Clifton Dixon /Owner/PATS

2400 Gold Rock RD, Rocky Mount, NC 27804 | 252 916-3828 clifton_dixon@hotmail.com

Dr. A. Richard Bonanno / NCSU

Associate Dean, CALS / Director NCCES / Phone: 919-515-1374 / Fax: 919-515-3135

Campus Box 7602 / 120 Patterson Hall, Raleigh, NC 27695-7602 / rich bohanno@ncsu.edu

Dear Dr. Bonanno,

It was great meeting you at the Covington Endowment Celebration. Thank you for taking the time to talk with me about the booklet I gave you. As discussed I am very excited about the work I have been doing with Burch and Boseman Farms these past 2 seasons with undercutting, digging and pulling the sweet potato mother root.

In this booklet you will see the work I did with George Naderman, PhD, Former Extension Soils Specialist (Retired) NCSU, numerous farm equipment manufacturers and farmers from 1991 until his retirement in 2001.

You will also see a letter from J Wayne Short, District Conservationist in Halifax County praising equipment I designed, contract manufactured and marketed throughout the southeast and mid-south.

Bobby Brock, NRCS State Agronomist and Wayne were convinced that straight no till was the most practical way to raise a cotton crop on coastal plains soils. George was convinced from several published research studies and his own on-farm studies with conventional tillage that these coastal plain soils had hardpans that reduced yields significantly.

Wayne and Bobby told me that if I would remove the closing coulters and baskets with squeeze wheels like on some of the old KMC strip tills, they would approve it for use on fields that were rated as highly erodible. Not only did it work better in no till conditions, it also gave us the floatation to run in conventionally tilled soils. Sometimes we feel that a government agency is putting undue hardship on the farmers to comply with another regulation. But in this case we made PATS the best rip-strip-till tool world in hard soil condtions! And here I would like to posthumously thank Bobby for his help & friendship over the years.

The reason I have created this booklet is to demonstrate to you that I have the ability to work with the NC sweet potato farmers, welding shops, OEM component suppliers and NCSU to develop a complete harvesting system! I look forward to talking with you.

Sincerely,

AE&E DIGEST, PAGE 35



Clifton Dixon, Dr. George Naderman Greene County, North Carolina, 1997



I was hired by Orthman Manufacturing in 1991 to represent them in NC, SC and GA.

In November of 1991 I met Hodge Kitchin at Scotland Neck, NC. He made me aware that he had to comply with new regulations concerning fields that had been designated highly erodible land (HEL) by the NRCS. Hodge had seen cotton planted straight no-till and did not like what he had seen. If he did not comply with ground cover requirements he would lose \$50,000.00 in government payments.

He liked my concept of re-bedding his land and banding cover crop in the middles. I talked with Wayne Short / Halifax County NRCS District Conservationist about options to comply. He was very adamant that he felt straight no-till was the best option. Hodge was just as adamant that he still needed a bed and that he wanted to rip under the row. We contacted Dr. George Naderman, a NCSU tillage researcher on his ideas on how to comply and not lose government payments.

We put in replicated research plots comparing no-till versus in row tillage. The in row tillage yields were statistically higher than no-till. These were the first of many tests that George and I put in until his retirement.



My Tribute To Dr. George Naderman

By: Clifton Dixon

DR. GEORGE NADERMAN (Photo taken at a Triticale research plot, Ft. Barnwell, NC. June 13, 2002.)

Dr. George Naderman stays as busy and committed to helping farmers and the environment of North Carolina as he did before his retirement. As seen in this picture, he and his good friend Bobby Brock were visiting Bill Smith, discussing the advantages of Triticale as a cover crop and the promising new varieties Resource Seeds, Inc. is developing.

George and I go back to the fall of 1991, when we first cooperated on some research plots with Hodge Kitchin at Scotland Neck, NC. Through the years I have tried to apply the knowledge and experience of George to the tillage systems I've developed.

In the mid '90s there was increasing interest in no till, as farmers put Conservation Plans into effect, as required for highly erodible land by the Farm Bill at that time. George kept reminding people, as he still does, that strip tillage (not just no-till) is likely to be needed to loosen the hardpan that forms in many sandy-natured soils of the eastern Coastal Plain. He bases this on his many test plots in farmer's fields here, as well as from the thorough research of NC State University and various other research institutions in the Southeast. The land does vary, even in the same field. There may be soil areas with very hard pan layers a foot or more deep, that limit root penetration and need deeper ripping. And even in the same field, some areas may not be need ripping at all--where ripping over a few inches deep will just cause problems by bringing up heavy clay that is at or just below the surface.

George has stressed the need for a variable depth ripper ever since I've known him. In a nut shell, what George has proven to me through the research data and field observation is:

1. All soils do not need subsoiling (either with no-till or conventional tillage).

2. The lighter colored, more sandy soils have serious, deeper pan layers, and usually need ripping down through that dense layer—probably even with conservation tillage. Darker soils, even somewhat sandy ones, have little or no pan layer, and need a shallow loosening, if any at all.

3. Deep tillage into clayey subsoils, on "clay galls" or on clayey hillsides usually does more harm than good. That's why I have worked so hard on perfecting this hydraulic row unit that has the ability to vary the depth of the ripper on the go.

At a field day this year near Wilson, NC, a farmer asked me what I had to pay George for all his help. I told him the only thing I ever paid George is attention.

So at this time, I would like to thank George for all his help throughout the years and wish for him a healthy, happy and productive retirement.

ZONES OF SOIL LOOSENING PRODUCED AT DIFFERING DEPTH BY A NEW "VARIABLE DEPTH RIPPER," AS COMPARED TO OTHER DEEP TILLAGE MACHINES

George Naderman, PhD, Former Extension Soil Specialist (Retired)

North Carolina State University, Raleigh, NC

This information is the major portion of a poster presentation offered (together with four co-authors) at the Annual Meeting of the Southern Branch of the American Society of Agronomy, Orlando, FL, February 4, 2002. (This begins on the next page.)



Conservation

January 24, 2002

John McCoy Orthman Manufacturing, Inc. P.O. Box B Lexington, NB 68850

Natural

Service

Resources

Dear Mr. McCoy,

I have been in the field and seen Clifton Dixon's latest rig run. Clifton has finally made the grade. His new rig will meet our long-term no-till ground cover requirements. It will also keep the blow outs under control in our clayey soils while doing a good job on the hardpans in our sandy soils. Clifton has finally reached the level of ground cover, soil protection, and long-term organic matter and soil tilth improvement we have been "conflicting' with him on for the last decade. I am glad to see such an enthusiastic, dedicated, and persevering person as Clifton finally pulling with us. His new rig meets all our cover requirements, something that his old rigs could not, and it definitely is the best rig I have seen for controlling blowouts. I can truly tell my people that Clifton's rig will do the job now! If you have any questions or need my assistance, please call.

Sincerely.

J. Wavne Short District Cohservationist

JWS:pb

CC: Clifton Dixon

Halifax County Agricultural Center 359 Ferrell Lane, Room 151 Post Office Box 8 Halifax, North Carolina 27839-0008 (252) 583-3481 Ext. 3 Phone (252) 583-1814 FAX

AE&E DIGEST, PAGE 55

Kinchafoonee Farm Services

Preston, Georgia • Wednesday, July 31, 2002



Mr. Wayne Dillard N President of Kinchafoonee Farm Services & Farmer

Mr. Jimmy Carter Former President of the United States of America & Farmer **Clifton Dixon** Owner & Developer of Precision Application Tillage Systems & Former Farmer

Former President Jimmy Carter congratulates Clifton Dixon on receiving the 2002 National Honor Award from the Soil and Water Conservation Society for his contributions to the conservation of soil, water and related natural resources. JOHN EDWARDS

United States Senate WASHINGTON, D. C. 20510 August 8, 2002

Mr. Clifton Dixon 133 Oakmont Drive, Suite 8 Greenville, NC 27858-5937

Dear Mr. Dixon:

Congratulations on receiving the Soil and Water Conservation Society's Honor Award. This honor brings distinction not only to you but to our entire state. I applaud your hard work and dedication to the field of agriculture.

Please let us know if we can help you in any way.

Yours sincerely,



J

JE/jmm

John Edwards

CLIFTON DIXON'S TRIBUTE TO HIS FAMILY



Frank D. Dixon August 20, 1915 - December 28, 1990 **Eunice Moore Dixon** March 24, 1914 - July 8, 1984



Sue D. Riff, Clifton F. Dixon and Marty D. Mills Moore Family Reunion, September 15, 2002

Craig A. Cox, SWCS Executive Director and Clifton Dixon July 17, 2002 Soil and Water Conservation Society Awards Meeting

My love of farming began on a small diversified farm in Black Jack, NC, a small farming community located near Greenville, NC nearly a half century ago.

Although our main crop was tobacco my father had a very diversified operation. He had a small flock of layer hens that supplies his weekly egg route in Greenville. We also had a small hog operation and an annual hog killing to fill the smoke house up with hams, cracklin's and sausage that he occasionally sold on that weekly egg route. He also had sweet potatoes, Irish potatoes and other seasonal vegetables that his weekly customers were happy to get when available.

Life was a lot different back then in Black Jack. When most of us school kids got home in the afternoon, we would change into our work clothes and do our chores. For me this meant gathering the eggs and putting them into the cartons used to deliver them. Also, there were hogs and cows to feed, and on special occasions, getting to help with land preparation or cultivating. Driving that Massev Ferguson 135 was a special treat for me just as I enjoy driving tractors while demonstrating my PATS equipment throughout our great country.

My mother was a Home Economics School Teacher. She dearly loved her job and her students. I still remember many of her former students visiting her until her death in 1984.

Summer was supposed to be a vacation from work for school teachers, but not for my mama. The summer was spent freezing and canning fresh vegetables and our pantry was full of Mason Jars with newly canned

vegetables that our family had worked so hard to produce.

As I look back at a special childhood I must admit I was very spoiled. To start with, I was an accident. Mama and Daddy were 41 when I was born. My oldest sister, Sue, was married and my other sister, Marty, was in college and my brother, Johnny Carr, was in the marines when I entered the second grade in 1962. Johnny Carr also loved farming, but never got the chance because he was killed in a car accident less than 2 miles from home in 1964. My parents never got over the loss.

My parents urged me to go to college, but I just had to farm. They co-signed my first PCA loan in 1974. The first few years went well, but inflation and drought in the late 70's had created a tremendous debt and when interest rates hit over 20% that was the straw that broke the camel's back. Through reorganization my parents and sisters got to save the home farm, but I lost all of the other farms and a lot of my parents'

and sisters' money.

After going broke farming the second time in 1987, I was fortunate that my father let me move back home with him. I had a job in the winter with the Carolina Farmer Newspaper calling on dealers throughout the southeast. Daddy would ride with me a lot and I am very thankful for that quality time we had together in his later years.

I lived in the old homeplace until 1995. With me on the road travelling so much, it was hard to keep the old big house livable so I rented 2 small offices in Greenville for \$250 per month with utilities furnished and sleep on the couch what little time I'm in Greenville. I am on the road most of the time and sometimes don't come home for as long as 2 months.

At this time, I would like to thank Sue and Marty for their continued love and support. So with the story told, I want to dedicate this award to my family.

Greenville businessman presented Conservation Society's Honor Award

By Ginger Livingston **Courtesv Of The Daily Reflector**

A Greenville businessman was recently honored for his work in the conservation field.

Clifton Dixon, owner of Precision Application Tillage Systems, received the Soil and Water Conservation Society's Honor Award during the organization's annual meeting in Indianapolis on July 17. The award was given

to individuals who have made significant contributions to the conservation of soil, water and related natural resources.

"He is driven by a sincere and intense dedication to find practical solutions to help farmers be more efficient and profitable in today's competitive. but



environmentally conscious world," said George Naderman, a North Carolina State University soils scientist who nominated Dixon for the award.

"Along the way he has listened, learned and tried to faithfully convey the principles and objectives of cover crops, residue management and conservation tillage offered by many of us professionals who worked to help further the use of these practices." Naderman said.

Dixon, a third generation farmer from Greenville, said all he has tried to do is produce an economical piece of equipment that lets farmers work more efficiently.

Dixon manufactures tilling equipment called precision application tillage system. The tiller allows farmers to prepare seed beds while leaving strips of unbroken earth between the rows.

The untilled earth lessens erosion and improves the nutrient levels in the soil.

Dixon said he drew from his own experiences as a farmer and the observations of current farmers when designing his equipment.

"I went broke twice farming. I'm not ashamed to say it," Dixon said in a telephone interview last week. "A lot of us did in the 1980s."

Dixon said that in the 1970s, American farmers were told they could feed the world and encouraged to make large investments in equipment using bank loans.

The inflation of the late 70's doubled fuel and labor cost and other inputs increased also.

"Then in the '80s, when the interest rates went into the 20 percent range, those of us that were highly leveraged could not cash flow our operations out.

Dixon got out of agriculture, but couldn't get the love of farming out of his system. He became a crop consultant and farm manager.

In the late 1980s and early 1990s the federal gov-

ernment started aggressively promoting soil conservation practices by offering farmers incentives for using more proactive conservation farming methods.

Dixon said farmers were interested in saving soil, but much equipment being used at the time made it difficult to implement common conservation practices.

He started tinkering with different tillers and started producing his precision application tillage system.

He had several ups and downs throughout the 1990s as he tried to find a manufacturing company to partner with and maintain his job as a crop consultant.

Eventually, Dixon started his own business, contracting out the equipment construction.

His days are now spent touring throughout Southern and Midwestern states demonstrating his equipment and educating farmers on how they can completely integrate conservation techniques into their operations.

The day after receiving his conservation award, Dixon was on the road, starting a two-week sales and demonstration tour in the Mississippi River states.

"I enjoy working with it," he said. "A lot of folks hunt and fish: I do tillage."

Dixon enjoys the work so much he started producing a periodic newspaper called "Eco Ag Digest." The small paper mainly promotes his tillage equipment, featuring photographs of the various farmers he's worked with and different conservation events he's attended. However, he includes articles from conservation specialists. Naderman said.

The Soil and Water Conservation Society, founded in 1945, is a nonprofit organization that advocates the conservation profession and science-based conservation policy.



GREENVILLE BUSINESSMAN Clifton Dixon displays the honor Award he recently received from the Soil and Water Conservation Society. Dixon designs and manufactures farming equipment that reduces soil erosion.









Top Left: The first field Joel tested his PATS without burn down.

Above: Joel, left, and Wayne Boseman, work on their first PATS row unit 5 years ago.

Left: Planting corn in burned down cover crop.

Below Left: FASSE electric over hydraulic valves on **Boseman Farms** Challenger.



We have a great working relationship with Mr. Clifton Dixon marketing his strip till equipment here in North Carolina. Clifton has been a great deal of help finding new prospects for us on large tillage tractors. We have sold 2 of his strip till units for delivery in 2000 and 10 units delivered this year. Our customers are very pleased with quality of the machines. Performance surpassed everyone's expectations. Three machines were 8row on 3-pt hitch and the other machines mounted on a caddy 8 and 12 units. We have sold 2 Challenger tillage tractors and rented a Challenger 85E because of our exposure marketing the PATS machines. We have also provided a Challenger tractor for Clifton's demo's that gave us further exposure in the area. Thurston and Orthman Manufacturing, who build the components for the PATS machines, are recognized in the industry for providing very high quality products. Clifton is very knowledgeable in strip till agronomic's. Its has been a pleasure working with Clifton in providing our customers with a very high quality Conservation Strip Tillage machine and giving us the opportunity to sell our Cat tractors. If you have any questions please feel free to call me anytime.

Kelly Rubado Ag Sales Rep Gregory Poole Equip Co 1-252-944-6233 Mobile No.

800-362-7278

4807 Beryl Rr Raleigh, NC 27606 800-451-7278

IS Highway 301 S & NC 59 Hope Mills, NC 28348

CAT

Kelly Rubado, Ag Sales Representative

Clifton Dixon and PATS Tillage Equipment

US Highway 17 at Springs Rd Washington, NC 27889 800-645-7278

151 Backhoe Rd. N.E. Leland, NC 28451 800-641-7278



Carlton Company King Air Wilson-Rocky Mount, NC Airport Thursday, June 15, 2000

Gregory Poole & Carlton **Demonstration Boseman** Farms Battleboro, NC

Special Guest Zack Geer Carlton Company Byrl Harrell PATS John, Jr. & Gary Dawson Farmers, Hawkinsville, GA Jim & Teel Warbington Farmers, Vienna, Georgia Ronnie Lee Farmer, Dawson, GA Layton W. Jensen President, Thurston Manufacturing Co., Thurston, NE



Above - Cotton planted on Boseman Farms with PATS Below - Guests observe beans being planted behind wheat on Boseman Farms





Mr. Clifton Dixon 133 Oakmont Drive, Suite 8 Greenville, North Carolina 27858

Dear Clifton:

We are finishing up our planting season in southwest Georgia at this time, and I wanted to give you an update on the eight PATS units delivered to our customers.

These units have done an excellent job during this season. As you know, once again, we have had less than adequate moisture and our customers are crediting their PATS units for good stands of cotton and peanuts.

We feel these units are an excellent match with our "Caterpillar" Challenger Tractors. The Caddy System's ability to remove the weight from the three point hitches has solved many of our problems.

In short, we feel that a "Caterpillar" pulling a PATS Unit is a quality tractor pulling a quality implement.

We appreciate your efforts.

SWB/bsm

Box 462

912-367-0068

CAT Albany, Georgia 31702 P.O. Box 1067 912-435-6262

Baxley, Georgia 31513 Brunswick, Georgie 31521 Box 310 912-265-5010

June 13, 2001

Sincerely, CARLTON COMPANY Sid W. Barge

Senior Vice President/Sales

Dublin, Georgia 31040 912-272-1661

Savannah, Georga 31402 Box 1056 912-964-7150

Valdosta, Georgia 31603 Box 1661 912-242-8610

Box 909





Introducing Precision Application Tillage Systems Sweet Potato Harvest Management System That Will: 1 – Improve quality and reduce spoilage by tightening the skins of the potato before harvest.

2 – Allow potato size to be determined by cutting the vines and pulling the mother root.

3 – Pulling the mother root reduces the time required to put the potatoes in the bucket, not having to pull the potatoes from the roots.

4 – Puts 2 rows into a single windrow with potatoes better exposed to allow for an easier hand harvest.

5 – Does not leave deep furrow like the disc plow, making it easier for the hand labor to walk to the truck.

6 – With the sizing option on the 4 row self propelled harvester, potatoes can be sized into # 1's and jumbos with the option of putting the canners into the # 1's. The canners can also be left in a windrow and covered to allow harvest when boxes are available or processors are ready to take them in bulk.

Another option is to put the # 1's and jumbos in 1 box while putting the canners in a separate box.

PATS Sweet Potato Vine & Mother Root Management System with Mechanical Sizing and Harvesting Option!

le	Row # 1	Middle # 2	Row # 2	Middle # 3	Row # 3	Middle # 4	Row # 4	Middle # 5	Row # 5	Middle # 6	Row # 6	Middle # 7	Row # 7	Middle # 8
	Covered		Covered		Covered		Covered		Covered		Covered		Covered	
	Potatoes		Potatoes		Potatoes		Potatoes		Potatoes	_	Potatoes		Potatoes	
		Windrow # 1				Windrow # 2				Windrow # 3				Windrov # 4
						Conveyor				Conveyor				
								Driver						
							Conveyor # 2		Conveyor #1					
							Canner Po	tato Sizing	Rollers	Conveyor	# 1			
										Conveyor	<i>π</i> ⊥			Canners # 1 Swee
					Conveyor	# 2	Jumbo Pot	tato Sizing	Rollers					ып вох
	Jumbo Sweet Pot Bin Box	ato												
				Can be m	ounted on J	ohn Deere 9	400, 9500 d	or 9600 stri	ipped down រួ	grain combi	nes.			

Row # 8

Middle # 9

Step # 1 Cut the vines in the middle and trim the top of the row.

Covered Potatoes Step # 2 - Pull the roots Chop the vines Cover the potatoes

Step # 3 Dig 8 rows of potatoes and put them in 4 windrows

Step # 4 - Harvest Option # 1 - Put canners & # 1 potatoes in boxes with conveyor # 1

Option # 2 - Leave canners in center windrow for later harvest. Put # 1 potatoes in boxes with conveyor # 1



My experience in sweet potato harvesting began in August of 2014 when Robert Boyette and Danny Kornegay told Joel Boseman and me about seeing sweet potatoes being undercut, in an attempt to tighten the skins by Mississippi State University the previous week at a field day put on by MSU.

At that time Joel's sweet potato crop was ahead of schedule. As he pulls most of his tobacco by hand and the tobacco harvest was behind schedule, he was looking for a way to slow the maturity of his potatoes. He purchased a shreader to achieve this and hopefully tighten the skins on his potatoes.

We built the 6 row under cutter on the facing page to try to achieve this. The problem we had was the disc digger did a poor job of digging because of the loose soil.

I attended a demonstration in early September at Burch Farms in Faison by MSU with their under cutter that is pictured on the facing page. I observed that Burch Farms were having the same problems with the loose soil, just like Joel.

TriEst Ag Group contracted me to design & assist in building a cone roller and going to Maine to fumigate. I had to put this project on hold until I got back.





I visited Tull Hill Farms on 10-23-2014 to talk with Kendall and Michael Hill about under cutting sweet potatoes to control the size and tighten the skins. Kendall adamantly told me that you cannot control the size of sweet potatoes or tighten the skins by under cutting. He told me the only way to shut the plant down was to mow the vines to cut off the energy supply.

Kendall and Michael both stressed the need for a machine to pull the sweet potato mother root to tighten the skins to reduce skinning during harvest and increase worker productivity.

On the facing page you can see where they shredded the vines with a specialty flail mower with longer chains in the middles to attempt to do a better job.Wet weather prevented harvest, so the vines had chance to regrow.

This is why I feel we need to run coulter blades in the middles while running small hydraulic mowers like the ones on Joel Boseman's tobacco flower trimmer sprayers to trim the tops of the beds to tighten the skins and toughen the stems for the PATS mother root puller. Robert Boyette told me that he has trimmed the leaves to toughen the stems to make his puller/shredder pull better and increase the speed in rank vine conditions.



I have been told that the sweet potato industry and NCSU have been working on different concepts of pulling the sweet potato mother root for over 50 years.

The top picture shows the latest concept that NCSU has been working with for years. NCSU and Amadas have built a 2 row like this and ran it at Burch Farms this past summer and fall.

The bottom picture is from 1973 at the research station at Clinton, NC of the tire sweet potato root puller developed by NCSU.

As I felt that the NCSU / Amadas concept had too many moving parts. I built a 1 row prototype with the wheels concept.

On the next page you will see this prototype and the changes I made on it after talking with Terry Strickland.

I took this prototype to many farmers to get their opinions on the video and how well it appeared to work. Terry told me that he had tried pulling the mother roots with wheels years before and could never get them to work satisfactory.

I appreciate Terry sharing his experience with me and putting me on the right track!





This was my first prototype row unit Joel had a piece of 12" x 6 " tubing that I utilized to simulate the row.

We had put disc bedders on one of the versions of the 6 row under cutter we had built to cut and cover up the vines in the middle. Joel and Robert both said that we should not throw soil in the middle as it would make it harder to follow with the digger and that it would make the middles mushy in wet conditions.

Another change that had to be made was to remove the rear roller and replace it with gauge wheels. We put them on the front at first, but found they were pushing the vines down before we could grab them. We then moved them to the rear and mounted floating vine trainers on the front.

The first time Jimmy Burch looked at the PATS puller he remarked that there was no way that the belt would track the wheels satisfactory. He was absolutely correct. We are going to replace the wide belt with standard v belts and pulleys. We will still use a knobby or grooved tire as an idler and pulling device.





I was very blessed to have the opportunity to work on pulling the sweet potato mother root at Burch Farms this past season in the same field as the NCSU / Amadus flail puller machine.

These are some of the issues that I have addressed and the same issues I feel that they need to address.

1 – Pictured is the rear roller skinning the sweet potatoes.I have solved this by replacing my rear roller with a gauge wheel on each side of the row.

2 – I have been told that the sweet potatoes need to stay in the ground from several days to a week to fully tighten the skins. I feel that the potatoes need to be wrapped up with soil to prevent damage from the sun. On the next page you will see where I have mounted disc hillers to cover the potatoes after the mother roots have been pulled.

3 – As the pictures from Tull Hill Farms demonstrate vines in the middles are tough to terminate. The PATS Sweet Potato Harvest Management System will utilize coulter blades in the middles to chop up the vines a week before digging to allow decomposition to begin.





Pictured are the coulters and sweet potato root puller I built at Burch and Boseman Farms last season. This is how the PATS Sweet Potato Quality and Harvest Management System works.

1 – When the sweet potatoes have reached the desired size we run the coulters down the middles and a hydraulically powered individual mower on top of each row to trim the leaves. This will be rear mounted on a 4, 6 or 8 row toolbar.

2 – The PATS Sweet Potato Mother Root Puller will be run as soon as possible to pull the roots, chop the vines and wrap the potatoes up with soil to protect them from the sun.

3 – The PATS sweet potato digger, built from old peanut diggers with modifications (see page 14) will be able to dig 4, 6 or 8 rows at the time.

This system will allow the grower to:

- 1 Better manage the size of his sweet potatoes.
- 2 Improve quality by tightening skins.
- 3 Reduce harvest losses.
- 4 Improve labor efficiencies.





I would not have been able to have developed these pieces of equipment without:

1 – Burch & Boseman Farms Support with tractors, shop equipment, parts & employee's support like Lilo Orona.

2 – Ideas like Bill Burch's concept to slow the wheels and belt down to let the forward motion of the tractor do the pulling.

3 – Langley Industrial (\$4,500.00) and Warsaw Welding (\$1,500.00) extending me credit to get to this point.

I plan on:

- 1 Utilize the farmer's existing toolbars & parts.
- 2 Let companies like Langley & Warsaw fabricate parts.
- 3 Buy OEM and sell to the farmer at dealer price.

4 – Let the farmer buy it unassembled to save money or have an assembly assisted price or fully assembled price.

I am going to give this booklet to all the large sweet potato farmers to see if they are willing to help me continue development and put in orders.

I would also welcome support from NCSU and other sweet potato support groups.

Thank you for the opportunity to make this presentation!





IT CAN ALSO PULL WEEDS!

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