41.99	41.99	**41.99**
Insecticide				0.00	0.00	0.00	**0.00**
Fungicide				0.00	0.00	0.00	**0.00**
Hauling[6]	**$0.155** /per bushel			6.72	8.40	10.08	**10.39**
Fuel, Oil, Grease[7]				9.26	9.26	9.26	**9.26**
Repairs[8]				21.60	21.60	21.60	**21.60**
Crop Insurance[9]				8.00	10.00	12.00	**12.00**
Miscellaneous[10]				3.40	3.40	3.40	**3.40**
Hired Custom Work[11]				7.00	7.00	7.00	**7.00**
Hired Labor[12]				0.00	0.00	0.00	**0.00**
Int. on Oper. Cap.[13]	**6** mo.		***4.00%***	3.60	3.74	3.88	3.91
TOTAL VARIABLE COSTS	**-Per Acre**			198.56	209.34	220.12	**221.71**
	-Per Bushel			4.58	3.86	3.38	**3.31**
FIXED COSTS							
Labor Charge[14]	***1.1*** hours		***17.00*** /hr	18.70	18.70	18.70	**18.70**
Management Charge[15]	***5%*** of gross income			21.02	26.11	31.21	**32.13**
Mach. and Equip. Charge[16]				59.20	59.20	59.20	59.20
Land Charge[17]				155.00	195.00	242.00	**242.00**
Miscellaneous[18]				13.40	13.40	13.40	**13.40**
TOTAL FIXED COSTS				267.31	312.41	364.50	**365.42**
TOTAL COSTS	**-Per Acre**			465.87	521.75	584.62	**587.13**
	-Per Bushel			10.74	9.63	8.99	**8.76**
RETURN ABOVE VARIABLE COSTS[19]				221.78	312.89	404.01	420.84
RETURN ABOVE VARIABLE AND LAND COSTS				66.78	117.89	162.01	178.84
RETURN ABOVE TOTAL COSTS				-45.54	0.48	39.50	55.42
RETURN TO LAND				109.46	195.48	281.50	297.42
RETURN TO LABOR AND MANAGEMENT				-5.82	45.30	89.41	106.25
RETURN TO LAND, LABOR, AND MANAGEMENT				149.18	240.30	331.41	348.25

Values highlighted in gold may be changed to assist in computing "Your Budget" Column using macros embeded within the spreadsheet.

Values highlighted in light blue are cells embedded with macros and will be calculated for the user based on data entered. These cells may be input manually, but macros will be overwritten!

Values highlighted in gray are stand alone cells that require direct input from the user.

[1] Yield is based on Ohio NASS 20 Year Trend Yield for Ohio plus and minus 20%.
Price is based on current CME November Futures less $0.30 basis.

[2] Commodity Program Payment estimates were calculated by using a 40 year trend estimate for Ohio commodity specific yields and the 2021/2022 marketing year average price: USDA baseline: ARC-CO, ARC-IC & PLC.
Payments for corn, soybeans and wheat were weighted by the share of acres enrolled in ARC-CO, ARC-IC and PLC and then by the share of commodity specific base acres to the aggregate total. Both numbers were provided by the Farm Service Agency.

[3] Seed costs are per 1000 seeds, treated.

[4] Assumes only maintenance application of fertilizer needed, corn-soybean rotation, 3.8 O.M., 20 CEC, and soil test values of 25 ppm P/A and 125 ppm K/A. Fertilizer prices vary over time and area. Check with local sources for current prices.
Assumes MAP(11-52-0): 430 /ton Potash(0-0-60): 325 /ton

[5] Based on use of: fall applied glyphosate plus 2,4-D with ammonium sulfate (AMS), preplant Valor XLT & metribuzin w/ AMS post glyphosate with MSO and AMS. Glyphosate tolerant soybeans are often used in part as a tool for perennial weed control. While this intrinsic value is not included in the budget, it should be considered when exploring opportunities with glyphosate tolerant soybeans.

[6] Hauling based on Ohio Farm Custom Rates charge per bushel - Farm to Market - 30 miles, one-way

[7] See 'machinery costs' tab for specific calculations. Lubrication costs are assumed to be 10% of fuel costs

[8] See 'machinery costs' tab for specific calculations.

[9] Crop Insurance: Revenue Protection (with Trend Adjusted Yield Endorsement), Basic (without SCO), 80% coverage level.

[10] Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc…

[11] Includes hired custom operations for dry bulk fertilizer application

[12] Part or all of labor may be a variable cost if paid labor varies with acres farmed.
Labor is considered a fixed cost if labor costs do not change with acres farmed.
Labor rate includes cash wages plus benefits.

[13] Interest on all variable costs, except hauling and crop insurance

[14] Part or all of labor may be a variable cost if paid labor varies with acres farmed.
Labor is considered a fixed cost if labor costs do not change with acres farmed.
Labor rate includes cash wages plus benefits.
Labor hours: FINBIN, Labor rate: Ohio Farm Custom Rates

[15] Management Charge is calculated as 5% of total receipts.

[16] Machinery and Equipment Charge Reflects 2000 acres, conservation tillage corn/no-till RR soybean rotation.
See 'machinery costs' tab for specific calculations.

[17] Average based on "Ohio Cropland Values and Cash Rents" factsheet found at: http://ohioline.osu.edu/
Land charges vary throughout the state, check your local rates.

[18] Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc…

[19] Return Above Variable Costs equals total receipts minus total variable costs.
Return Above Variable and Land Costs equals total receipts minus total variable and land costs.
Return Above Total Costs equals total receipts minus total costs.
Return to Land equals total receipts minus total costs except land costs.
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WHEAT PRODUCTION BUDGET (Grain and Straw) - 2021

Conservation Tillage Practices

Reflects 2000 acres, Conservation Tillage Wheat/Corn/No-Till RR Soybeans

Updated: **9//2020**

ITEM	EXPLANATION	YOUR PROD. NUMBERS	PRICE PER UNIT		YIELD (bu/A) 58	72	86	YOUR BUDGET 92
RECEIPTS								
Wheat (Grain Only)[1]			***$5.55***	/bu	319.24	399.05	478.85	**510.60**
ARC/PLC Payment (paid October 2022)[2]					12.75	12.75	12.75	**12.75**
Crop Insurance Indemnity					0.00	0.00	0.00	**0.00**
Ad Hoc Payment					0.00	0.00	0.00	**0.00**
Grower or Market Premium					0.00	0.00	0.00	**0.00**
TOTAL WHEAT RECEIPTS					331.99	411.80	491.60	**523.35**
VARIABLE COSTS								
Seed	1,400,000 seeds	***1,400,000***	***0.0310***	/1000 seeds	43.40	43.40	43.40	**43.40**
Fertilizer[3]								
N (lbs.)	63.5 82.6 101.8	***109.4***	***0.393***	/lb	24.95	32.46	39.97	**42.96**
P_2O_5(lbs)	28.8 36.0 43.1	***46.0***	***0.413***	/lb	11.89	14.86	17.84	**19.02**
K_2O(lbs)	14.4 18.0 21.6	***23.0***	***0.271***	/lb	3.89	4.87	5.84	**6.23**
Lime(ton)	***0.25***		***25***	/ton	6.25	6.25	6.25	**6.25**
Chemicals[4] Herbicide					14.65	14.65	14.65	**14.65**
Insecticide					0.00	0.00	0.00	**0.00**
Fungicide					0.00	0.00	0.00	**0.00**
Hauling[5]	**$0.155** /per bushel				8.92	11.14	13.37	**14.26**
Fuel, Oil, Grease[6]					6.67	6.67	6.67	**6.67**
Repairs[7]					13.81	13.81	13.81	**13.81**
Crop Insurance[8]					5.50	6.00	6.50	**6.50**
Miscellaneous[9]					3.00	3.00	3.00	**3.00**
Hired Custom Work[10]					14.60	14.60	14.60	**14.60**
Hired Labor[11]					0.00	0.00	0.00	**0.00**
Int. on Oper. Cap.[12]	***9*** mo.		***4.00%***		4.29	4.64	4.98	**5.12**
TOTAL VARIABLE COSTS	**-Per Acre**				161.82	176.35	190.88	**196.46**
	-Per Bushel				2.81	2.45	2.21	**2.14**
FIXED COSTS								
Labor Charge[13]	***1.35*** hours		***17.00***	/hr	22.95	22.95	22.95	**22.95**
Management Charge[14]	***5%*** of gross revenue				15.96	19.95	23.94	**25.53**
Mach. And Equip. Charge[15]					33.79	33.79	33.79	**33.79**
Land Charge[16]					155.00	195.00	242.00	**242.00**
Miscellaneous[17]					10.70	10.70	10.70	**10.70**
TOTAL FIXED COSTS					238.40	282.39	333.38	**334.97**
TOTAL COSTS (Grain Only)	**-Per Acre**				400.21	458.74	524.26	**531.43**
	-Per Bushel				8.11	7.16	6.66	**6.60**
RETURN ABOVE VARIABLE COSTS[18]					170.17	235.45	300.72	326.89
RETURN ABOVE VARIABLE AND LAND COSTS					15.17	40.45	58.72	84.89
RETURN ABOVE TOTAL COSTS					-68.23	-46.94	-32.66	-8.08
RETURN TO LAND					86.77	148.06	209.34	233.92
RETURN TO LABOR AND MANAGEMENT					-29.32	-4.04	14.24	40.40
RETURN TO LAND, LABOR AND MANAGEMENT					125.68	190.96	256.24	282.40

WHEAT STRAW		Tons Straw / Acre								
RECEIPTS (Straw Only)	1.2	1.5	1.8	***1.5***	***120***	/ton				
Small Squares / Acre	53	67	80	***67***	***2.75***	/bale	146.67	183.33	220.00	**183.33**
VARIABLE COSTS (Straw Only)										
Fertilizer[3]										
P_2O_5(lbs)	3.8	4.8	5.7	***4.8***	***0.413***	/lb	1.58	1.97	2.37	**1.97**
K_2O(lbs)	29.9	37.4	44.9	***37.4***	***0.271***	/lb	8.11	10.13	12.16	**10.13**
Hired Custom Work[10]							81.77	100.43	119.10	100.43
Hired Labor[11]							0.00	0.00	0.00	**0.00**
Int. on Oper. Cap.[12]		***3***	mo.		***4.00%***		0.10	0.12	0.15	**0.12**
TOTAL VARIABLE COSTS- Per Acre							91.45	112.54	133.63	**112.54**
FIXED COSTS (Straw Only)										
Labor Charge[13]		***0.5***	hours		***17.00***	/hour	8.50	8.50	8.50	**8.50**
Management Charge[14]		***5%***	of gross revenue				7.33	9.17	11.00	9.17
Miscellaneous[17]							2.20	2.20	2.20	**2.20**
TOTAL FIXED COSTS							18.03	19.87	21.70	**19.87**
TOTAL COSTS (Straw Only)- Per Acre							109.48	132.41	155.33	**132.41**
RETURN TO LABOR AND MANAGEMENT (Straw Only)[18]							53.02	68.59	84.17	**68.59**
RETURN ABOVE VARIABLE COSTS (Straw Only)							55.22	70.79	86.37	**70.79**
RETURN ABOVE TOTAL COSTS (Straw Only)							37.18	50.93	64.67	50.93

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Price is based on current CME September Futures contract price less 0.20 basis.

[2] Commodity Program Payment estimates were calculated by using a 40 year trend estimate for Ohio commodity specific yields and the 2021/2022 marketing year average price: USDA baseline: ARC-CO, ARC-IC & PLC.
Payments for corn, soybeans and wheat were weighted by the share of acres enrolled in ARC-CO, ARC-IC and PLC and then by the share of commodity specific base acres to the aggregate total. Both numbers were provided by the Farm Service Agency.

[3] Assumes only maintenance application of fertilizer needed, 3.8 O.M., 20 CEC, and soil test values of 25 ppm P/A and 125 ppm K/A.
Fertilizer prices vary over time and area. Check with local sources for current prices.
Assumes UAN(28-0-0): $220 /ton MAP(11-52-0): $430 /ton Potash(0-0-60): $325 /ton

[4] Based on use of Spring application of 0.6 oz of Harmony Extra SG TotalSol, 1 pint of 2,4-D (4 lb/gal) and (non-ionic surfactant) NIS

[5] Hauling based on Ohio Farm Custom Rates charge per bushel - Farm to Market - 30 miles, one-way

[6] See 'machinery costs' tab for specific calculations. Lubrication costs are assumed to be 10% of fuel costs

[7] See 'machinery costs' tab for specific calculations.

[8] Crop Insurance: Revenue Protection (with Trend Adjusted Yield Endorsement), Basic (without SCO), 70% coverage level.

[9] Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc…

[10] Includes hired custom operations for grain: dry bulk fertilizer application and liquid fertilizer application for straw: raking per acre and bale, load, haul and store per bale

[11] Part or all of labor may be a variable cost if paid labor varies with acres farmed.
It's a fixed cost if labor costs do not change with acres farmed.

[12] Interest on all variable costs, except hauling and crop insurance

[13] Part or all of labor may be a variable cost if paid labor varies with acres farmed.
It's a fixed cost if labor costs do not change with acres farmed.
Labor hours: FINBIN, Labor rate: Ohio Farm Custom Rates

[14] Management Charge is calculated as 5% of total receipts.

[15] Machinery and Equipment Charge Reflects 2000 acres, conservation tillage corn & wheat/no-till RR soybean rotation. Wheat grown 1/5 years.
See 'machinery costs' tab for specific calculations.

[16] Average based on "Ohio Cropland Values and Cash Rents" factsheet found at: http://ohioline.osu.edu/
Land charges vary throughout the state, check your local rates.

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