

#### Soil Health is Human Health?

In the race to feed the world we have forgotten about Soil Health and it's DIRECT LINK to YOUR HEALTH.

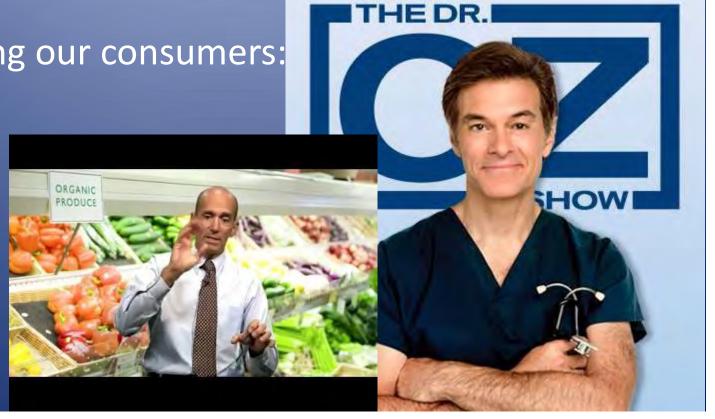
Media Educating our consumers:

DR. OZ

DR. Mercola

DR. Hymen

DR. Huber



What do the Millennials Want?

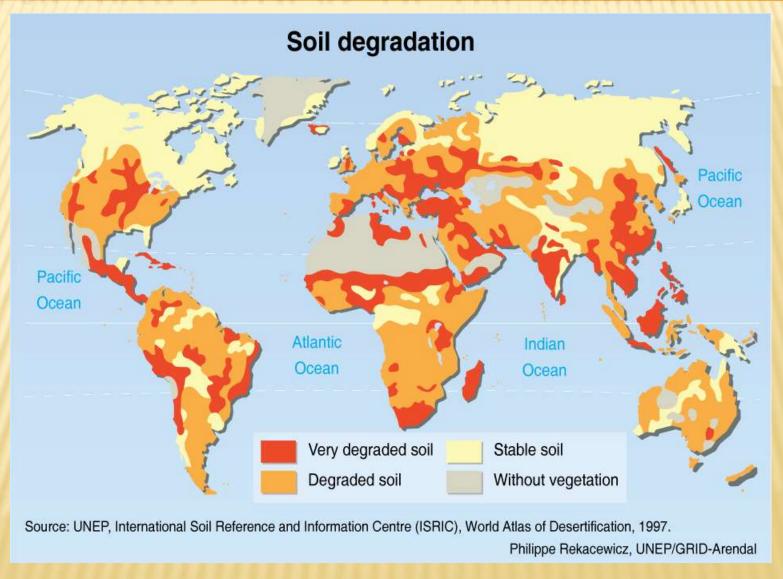


### FOOD defined by your NEW BOSS

- Nutrient Dense-biologically healthy rich soil?
- Safe-no synthetic pesticides-Organic?
- Free from Antibiotics-Organic or non GMO?
- Free of Hormones-No implants? No soy?
- Type of fat-omega 3 vs 6 fatty acids-grass fed
- Humanely produced-Free range on pasture?

"Capturing the Benefits of BIODIVERSITY"

#### **VULNERABLE AREAS OF THE WORLD**



DR. Jerry Hatfield USDA-ARS Director of Midwest Climate Hub

# What is your "ONE THING"?



#### My Dad Taught Me to be a Pioneer

- Early adopter
- Think outside the box for different results
- Do what is right Don't worry about what people say
- Never give up-"Make it better"
- You can do anything if you put your mind to it.
- Dad was my ROCK, my mentor





Earl Doudlah...
"Out-Standing in his field!"

# Vibrant Picture of My Dad



## 2008 Diagnosis Cancer

- Dad was diagnosed with Mantle-Cell Lymphoma. A Cancer of the Midwest!
- Transition 40 acres to Organics in 2008.
- Today 629 acres transitioning to 1455 acres
- Learn in conventional and implement into our organic acres- organic forces you to be a better biological farmer!

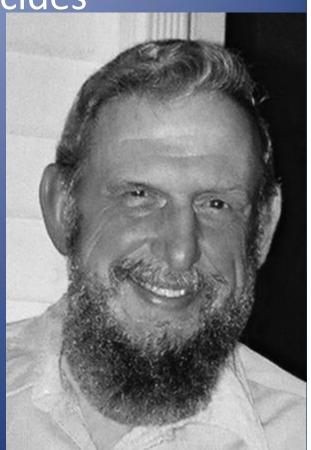
#### Lymphoma Doctors list of possible causes

Exposure to Herbicides

Exposure to Insecticides & Fungicides

Exposure to Degreasers

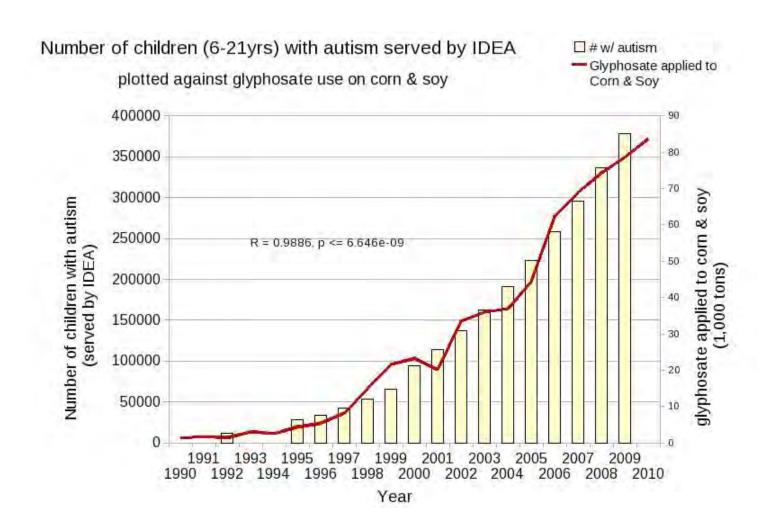
- Dad passed away June 12, 2011
- He was 73 years old



## Dad with Mantle Cell Lymphoma-Blood Cancer



#### **Glyphosate and Autism\***



# Glyphosate (ppb) levels in food

	Glyphosate	Glyphosate
Food product	(ppb)	Food product (ppb)
Cheerios	1,125.3	Oreo Double Stuf 190.90
Honey-nut cheerios	670.2	Simply Naked Pita Chipa 812.53
Wheaties	31.2	Ley's Kettle Cooked 452.71
Trix	9.9	Doritos Cool Ranch 481.20
Annies Gluten free bunr	ıy	Fritos (Original) 174.71
cookies	55.13	Goldfish Crackers 18.40
Kellogs corn flakes	78.90	Goldfish Whole Grain 24.58
Kellogs Raisin bran	82.90	Oatmeal Crème Pies 264.28
Kashi Organic Promise	24.90	Oatmeal Cookies 452.44
Kellogs Special K	74.60	Organic Golden Round 119.12
Kellogs Frosted Flakes	72.80	Crispy Cheddar Crackers 327.22
Cheeze-It (Original)	24.60	Bread (7 brands) < 0.1-127,000.00
Cheeze-It (whole grain)	36.25	Sugar (7 brands) 0.5-810,000.00
Ritz Crackers	270.24	Breast milk (range) 66-166.00
Triscuit	89.68	Drinking water (range) 0.5-700.00
Oreo Original	289.47	Instant oatmeal 1,670.00

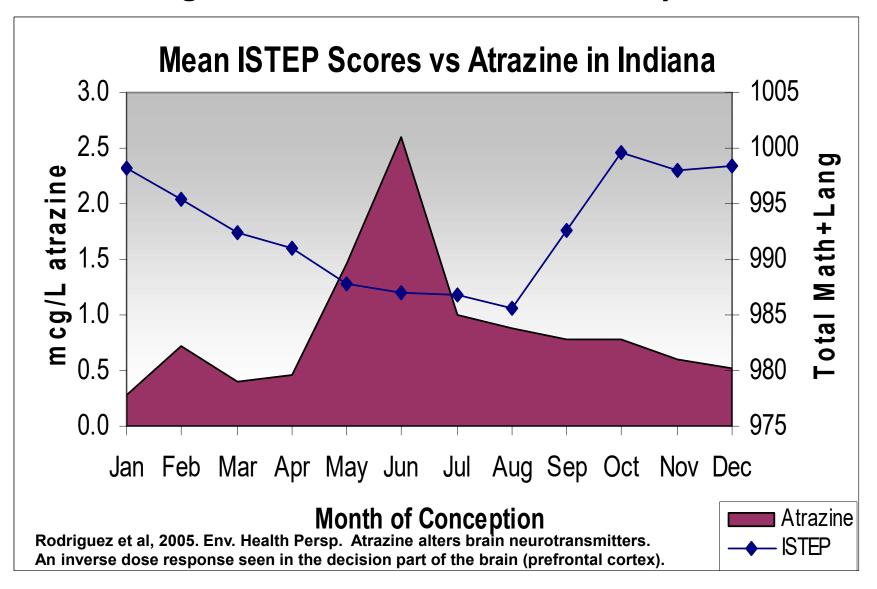
#### One in Two in 2025?





The rate was 1 in 10,000 in 1970

#### Could learning abilities in humans be altered by an herbicide?



Dr. Paul Winchester's data: Director of Neonatology, St. Francis Hospital & Health Centers, Indianapolis Clinical Professor, Indiana University School of Medicine

#### What do you BELIEVE in?

- My conventional beliefs were shattered I drank the Kool-Aid
  - No turning back Know too much
  - Duped by the Big Chem Agenda
  - Do you believe you are responsible to feed the world?
    - At what cost?
      - Cancer for your consumer?
      - Contamination of your well water?
      - Gulf Hypoxia? Shrimper 100 Miles to get to work? Would you drive your tractor that far?
  - Have you been fraudulently misled?
    - Drugs and side effects?
    - Conventional Agriculture Drug Addict?
      - Would you have been a "user" if you had known the side effects to your fellow man?
      - Can you safely farm with your kids? Open a seed corn bag
  - Organic Start with transitioning your thoughts
  - My definition of a farmer changed -"produce nutrient dense safe food"
- My Legacy
  - Judgment day?
    - Put your grandkids on your knee
    - Gods Judgement am I Practice Sorcery (Greek word Pharmakia) Pharmacy and Mingled (Hebrew word Kilayim) seeds of mixed locked genomes GMO Seeds?
    - Organic is a CHOICE you are demonstrating your beliefs

### Transition Plan to Organic

on HEL crimp only fields (deno hydrological conditions for Org			crimpSOY(c. rye	+vetcn)-kY	E+VETCH(verttillage volunteer ve	etciij-crimpcoki(c.rye)		T1	T2	Ornania			MB 4010											
2014	ganic		last pesticide	Crop	SQ FT			11	12	2015 crop			IVIB 4010			2016 c	rop					2017	crop	
oup Group Acres	Farm	acres	36 month date	2014	Inspection 11.6.14	Comment	Corn	P/DE	FG Soy	Wheat	Trit/vetch	Rye/Vetch	Forage Peas	Corn	P/DE	FG Soy	Wheat	Trit/vetch	Rye/Vetch	Corn	P/DE	FG Soy	Wheat	Trit/vetch
	Batty	78	summer 2014	С	? Rye				78					78								78		
rye)-soy 192	Kens	78	summer 2014	С	15 rye				78					78								78		
	Casey 3	36	Organic	org C	4-6 PB Vetch				36					36								36		
	Brooklyn	122	summer 2014	С	6 oats 2-5 Vetch		122	x	x								122				122			
:.rye)-peas 225	Riley M	72	summer 2014	С	5 rye 1 vetch	better on hill		x	72								72				72			
	Monson S	31	summer 2014	S	6-8 oats			31					×				31				31			
tch) 155	Birk 160	155	summer 2014	,	.5rad .5rye 1.5 vetch .5 clover	low seeding rate=poor stand		155					Ŷ				155			155	32			
-	Cooksville North	50	summer 2013	DE	8oat 8vetch 8clover		50								50					50				
	Cooksville middle	20	summer 2014	DL C	SOUL SVEICH SCIOVE		30	20							30		20			20				
(wheat) 140		30	summer 2012	DE	8oat 8vetch 8clover		20	20							20		20			20				
	Keehns Upper and East	30	summer 2012	DE			30								30					30				
	Porter West	40	Organic .	P,DE	8oat 8vetch 8clover	excellent	40								40					40			26	
	Casey 2	36	Organic	P,DE	4-6 PB Vetch		36								36								36	
ch)-corn 133	Keehns	85	summer 2013	S	1 C Rye	thick residue	85									85							85	
	Porter East Tobacco	5	summer 2013	S	none								5		5								5	
	Porter East Center	6	summer 2013	S	none								6		6								6	
	Porter East Jeff garden	1	summer 2013	S	none								1		1								1	
173	Tuttle	173	summer 2013	S	5 oat 2 vetch 1 clover			173									173				173			
	Porter DJ Wilder		summer 2012	DE			33									28			5	33				
	Porter East South	43	summer 2013	S							43					43				43				
7 296	M+D Lower	18	summer 2014	С								18							18	18				
	M+D Upper	21	summer 2013	S							21							21		21				
	Magnolia	72	summer 2014	S	9-16 oats 4-6 vetch	excellent no rye matt						72							72	72				
	Cooksville South	110	summer 2014	С								110							110	110				
8 115	Birk 40	37	summer 2014	S					37							37						37		
	Birk 80	78	summer 2014	S					78							78						78		
1,429	Totals	1,429					396	379	379	_	64	200	12	192	168	271	573	21	205	591	398	307	133	
			Organic				139	-	36	-		-		36	168	71		21	5	591	398	307	133	
						Total Acres	1,429							1,429						1,429				
	organic	116				Organic Acres	175							301						1,429				
						Acres Yield	257 180	379 1800	343 45	- 50	64 50	200	12 20	156 180	- 2200	200	573 60	21 50	205	180	398	- 45		
						Price	\$ 3.50	\$ 0.55		\$ 6.00	\$ 7.00	\$ 14.00	\$ 30.00	\$ 3,50		\$ 13.00	\$ 6.00	\$ 7.00	\$ 14.00	\$ 3.50	\$ 300.00	\$ 13.00	\$ 6.00	\$ 7.00
		1,210	do			Gross		\$ 375,210			\$ 22,225		\$ 7,200	\$ 98.280		\$ 117,000			\$ 114.520	¢ 3.30	\$ 238.800	¢	6	- 7.30
		1,210 540				Acres	139	379	200,035		64	200	<i>y</i> 1,200	36	168	71	y 200,26U	21	3 114,520	591	398	307	133	
			wiiddt			Acres	170	3/9	36	- 60	400	400		170	1,800	45	400	400	400	170	1,800	307	155	
								\$ 300.00	\$ 28.00			\$ 1.50						\$ 1.50	\$ 1.50	170 \$ 13.00	1,800 \$ 0.92	\$ 28.00		
						Price	\$ 13.00	300.00	⇒ 28.00	\$ 15.00	\$ 1.50	ə 1.50		\$ 13.00	\$ 0.90	\$ 28.00	\$ 15.00	<b>&gt; 1.50</b>	5 1.50	<b>\$</b> 13.00	⇒ 0.92	⇒ 28.00	\$ 15.00	, 1.50

#### Transitioning Seed Loophole permitted

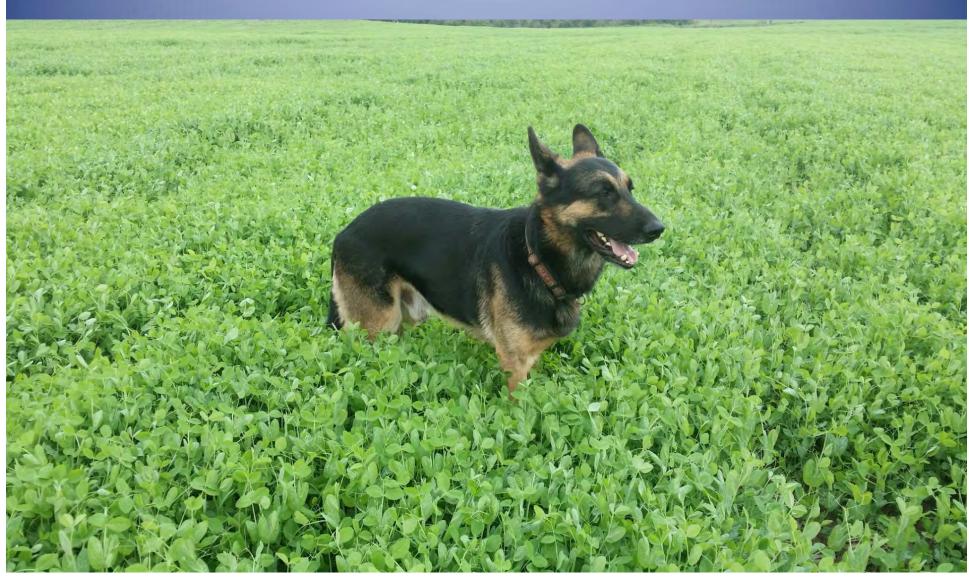
- Allowed to plant your own transitioning cover crop seed on your certified organic acres
  - Must clean on farm or a Certified Organic Seed
     Cleaner
    - Only exposed to your own weeds
  - Ease into your organic acres using this low cost method
    - Start small on 5 to 40 acres
    - Learn from small mistakes and observe the success areas
    - Do not put your equity at risk by going all in cold turkey

### **Transition with Cover Crops?**

- T1-Improve soil tilth, add N and break weed cycle
  - 4010 speckled forage peas plant early in spring
    - 1.5 bpa
- T2-Improve soil tilth, smother weeds and add N
  - Plant Poly crop
    - Aroostook Cereal Rye 1.5 bpa
    - Purple Bounty Vetch 22#/ac.
- T3 Organic-\$9.00 organic corn?
  - Grow 80-100% of your Nitrogen Needs

Organic adaption rate- Petition NOP to allow Transitional Cover Crop seed to be planted on other farms organic lands

# Transitional alternate cash crop-4010 forage peas – T1



# Harvest - Aroostook Cereal Rye with Purple Bounty Vetch —T2







Aroostook
Cereal Rye
&
Purple Bounty
Vetch



Corn after Purple Bounty Vetch- T3

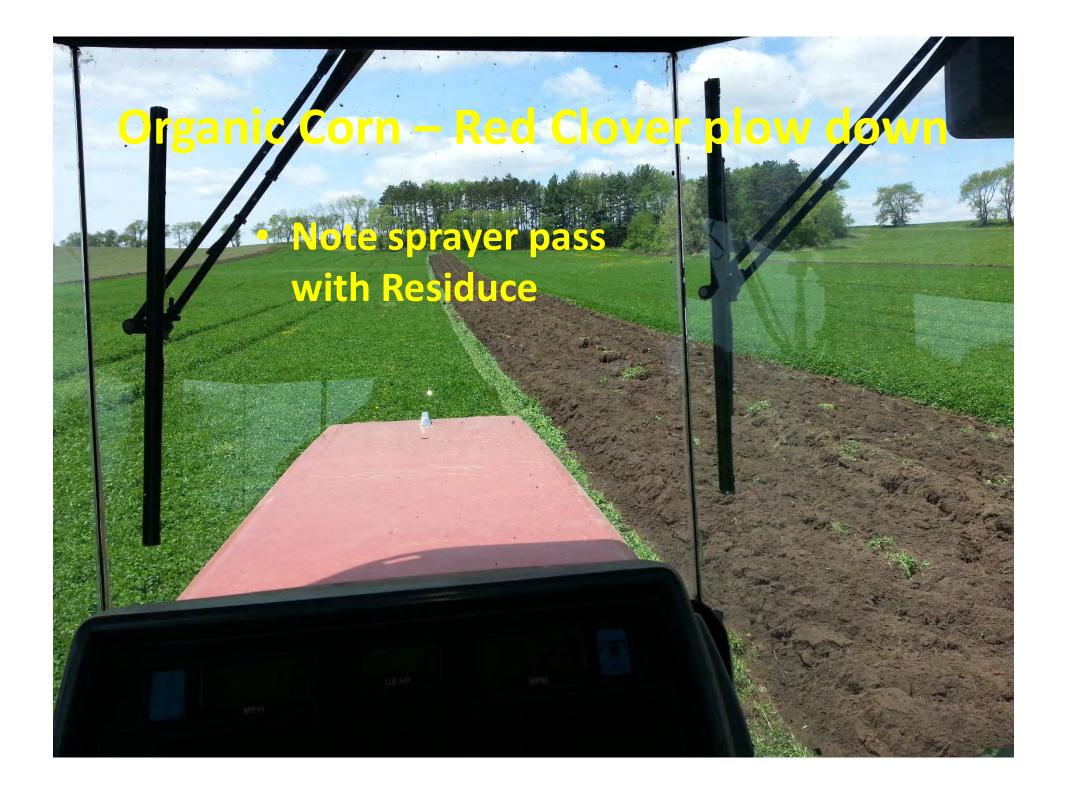


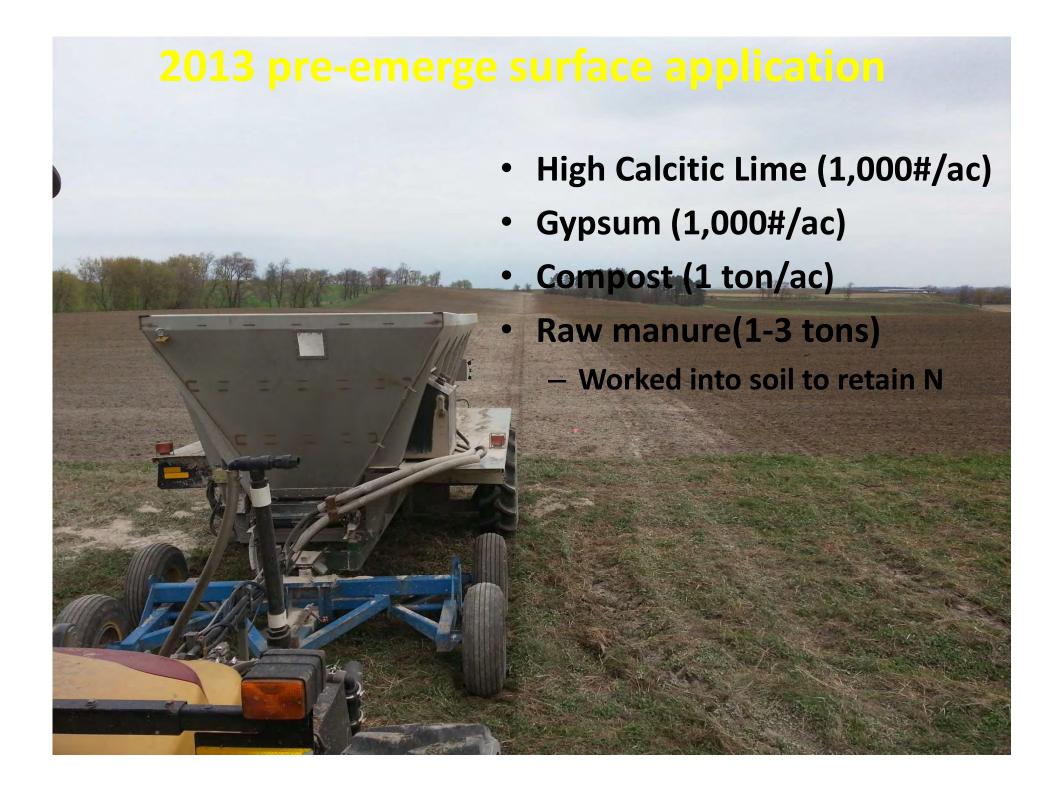


# Planting Oats Vetch and Clover for Corn









#### ROCKET your corn seed for weed control

- Myco seed treatment (MST) on seed
- Chilean(sodium) nitrate 2"x2"placement
- Fish, SP-1, Molasses, Bio Repel, Ecotec, Jabb SPE in the Seed Trench



#### Jabb SPE - Beauveria bassiana -seed treatment

- Reports, trials and research indicate seeds treated with Soil Plant Enhancer (SPE-120)
  with Beauveria bassiana have shown improved performance against:
  - Potato psyllids Leaf hoppers Pea aphids Green peach aphids Leaf miner, Mites, white flies Wheat midge Spotted wing drosophila in raspberries Grape colaspis Wheat stem sawfly Apple maggot Onion maggot Onion thrips Plum curculio Pecan weevil Alfalfa weevil Clover leaf weevil Squash borer Cabbage looper Armyworm Corn Ear worm Pink boll worm Variegated cutworm Black cutworm Webworm European corn borer Northern corn root worm beetle Western corn root worm beetle Japanese beetle Colorado potato beetle Wireworms
- SPE-120 with Beauveria bassiana is a plant symbiont. Activity includes:
  - Stimulation of immune system
  - Restricts plant pathogens from entering the plant.
  - Interacts with plant to produce additive biochemicals
  - Combines plant resistance to insect feeders for reducing population threat
  - Naturally occurs in soil but has been killed off by fungicides and tillage



#### Soil Plant Enhancer (SPE-120)

Reports have shown:

reduced Toxins:

Aflatoxins and Mycotoxins in corn

reduced Diseases:

Fusarium and Rhizoc in potatoes and cucurbits

Suppressed Insects in:

Lygus bugs/ squash bugs in squash and melons
Cabbage looper in cole crops and greens
Colorado Potato beetles in potatoes and egg plant

Onion thrips in onions Aphids, white flies, mosquitoes, psyllids







#### Corn 40 days after planting

Doudlah Farms, Evansville, WI







# **Two Rotations-Organic** *mechanical action-CROP* (cover crop)

#### **Tillable Lands**

- Year 1 mid May disk-CORN(Aroostook cereal rye)
- Year 2 crimp-DRY EDIBLES or SOY(disk-oats+mustard)
- Year 3 disk-CANNING PEAS-disk-DRY EDIBLES(winter wheat+daikon radish)
  - plane-frost seed med. red clover
- Year 4 none-WHEAT or (purple bounty vetch and Aroostook cereal rye)

#### **HEL Lands**

- Year 1 crimp-SOY(Aroostook c.rye + purple bounty vetch)
- Year 2 none-RYE+VETCH(verticle-tillage volunteer vetch)
- Year 3 disk-CORN(aroostook cereal rye)



# Introduction to No-till-Crimp Beans Simple as 1 – 2 – 3!!!!

1 - Seed Aroostook Cereal Rye in Fall

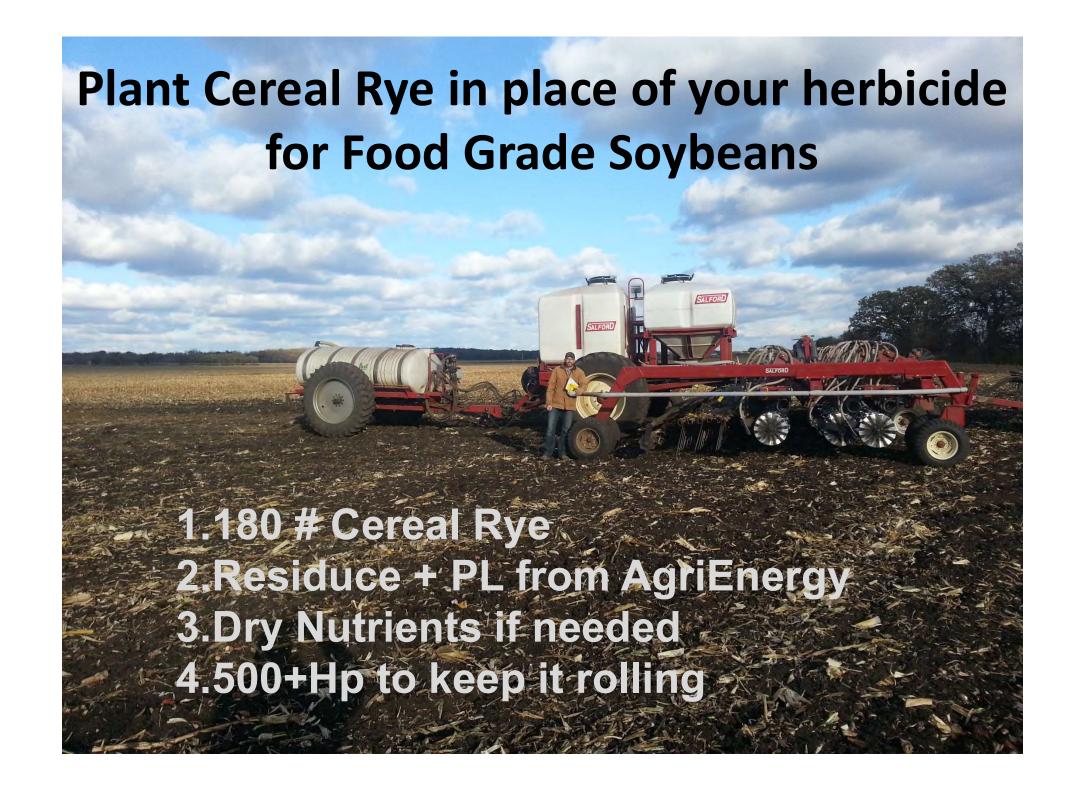
2 - Plant beans and Crimp Rye

3 - Harvest Beans

#### NRCS CONSERVATION PROGRAMS

- Environmental Quality Incentives Program (EQIP)
  - Cover Crops (340)
  - Residue and Tillage Management
  - No-till/strip-till/ direct seed (329)
- Conservation Stewardship Program (CSP)
  - Precision Application Tech to apply nutrients (WQL11)
  - Drift reducing Nozzle low pressure/low boom height to reduce pesticide drift (AIRO4)
  - GPS, targeted spray application or electronic control technology (AIR07)
  - Control Traffic System (SQL01)
  - Plant tissue test and analysis to improve
  - Nitrogen management (WQL04)









## Weed Control - Get it right in the fall!



# Soybean Planting and Rye Crimping



# Add <u>7.5 ton</u> of biological active <u>carbon</u> while you plant!



## Crimped Rye

Field M & D- upper field Rolled down June 4<sup>th</sup>. Projected 3-5 ton dry matter





# Humic Substances

Soybean & corn roots

# Not all Crimpers are Created Equal



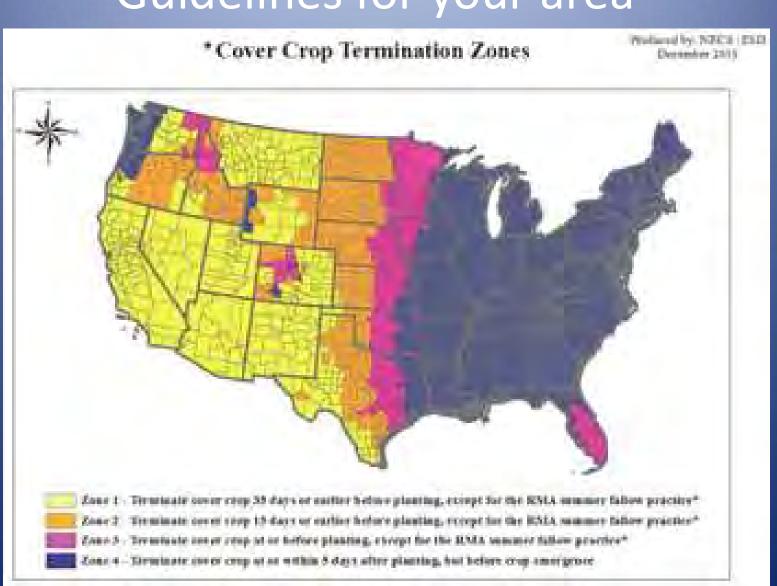
- 25-35% of Cereal Rye Stand goose necked up
- Recrimped 3-5 days later
- 1-3% heads left standing

 Crimp-rite roller by Riteway requires recrimping even at 550#/ft

Chevron less likely to need recrimp at 230#/ft



# Check Crop Insurance Termination Guidelines for your area



#### No-till beans — Keehn Field

NOTE: weed control July 23



# Notill beans — Keehn Field Doudlah Farms, 47 bu/ac food grade beans



# "It's like Combining on Carpet"

Robin Brekken MN

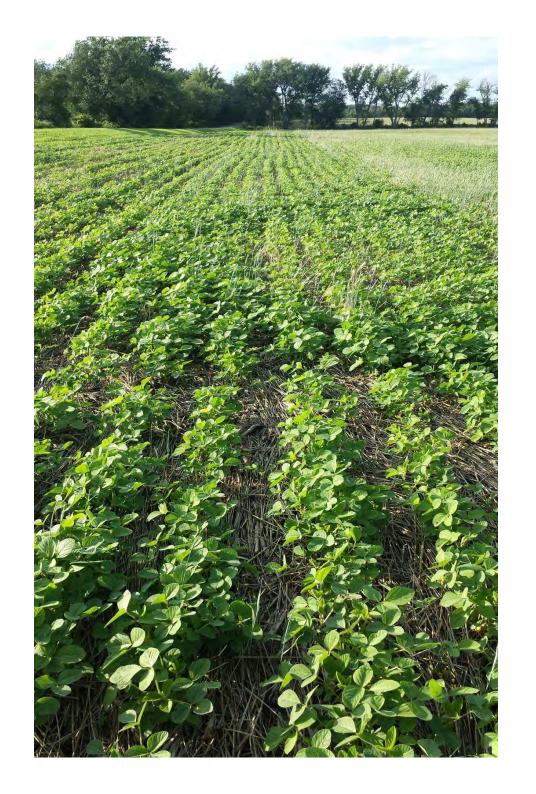


#### Don't Panic

Narrow rows will close canopy

All rainfall will be infiltrated

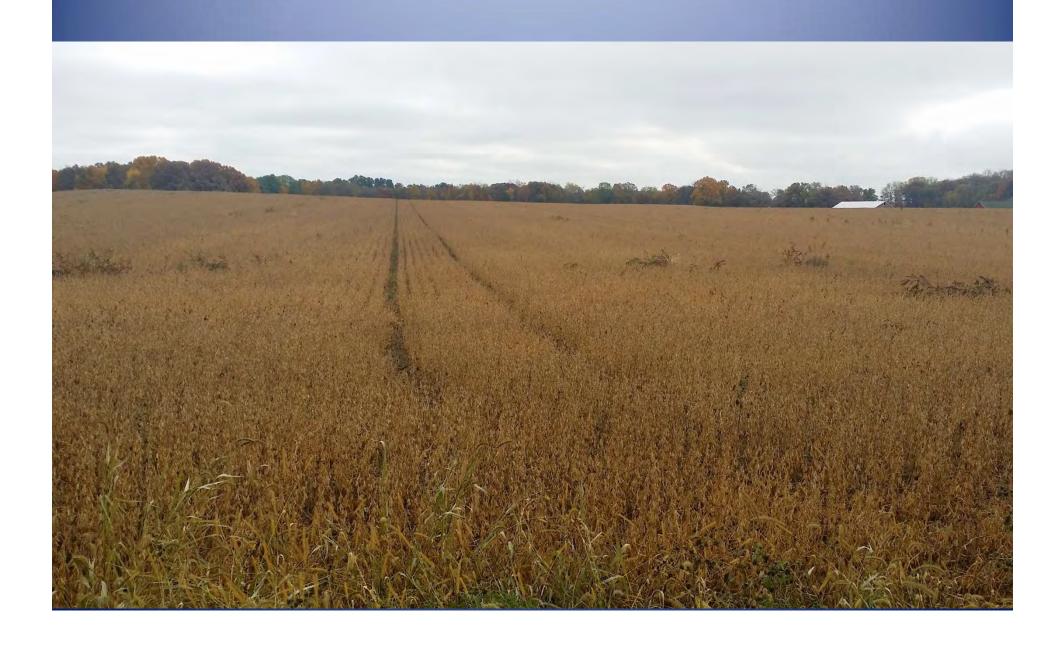
Cereal Rye will maintain weed control thru fall



## No-till Clear Hilems- Keehn field Doudlah Farms, Evansville, WI, July 23



# Organic Soybeans - No Mech. Cultivation



# Rodale and Cover Crops made it possible on my farm!

- Nutrient rich dense safe food-Organic
- Soybeans most erosive crop...to regenerating soil
- No Pesticides
- Reduced my time in field
  - Increase my management in other areas
  - Time with my family
- Increased my profit margins
- Organically-Sequester carbon to "save our planet"

# Crimping PLAN B



# Transition with Rye and a ZXR Crimper/Planter? Brent Schlenker IA

- T1 T2 T3
- Rye soy Rye soy Rye
  - Transition while selling a crop
  - Add N to your soils over time
  - Able to get the rye in early
  - Add brown carbon > 5 ton per year!!!
  - Eliminate erosion
  - Might have to clean rye out of FOOD GRADE soybeans?

#### Oats and Peas - Transition

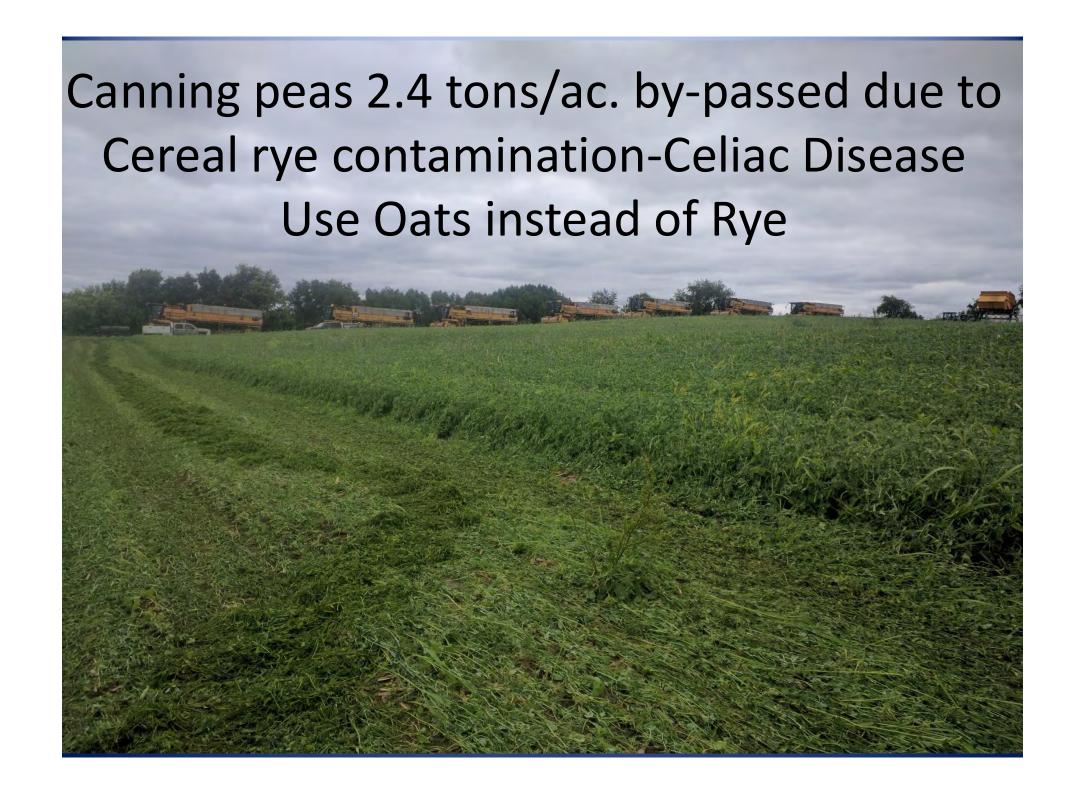
- Beran Brothers Lime Springs IA
  - Certified Organic
  - Use internally as a transitional cover crop
  - Decreases compaction
  - Poly/companion/ crop reduces weeds
  - Late July Harvest allows for amendment application
  - Harvest with a lot of air and drill ready?
    - Or clean and separate oats from peas
  - Low Cost

#### No-Till-Crimp Dry Edible Black Beans –Sept 20



#### **Double Crop - Canning Peas ahead of Dry Edibles**





# Dry Edible Black Beans (Zorro) after Peas



# Hatzenbichler Tine Weeder 40'



# In Row Weeding – WOW!



# RTK Cultivating 15" Rows w/Tramlines

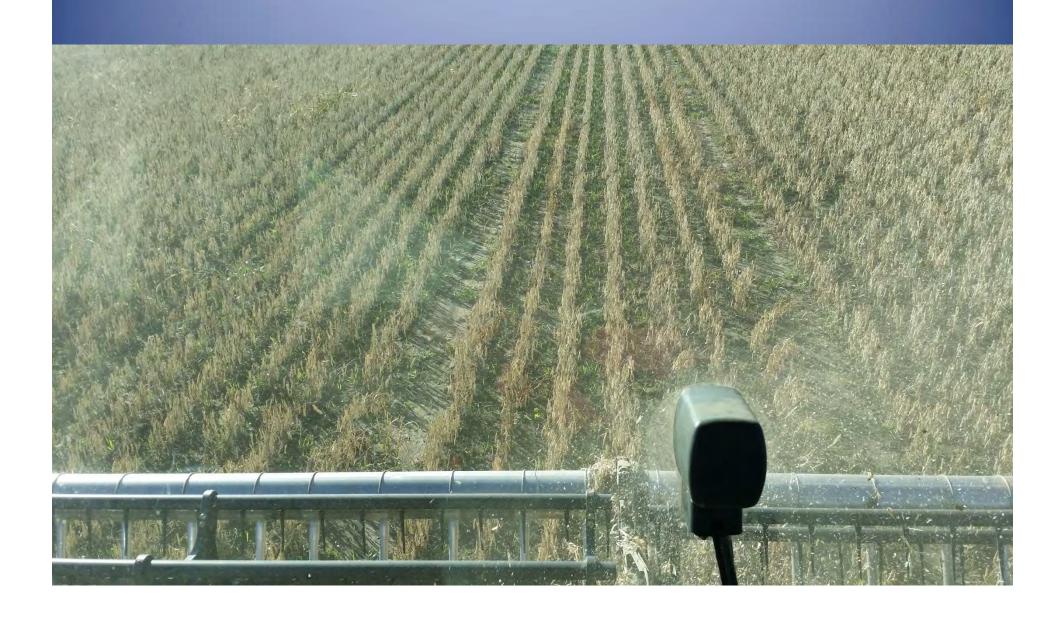


# 15" Row Dry Edible Beans



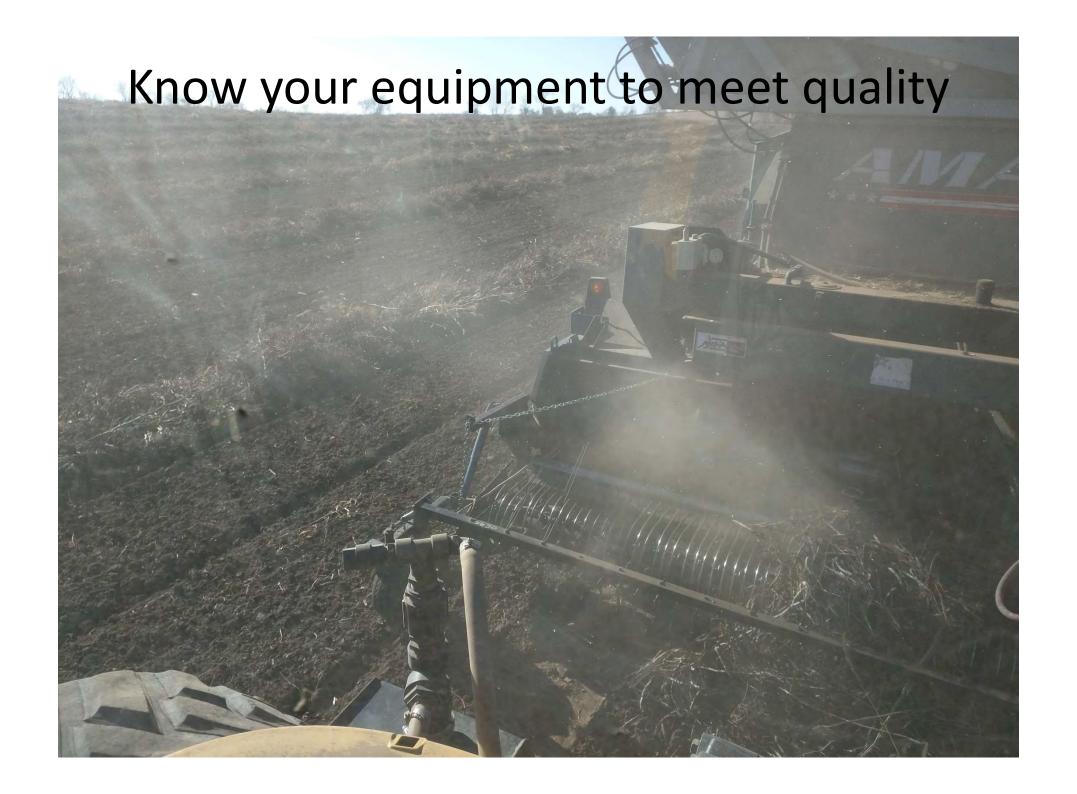


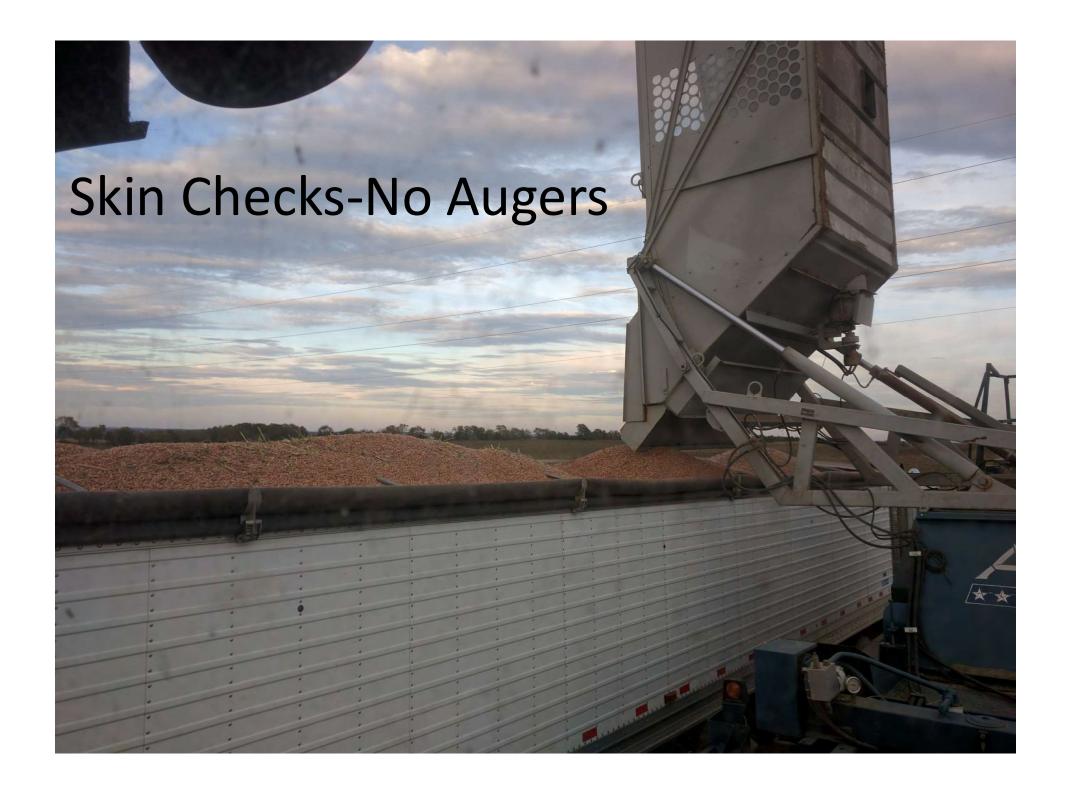
#### Harvesting Black Beans w/combine

















#### Tillage vs No-Till-Crimp



#### Crimping Purple Bounty Vetch



#### No-Till into Crimped Vetch and Rye



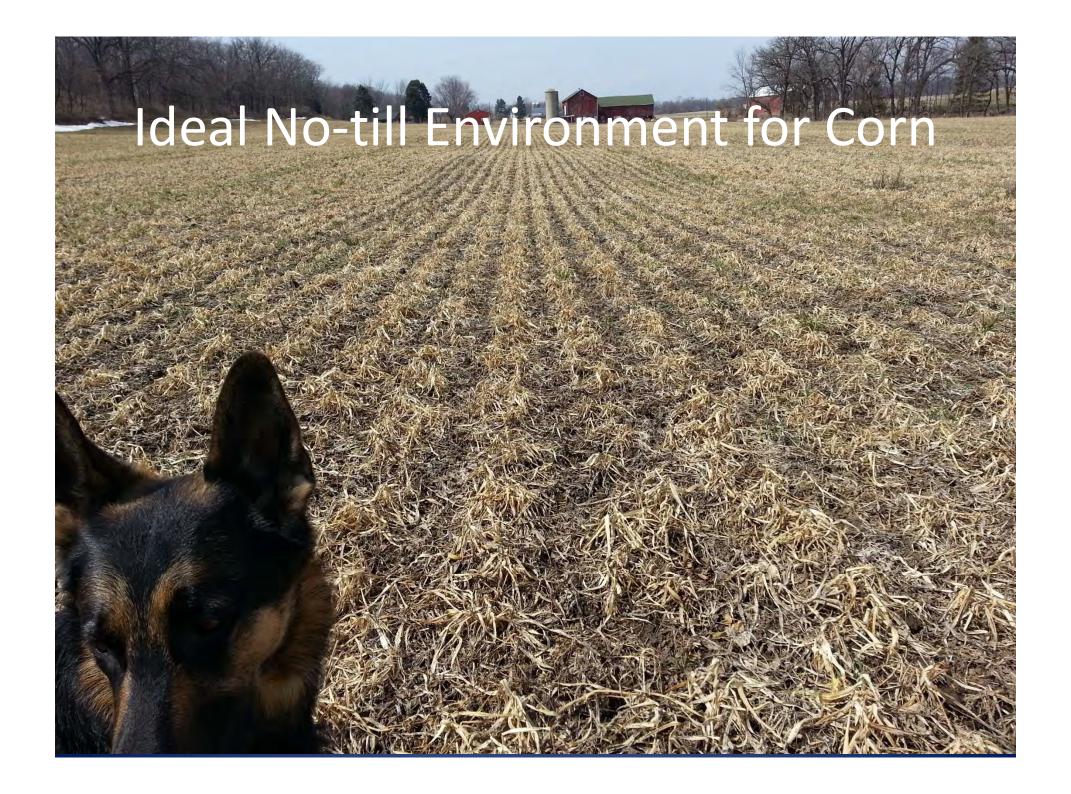
#### Tillage vs. No-Till-Crimp





#### No-Till Crimped Organic Corn

- Planted in fall
  - Oats, sorghum and Daikon Radish in 15" rows
  - Lynx winter pea in twin 5" rows in between
- No-till corn into winter killed 15" rows
  - Dakon radish acts as early gas tank for early corn developmental nutrients
  - Crimp V2 or V3 corn
    - Crimp flowering Lynx winter pea for long term nitrogen needs
    - Lynx winter pea failed to emerge due to skin check damage



## Frost Terminated – Oats, Radish and Sorghum in 15"rows



#### N - Lynx Winter field peas in twin 5"





NT Organic Crimped





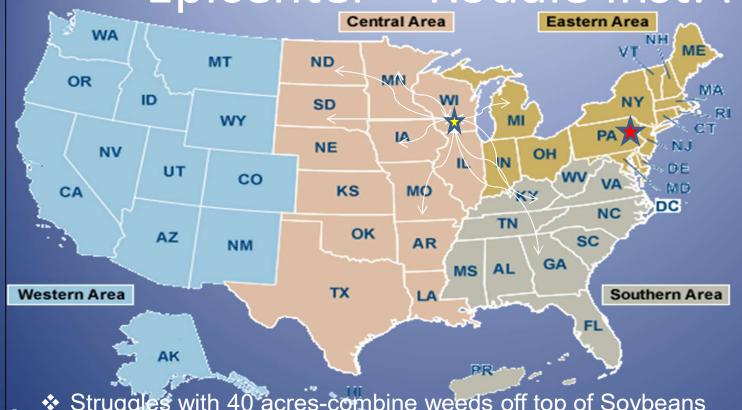
#### 2017 Install - Prairie Filter Strips

- GPS Index for tram lines
- Beneficial Insects
- Erosion Control
- Pollinator Habitat
- BIODIVERSITY

- Small changes
  - Big Impacts



Epicenter – Rodale Inst. PA



- Struggles with 40 acres-combine weeds off top of Soybeans
- ❖ One conference with Rodale-Jeff Moyer "I can do that"
- ♦ 600+ Acres later SUCCESS
- One Year later held our own FIELD DAY
- ❖ 200 farmers gathered to see how to Crimp Cereal Rye
- ❖ Rodale is instrumental to my success- Organic is not passed down from Generation to Generation.

#### Doudlah Farms Field Day, Standing room only! Kentucy, North & South Dakota, Minnesota, Michigan, Iowa, Illinois, Wisconsin, Georgia







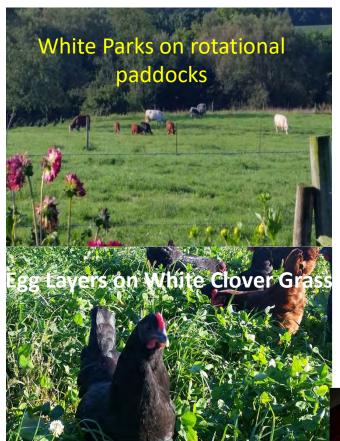


2017 Organic Field Day August 10th

#### Crimping with Confidence-Credits

- Rodale Institute, Jeff Moyer PA
- UW-Madison, Dr. Erin Sylva WI
- David Brandt, OH
- Reginald Destree, WI
- Robin Brekken, ND
- Jason Doudlah, WI





Cover Crops allow us to Direct Market our farm











#### **How we use COVERCROPS & BIODIVERSITY**

- Nitrogen production-legumes and N fixing bacteria(soil health)
- Build organic matter %...nutrients, water holding capacity
- Solubilizing nutrients in soil
  - Each CC species expresses it's unique nutrient release thru microbes
- Armor soil to eliminate:
  - Erosion
  - Surface Puddling (crusting) ...buildup of CO2 causes further weed germination
  - Runoff....free irrigation...increase infiltration and percolation
  - Evaporation
- Consistent 365 day food source for microbes
- Weed control-both mulch and allelopathy expression
- Reduce/eliminate the use of herbicides, fungicides, fumigants and insecticides that kill off soil life
- Reduce/eliminate the use of toxic fertilizers that kill off beneficial soil life. SOP, TN Brown, soft rock phosphate ....
- Produce and Market pasture based livestock without antibiotics
- Makes organic farming possible, profitable, regenerative, sustainable, safe and environmentally sound

#### Know YOU, your BANK and your BANKER

- Does your bank support Organic? Your banker?
  - Do they have a Organic Specialists?
- Does your loan officer understand the Transition process?
- Rate of transition? What is your equity position? Your leverage?
- Do they understand the Organic Market? Do You? Value of the dollar. Finally transitioned and corn goes from \$14.50 to \$8.10?
- Do you understand the equipment changes on your farm going to organic?
  - Can you mechanically weed your entire crop in 2-3 days or in 24 hours?
- Do you have contracts, crop insurance, plan B
- Plan for the unexpected





#### **Knowing your capabilities**

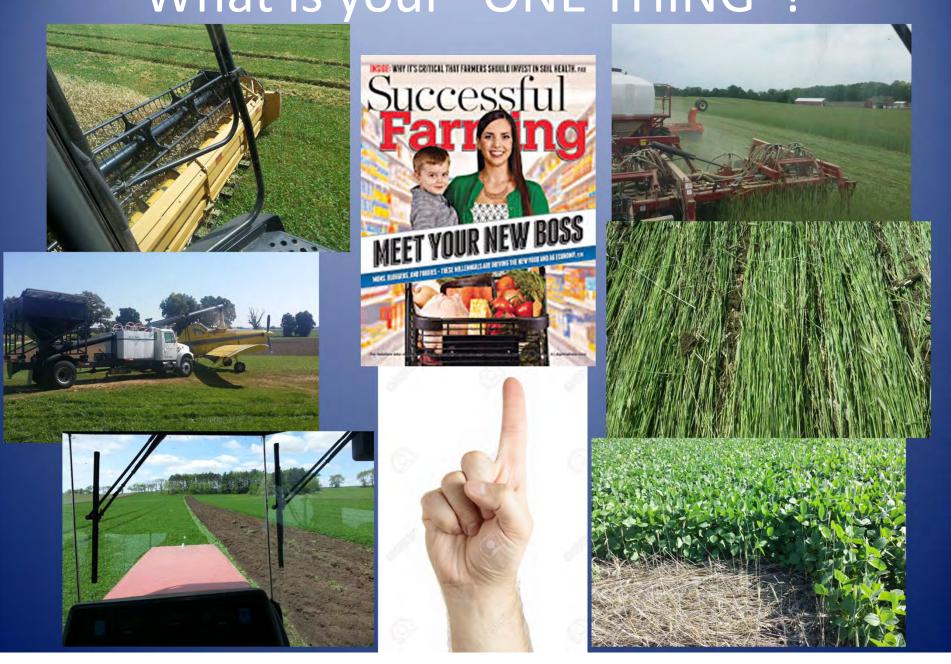
- Do you have adequate storage, aeration, bean ladders, belt unload
  - Does your available storage match your contract delivery period
  - Can you clean to the specifications of your contract?
    - Spin your poly crops apart? i.e. Gluten Intolerance?
- Can you clean and sell your cover crops. Can you find the market? Or use it internally?
- Do you have a backup action plan in case your cover crop fails?
  - Access and budget for manure, Chilean Nitrate or Nature Safe?
- Are the demands on your time <u>sustainable</u>? Can you even farm the same number of acres organically? 5X multiplier? Can you keep up with the BIODIVERSITY of your farm?
- Certification Process? Details....can you pull it all together for a day?
- Find your support group. It might not be your neighbors? Coffee shop goes quiet?
- Promote what your doing....soil health, clean water, pesticide reduced food...your health – your part of a solution!

#### Mitigate your Organic Risk

- Natural Weather
- > Fraud
- Global Shading/Chem Trails/GeoEngineering



#### What is your "ONE THING"?



#### Wild Oat Organics

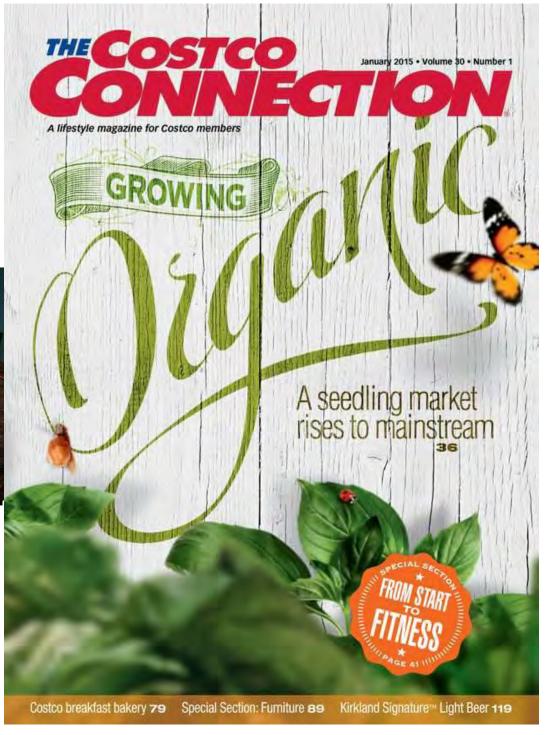
now sold at



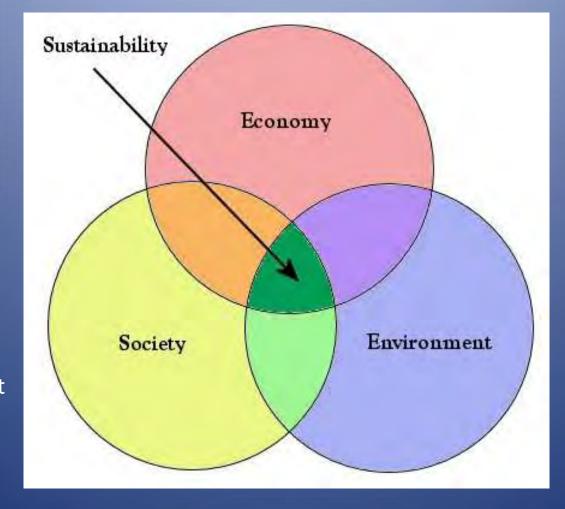


### Chipotle.





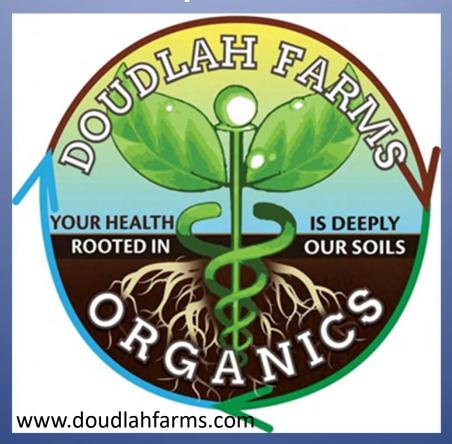
#### Regeneration of Soil Health



Short Term vs.
Long Term
Profits

Health care cost vs. Nutrient Dense Safe Foods Degrading soil health & water quality vs. Healthy Soils.

# N-T-Crimp has taken Doudlah Farms to Organics-providing nutrient dense safe humanely raised food!



What's your one Thing?

"A nation that destoys its soil destroys itself." -FDR

<iframe

src="https://drive.google.com/file/d/0B0IvI35GxYPnSTNwbEVGc2hxcVk/
preview" width="640" height="480"></iframe>