From: Bill Rooney
To: "Rene Clara"

Subject: RE:

**Date:** Saturday, October 10, 2009 11:11:08 PM

I approve – Have a safe trip.

Bill

From: Rene Clara
Sent: Wednesday, October 07, 2009 11:40 AM

To: Bill Rooney Subject:

Dear Dr. Bill,

I am in contact with Ing. Julián Ramírez, ICTA Director manager and René Velásquez, PROSEMILLAS Director in Guatemala. We are planning to do a visit of pursuit to his plans of work in sorghum to observe the experimental varieties for forage (grain and forage) and the problems in the seed producción of the sorghum varieties.

I am programming this visit for the 27th, 28 and 29 of Octubre/09. I want to know if you approve it.

Regards,

René Clará V. INTSORMIL

Host Regional Coordinator

CENTA, Apdo. Postal 885, San Salvador, El Salvador, C.A. Tel. (503) 2302 0239 - (503) 7815 2238 cel.

Fax: (503) 2302 0239

E-mail:

iObtén la mejor experiencia en la web! Descarga gratis el nuevo Internet Explorer 8 http://downloads.yahoo.com/ieak8/?l=e1 From: Bill Rooney
To: "Rene Clara"

Subject: RE: [Fwd: Re: visita Rene Clara]

Date: Saturday, October 17, 2009 7:05:38 AM

## Rene:

I think that is acceptable. I will make my plans on that schedule.

Regards,

Bill

From: Rene Clara

Sent: Friday, October 16, 2009 10:10 AM

To: Bill Rooney; raobando@mx.inta.gob.ni

; evega@inta.gob.ni

**Subject:** Re: [Fwd: Re: visita Rene Clara]

Dr. Bill,

We would come to Managua on Monday 30 evening. We would work on Tuesday and Wednesday in Nicaragua and would sleep in Choluteca (Wednesday) On Thursday we go to El Salvador and we would work on Friday at SA and SCP, sleeping in hotel it surrounds airport. Saturday (Dec. 5) you return to Texas.

Regards,

René Clará V. INTSORMIL Host Regional Coordinator

CENTA, Apdo. Postal 885, San Salvador, El Salvador, C.A.

Tel. (503) 2302 0239 - (503) 7815 2238 cel.

Fax: (503) 2302 0239

E-mail:

**De:** Bill Rooney <wlr@tamu.edu>

Para: Rene Clara < >; raobando@mx.inta.gob.ni

CC: ; evega@inta.gob.ni Enviado: vie, octubre 16, 2009 8:05:47 AM

**Asunto:** RE: [Fwd: Re: visita Rene Clara]

## Rene and Rafael

23-27 Nov – NO 30- 4 Dec – YES

We start in Nicaragua and go to Salvador?

Regards,

Bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151

From: Rene Clara [ Sent: Thursday, October 15, 2009 4:09 PM

**To:** raobando@mx.inta.gob.ni

cc: ; evega@inta.gob.ni; Bill Rooney

**Subject:** Re: [Fwd: Re: visita Rene Clara]

Payo,

Pienso que la semana del 23 al 27 de Noviembre o la semana del 30 de Noviembre al 4 de Diciembre/ sería buena mi visita junto co9n el Dr. Bill Rooney. Podríamos estar en Nicaragua unos 2 días y otros 2 días en El Salvador, mas un día de viaje.

Esperemos a ver que dice el Dr. Bill.

What do you think Dr. Bill?

Saludos,

René Clará V. INTSORMIL Host Regional Coordinator

CENTA, Apdo. Postal 885, San Salvador, El Salvador, C.A. Tel. (503) 2302 0239 - (503) 7815 2238 cel.

Fax: (503) 2302 0239

E-mail:

```
De: "raobando@mx.inta.gob.ni" <raobando@mx.inta.gob.ni>
Para: Rene Clara <
CC: raobando@mx.inta.gob.ni;
                                                             ; evega@inta.gob.ni
Enviado: jue, octubre 15, 2009 12:36:03 PM
Asunto: Re: [Fwd: Re: visita Rene Clara]
> Rene:
No se si con estas fechas de siembra vos podes estimar la fecha de tu
próxima visita. Te adelanto que en Estelí nos va a atender el Ing. Julio
Molina ya que el Ing. Rodolfo Valdivia trabaja para INTA hasta hoy 15 de
octubre.
Payo
> Gracias por la información, esta interesante saber de los resultados. En
> mi visita tenemos que ver esto.
> Saludos,
> René Clará V.
> INTSORMIL
> Host Regional Coordinator
> CENTA, Apdo. Postal 885,
> San Salvador, El Salvador, C.A.
> Tel. (503) 2302 0239 - (503) 7815 2238 cel.
> Fax: (503) 2302 0239
> E-mail:
>
>
> De: "raobando@mx.inta.gob.ni" <raobando@mx.inta.gob.ni>
> Para:
> CC:
                                evega@inta.gob ni
> Enviado: mar, octubre 13, 2009 11:47:53 AM
> Asunto: [Fwd: Re: visita Rene Clara]
> Rene:
> Te reenvío correo de Federico Baltodano con fechas y arreglos de siembra
> de producción de semilla del hibrido ESHG-3.
> Los arreglos son:
> Siembra simultánea: 3 de septiembre
> Siembra en arreglo el 3 el macho y el 7 la hembra
> Siembra en arreglo el 3 la hembra y 7 el macho.
> Rafael Obando
```

>

```
>
>
> ------ Mensaje original -----
> Asunto: Re: visita Rene Clara
> De: "Federico Baltodano"
> Fecha: Lun, 12 de Octubre de 2009, 4:42 pm
> Para: raobando@mx.inta.gob ni
> Rafael la siembra del sorgo ESHG 3 fue el 3 de Septiembre, la siembra de
> sorgo simultanio y
> 4 dias despues el macho primero y la hembra despues. gracias Federico B.
> ---- Original Message -----
> From: <<u>raobando@mx.inta.gob.ni</u>>
> To: <<u>raobando@mx.inta.gob ni</u>>
> Cc: < hpedroza@ibw.com.ni >;
> < <u>vizaguirre@inta.gob.ni</u>>;
> < imarcha@inta.gob.ni>;
> < mobando@inta.gob.ni>; < mgarcia@inta.gob.ni>;
> <
>
> Sent: Friday, May 15, 2009 4:26 PM
> Subject: Re: visita Rene Clara
>
>> ----- Mensaje original
 -----Mis estimados amigos:
> Les recuerdo que deben poner en su programacion semanal el viaje a Managua
> al CNIAB el dia jueves 21 para presentar los resultados del proyecto
> INTSORMIL en 2008 y la propuesta de actividades para 2009. Nos vemos ese
> dia en CNIAB. Iniciamos a las 8:30 am
> Rafael Obando
>
>
>> Amigos:
>> Adjunto les envio la agenda a desarrollar durante la visita del Ing.
>> Clara que sera del 19 al 22 de mayo. La agenda por dia es la siguiente:
>> Martes 19: Viaje de San Salvador a Managua
>> Miercoles 20: Viaje a Posoltega a ver lote de produccion de semilla del
>> hibrido de grano blanco ESHG-3 en la finca de Federico Baltodano.
>> Jueves 21: Reunion con todos los investigadores que llevan proyectos
>> INTSORMIL para revisar informe 2008 y el plan de actividades para 2009
>> Viernes 22: Viaje de Managua a San Salvador.
>> El dia jueves 21 la reunion sera en CNIAB iniciando a las 8 am. Cada
>> responsable de proyecto debe hacer una presentación de los resultados de
>> 2008 para analizarlos y recibir recomendaciones de elaboracion de
```

```
>> informes
>> para INTSORMIL. Ademas se haran recomendaciones a las propuestas de
>> actividades a desarrollar en 2009. Pueden iniciar las gestiones de
>> logistica para el viaje a managua afectando el proyecto INTSORMIL.
>>
>>
>>
>> Asunto: Re: Presentación propuestas y evaluación externa.
>> De: raobando@localhost
>> Fecha: Mar, 5 de Mayo de 2009, 9:13 am
>> Para
>> ------
>>
>>> Rene:
>>
>> Muchas gracias por tu comprension. Al mismo tiempo que te envie el plan
>> voy a enviar a los funcionarios de INTA para que ellos lo aprueben. Tal
>> vez seria bueno que hicieramos el plan de trabajo para enviarlo a las
>> regiones para que los investigadores regionales lo incorporen en su
>> programación de actividades y obtengan el permiso y los medios para
>> viajar
>> a Managua a la reunion. Propongo la siguiente agenda:
>> Martes 19: Viaje de San Salvador a Managua
>> Miercoles 20: Viaje a Posoltega a ver lote de produccion de semilla del
>> hibrido de grano blanco ESHG-3.
>> Jueves 21: Reunion con todos los investigadores que llevan proyectos
>> INTSORMIL para revisar informe 2008 y el plan de actividades para 2009
>> Viernes 22: Viaje de Managua a San Salvador.
>> Rafael Obando
>>
>>
>> Payo,
>>>
>>> Te esperamos esta semana, pero envíame propuestas ya discutidas y
>>> revisadas en INTA.
>>> Yo siempre te he dicho que utilices fondos del INTSORMIL para
>>> comunicarte
>>> en un Cyber. Creo que INTA no te puede restringir esta opción. De esta
>>> manera podemos avanzar.
>>>
>>> Sigo con el plan de llegar el 19 de los corrientes para trabajar 20, 21
>>> regresar el viernes 22. Mi prioridad es discutir el nuevo plan de
>>> trabajo
>>> 2009-2010 y ver la producción de semilla del híbrido ESHG-3 donde
>>> Federico
>>> Valtodano, caso que haya sembrado. Si quieres agregar algo mas a este
>>> programa lo puedes hacer.
>>>
>>> Saludos,
>>>
>>>
```

>>> René Clará V.
>>> Coordinador Regional Local
>>> INTSORMIL
>>> CENTA, Aptdo. Postal 885,
>>> San Salvador, El Salvador, C.A.
>>> Tel. (503) 2302 0239 - (503) 7815 2238 cel.
>>> E-mail
>>>
>>
>
>
>
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Tittp://downloads.yanoo.com/reako/:1-e1

iObtén la mejor experiencia en la web! Descarga gratis el nuevo Internet Explorer 8 http://downloads.yahoo.com/ieak8/?l=e1 From: Bill Rooney
To: "Abernathy, Chris"
Cc:

**Subject:** RE: 2008 Sorghum Trials

 Date:
 Tuesday, October 06, 2009 5:07:32 AM

 Attachments:
 10.05.09 - 2008 RBFT DATA.xlsx

## Chris:

My apologies in the delay to get you this information, but as usual everything takes longer than it should. I'm sending you both raw data and analyzed data from the 2008 trials on sorghum. While there is some variation from location to location, there is a core set of information that should be of value. What I don't have compiled would be relative weather data. Don't know if you need/want it, but we can request it from the cooperators when we start collecting 2009 data (which will be pretty soon now).

Take a look – if you have questions, please let us know.

Regards,

Bill

**From:** Abernathy, Chris [mailto:abernathycr@ornl.gov]

**Sent:** Tuesday, August 18, 2009 6:52 AM

To: Bill Rooney
Cc:

Subject: RE: 2008 Sorghum Trials

Thanks Bill. That is great.

DoE is pushing for almost anything at this point, but is VERY aware of the impact the funding delays caused.

Chris

P.S. hooray for grad students!

From: Bill Rooney [mailto:wlr@tamu.edu] Sent: Tuesday, August 18, 2009 7:45 AM

**To:** Abernathy, Chris

Cc:

Subject: RE: 2008 Sorghum Trials

Chris

We have data for 2008 - we've been compiling it in bits and pieces from the cooperators this summer. Because I was doing such a poor job (didn't have time), I've assigned a graduate student

to compile the data for both 2008 and 2009. He will be in contact with the data as soon as I have a chance to approve what he has.
regards,
bill
Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151
Original Message  From: Abernathy, Chris [mailto:abernathycr@ornl.gov]  Sent: Monday, August 17, 2009 9:59 AM  To: William Rooney (wlr@tamu.edu)  Subject: 2008 Sorghum Trials
Bill,
Were there any sorghum trials planted in 2008? If so, were data collected on them? If not, are there trials in place now for 2009?
I am trying to determine which trials I can expect data for 2008.
Thanks for your help,
-Chris
***********************
Chris Abernathy
Environmental Project Manager
Environmental Sciences Division
Oak Ridge National Laboratory (865) 241-5877 (office); (865) 576-9939 (fax)

Hybrid	Sample	Plot	Year	Location	Rep	Entry	Plant Ht.(C.M)
22053	Α		2008	KY	1	1	
22053	В		2008	KY	1	1	•
22053	С		2008	KY	1	1	•
22053	Α	•	2008	KY	2	1	•
22053	В		2008	KY	2	1	
22053	С		2008	KY	2	1	
M81-E	Α		2008	KY	1	2	
M81-E	В		2008	KY	1	2	
M81-E	С		2008	KY	1	2	
M81-E	Α		2008	KY	2	2	
M81-E	В		2008	KY	2	2	
M81-E	С		2008	KY	2	2	
Graze-N-Bale	Α		2008	KY	1	3	
Graze-N-Bale	В		2008	KY	1	3	
Graze-N-Bale	С		2008	KY	1	3	
Graze-N-Bale	Α		2008	KY	2	3	
Graze-N-Bale	В		2008	KY	2	3	
Graze-N-Bale	С		2008	KY	2	3	
grazeall3	Α		2008	KY	1	4	
grazeall3	В		2008	KY	1	4	
grazeall3	С		2008	KY	1	4	
grazeall3	Α		2008	KY	2	4	
grazeall3	В		2008	KY	2	4	
grazeall3	С		2008	KY	2	4	
sugart	Α		2008	KY	1	5	
sugart	В		2008	KY	1	5	
sugart	С		2008	KY	1	5	
sugart	Α		2008	KY	2	5	
sugart	В		2008	KY	2	5	
sugart	С		2008	KY	2	5	
sugart		302	2008	NC	3	5	
sugart		101	2008	NC	1	5	
sugart		204	2008	NC	2	5	
sugart		403	2008	NC	4	5	
M81-E		105	2008	NC	1	2	
M81-E	•	305	2008	NC	3	2	
M81-E		203	2008	NC	2	2	
M81-E		401	2008	NC	4	2	
Graze-N-Bale		104	2008	NC	1	3	
Graze-N-Bale		205	2008	NC	2	3	
Graze-N-Bale		301	2008	NC	3	3	
Graze-N-Bale		402	2008	NC	4	3	
grazeall3		102	2008	NC	1	4	
grazeall3		303	2008	NC	3	4	
-							

grazeall3		404	2008	NC	4	4	
grazeall3		201	2008	NC	2	4	
22053		103	2008	NC	1	1	
22053		304	2008	NC	3	1	
22053		405	2008	NC	4	1	
22053		202	2008	NC	2	1	
sugart	•	1	2008	MS	1	5	251.0
M81-E		2	2008	MS	1	2	256.4
22053		3	2008	MS	1	1	259.0
84G62		4	2008	MS	1	6	64.1
grazeall3		5	2008	MS	1	4	207.4
Graze-N-Bale		6	2008	MS	1	3	355.5
M81-E		7	2008	MS	2	2	271.1
84G62		8	2008	MS	2	6	72.6
22053		9	2008	MS	2	1	273.8
sugart		10	2008	MS	2	5	250.3
Graze-N-Bale		11	2008	MS	2	3	325.3
grazeall3		12	2008	MS	2	4	179.3
Graze-N-Bale		13	2008	MS	3	3	405.3
grazeall3		14	2008	MS	3	4	205.8
84G62		15	2008	MS	3	6	74.2
sugart		16	2008	MS	3	5	264.5
M81-E		17	2008	MS	3	2	259.8
22053		18	2008	MS	3	1	291.4
sugart		101	2008	CS	1	5	279.4
84G62		102	2008	CS	1	6	114.3
grazeall3		103	2008	CS	1	4	190.5
22053		104	2008	CS	1	1	165.1
Graze-n-Bale		105	2008	CS	1	3	254
M81-E		106	2008	CS	1	2	215.9
84G62		201	2008	CS	2	6	127
sugart		202	2008	CS	2	5	228.6
grazeall3		203	2008	CS	2	4	203.2
Graze-n-Bale		204	2008	CS	2	3	241.3
M81-E		205	2008	CS	2	2	254
22053		206	2008	CS	2	1	190.5
M81-E		301	2008	CS	3	2	228.6
sugart		302	2008	CS	3	5	215.9
84G62		303	2008	CS	3	6	127
grazeall3		304	2008	CS	3	4	203.2
Graze-n-Bale		305	2008	CS	3	3	304.8
22053		306	2008	CS	3	1	203.2
84G62		401	2008	CS	4	6	127
grazeall3		402	2008	CS	4	4	203.2
22053		403	2008	CS	4	1	190.5
Graze-n-Bale		404	2008	CS	4	3	279.4
M81-E		405	2008	CS	4	2	266.7
		-	-				

						_	
sugart	•	406	2008	CS	4	5	254
84G62	•		2008	CS2	1	6	121.92
sugart	•	•	2008	CS2	1	5	299.72
M81-E			2008	CS2	1	2	289.56
Graze-n-Bale			2008	CS2	1	3	317.5
grazeall3			2008	CS2	1	4	215.9
22053	•	•	2008	CS2	1	1	203.2
sugart		101	2008	CC	1	5	198.12
84G62		102	2008	CC	1	6	91.44
grazeall3		103	2008	CC	1	4	152.40
22053		104	2008	CC	1	1	152.40
Graze-n-Bale		105	2008	CC	1	3	243.84
M81-E		106	2008	CC	1	2	213.36
84G62	•	201	2008	CC	2	6	243.84
sugart		202	2008	CC	2	5	198.12
grazeall3		203	2008	CC	2	4	274.32
Graze-n-Bale		204	2008	CC	2	3	228.60
M81-E	-	205	2008	CC	2	2	
22053	•	206	2008	CC	2	1	·
M81-E	•	301	2008	CC	3	2	•
sugart	•	302	2008	CC	3	5	•
84G62	•	303	2008	CC	3	6	•
grazeall3	•	304	2008	CC	3	4	•
Graze-n-Bale	•	305	2008	CC	3	3	•
	•	306			3		•
22053	•		2008	CC		1	100.00
84G62	•	401	2008	CC	4	6	106.68
grazeall3	•	402	2008	CC	4	4	182.88
22053	•	403	2008	CC	4	1	182.88
Graze-n-Bale	•	404	2008	CC	4	3	289.56
M81-E	•	405	2008	CC	4	2	274.32
sugart	•	406	2008	CC	4	5	274.32
Graze-n-Bale	•	101	2008	KA	1	3	352.42
22053	•	102	2008	KA	1	1	356.88
grazeall3	•	103	2008	KA	1	4	307.34
sugart	•	104	2008	KA	1	5	344.17
Graze-n-Bale	•	201	2008	KA	2	3	346.08
sugart		202	2008	KA	2	5	368.93
22053		203	2008	KA	2	1	365.12
grazeall3		204	2008	KA	2	4	279.40
Graze-n-bale	•	301	2008	KA	3	3	344.81
22053		302	2008	KA	3	1	323.85
grazeall3		303	2008	KA	3	4	276.23
sugart		304	2008	KA	3	5	327.02
Graze-n-Bale		401	2008	KA	4	3	316.24
sugart		402	2008	KA	4	5	324.48
22053		403	2008	KA	4	1	321.95
grazeall3		404	2008	KA	4	4	241.94
-		- •		•			

Dependent Variable: height

Source DF SS MS F Pr>F

Model 7 34698.32 4956.903 2.02 0.1727

Error 8 19635.44 2454.431 Corrected Total 15 54333.76

R-Square CV Root MSE Mean 0.638614 23.96904 49.54221 206.6925

 Source
 DF
 Type I SS
 MS
 F
 Pr>F

 hybrid
 5
 23985.44
 4797.087
 1.95
 0.1906

 rep
 2
 10712.88
 5356.441
 2.18
 0.1752

 Source
 DF
 Type III SS MS
 F
 Pr>F

 hybrid
 5
 24454.79
 4890.958
 1.99
 0.1842

 rep
 2
 10712.88
 5356.441
 2.18
 0.1752

Dependent Variable: freshyield

Source DF SS MS F Pr>F Model 8 6.98E+09 8.73E+08 20.43 <.0001

Error 15 6.41E+08 42712142 Corrected Total 23 7.62E+09

R-Square CV Root MSE Mean 0.915946 14.3745 6535.453 45465.6

 Source
 DF
 Type I SS
 MS
 F
 Pr>F

 hybrid
 5
 5.77E+09
 1.15E+09
 27 <.0001</td>

 rep
 3
 1.22E+09
 4.05E+08
 9.48
 0.0009

 Source
 DF
 Type III SS MS
 F
 Pr>F

 hybrid
 5 5.77E+09 1.15E+09
 27 <.0001</td>

 rep
 3 1.22E+09 4.05E+08
 9.48 0.0009

Dependent Variable: freshtons

Source DF SS MS F Pr>F Model 8 1389.309 173.6637 20.43 <.0001

Error 15 127.493 8.499532 Corrected Total 23 1516.802

R-Square CV Root MSE Mean 0.915946 14.3745 2.915396 20.28172

Source DF Type I SS MS F Pr>F hybrid 5 1147.493 229.4985 27 <.0001

	rep		3	241.8167	80.60557		9.48	0.0009
	Source hybrid rep		5	Type III SS 1147.493 241.8167	229.4985			r>F .0001 0.0009
Dependen	t Variable: Source Model Error Corrected	DF	7	SS 3.53E+08 59403914 14			Pi 5.94	r>F 0.0157
	•			Root MSE 2913.121				
	Source hybrid rep		5	Type I SS 2.75E+08 77653673	55081313		6.49 4.58	
	Source hybrid rep		5	Type III SS 2.84E+08 77653673	56746450		Pi 6.69 4.58	r>F 0.0135 0.0536
Dependen	t Variable: Source Model Error Corrected	DF	7 7		MS 10.03678 1.688732 82.07859	F	P 5.94	r>F 0.0157
	•			Root MSE 1.299512				
	Source hybrid rep			Type I SS 54.80472 15.45275			6.49 4.58	
	Source hybrid rep			Type III SS 56.46149 15.45275				
Dependen <sup>-</sup>	t Variable: Source	dm DF	_	SS	MS	F	P	r>F

7 0.045254 0.006465 1.26

0.3823

Model

Error	7	0.035786	0.005112
Corrected Total		14	0.08104

R-Square CV Root MSE Mean 0.558414 17.78616 0.0715 0.402

Source	DF		Type I SS	MS	F	Pr	>F
hybrid		5	0.044907	0.008981		1.76	0.2403
rep		2	0.000347	0.000174		0.03	0.9668

 Source
 DF
 Type III SS
 MS
 F
 Pr>F

 hybrid
 5
 0.044897
 0.008979
 1.76
 0.2404

 rep
 2
 0.000347
 0.000174
 0.03
 0.9668

Dependent Variable: subfreshwt

Source DF SS MS F Pr>F

Model 7 0.780781 0.11154 0.46 0.8342

Error 7 1.685019 0.240717 Corrected Total 14 2.4658

R-Square CV Root MSE Mean 0.316644 13.82054 0.490629 3.55

 Source
 DF
 Type I SS
 MS
 F
 Pr>F

 hybrid
 5
 0.71835
 0.14367
 0.6
 0.7053

 rep
 2
 0.062431
 0.031215
 0.13
 0.8804

 Source
 DF
 Type III SS
 MS
 F
 Pr>F

 hybrid
 5
 0.705531
 0.141106
 0.59
 0.7121

 rep
 2
 0.062431
 0.031215
 0.13
 0.8804

Dependent Variable: subdrywt

Source DF SS MS F Pr>F

Model 7 0.500749 0.071536 2.09 0.1759

Error 7 0.239611 0.03423 Corrected Total 14 0.74036

R-Square CV Root MSE Mean 0.676359 13.17763 0.185014 1.404

 Source
 DF
 Type I SS
 MS
 F
 Pr>F

 hybrid
 5
 0.473527
 0.094705
 2.77
 0.1086

 rep
 2
 0.027222
 0.013611
 0.4
 0.6862

Source DF Type III SS MS F Pr>F

hybrid 5 0.459256 0.091851 2.68 0.1153 rep 2 0.027222 0.013611 0.4 0.6862

hybrid	height	height	fresh yield	fresh yield	fresh yield	fresh yield	dry yield	dry yield
	cm	stdev	kg/ha	stdev	ton/ac	stdev	kg/ha	stdev
22053	167.64	21.55261	29486.95	9492.188	13.15381	4.234364	14974	4772.234
84G62	147.32	83.93538	31361.88	6219.505	13.9902	2.774455	13514.09	3858.901
Graze-n-	254	31.72459	69921.33	12663.35	31.19116	5.648984	22994.55	3973.554
M81-E	243.84	43.10523	62198.44	12269.01	27.74606	5.473076	21303.81	3570.536
grazeall	203.2	63.44918	35032.53	10125.71	15.62764	4.516969	10278.87	3171.687
sugart	223.52	43.99409	44792.46	8741.84	19.98144	3.899641	14353.57	4071.545
Isd	93.28		9850		4.394		5624.37	

hybrid	height	fresh yield	fresh yield	dry yield	dry tons	dry matter su	b fresh w sub	dry wts	
	cm	kg/ha	ton/ac	kg/ha	ton/ac	kg	kg		
22053	167.64	29486.95	13.15	14974.00	6.68	0.50	3.58	1.79	
84G62	147.32	31361.88	13.99	13514.09	6.03	0.45	3.20	1.45	
Graze-n-	254.00	69921.33	31.19	22994.55	10.26	0.39	3.84	1.51	
M81-E	243.84	62198.44	27.75	21303.81	9.50	0.37	3.57	1.29	
grazeall	203.20	35032.53	15.63	10278.87	4.59	0.39	3.42	1.28	
sugart	223.52	44792.46	19.98	14353.57	6.40	0.33	3.76	1.24	
Isd	93.28	9850.00	4.39	5624.37	2.51	0.14	0.30	0.36	

dry tons	dry tons	dry matter	dry matter	suh fresh w	suh fresh w	sub dry wt	sub dry wt
ton/ac	stdev	%	stdev	kg	stdev	kg	stdev
6.679741	2.128843	0.5	0.056569	3.58	0.183848	1.785	0.120208
6.028492	1.721415	0.453333	0.040415	3.196667	0.306649	1.446667	0.015275
10.25762	1.77256	0.39	0.084853	3.84	0.339411	1.51	0.480833
9.503404	1.592778	0.37	0.051962	3.566667	0.570731	1.286667	0.047258
4.585294	1.414856	0.39	0.127279	3.415	0.869741	1.275	0.091924
6.402974	1.816273	0.333333	0.020817	3.763333	0.035119	1.24	0.06245
2.51		0.138		0.3		0.36	

Dependent Variable: height

Source DF SS MS F Pr>F

Model 8 33135.34 4141.918 7.36 0.0017

Error 11 6187.162 562.4693 Corrected Total 19 39322.5

R-Square CV Root MSE Mean 0.842656 11.04992 23.71643 214.63

 Source
 DF
 Type I SS
 MS
 F
 Pr>F

 hybrid
 5
 32427.35
 6485.471
 11.53
 0.0004

 rep
 3
 707.9857
 235.9952
 0.42
 0.7426

 Source
 DF
 Type III SS
 MS
 F
 Pr>F

 hybrid
 5
 32519.75
 6503.95
 11.56
 0.0004

 rep
 3
 707.9857
 235.9952
 0.42
 0.7426

Dependent Variable: freshyield

Source DF SS MS F Pr>F

Model 8 1.38E+09 1.72E+08 9.5 0.0006

Error 11 1.99E+08 18122857 Corrected Total 19 1.58E+09

Corrected Total 19 1.56E+09

R-Square CV Root MSE Mean 0.87356 12.77804 4257.095 33315.72

 Source
 DF
 Type I SS
 MS
 F
 Pr>F

 hybrid
 5
 1.37E+09
 2.74E+08
 15.13
 0.0001

 rep
 3
 6151049
 2050350
 0.11
 0.9506

Source DF Type III SS MS F Pr>F

hybrid 5 1.33E+09 2.65E+08 14.63 0.0002 rep 3 6151049 2050350 0.11 0.9506

Dependent Variable: freshtons

Sum of

Source DF SS MS F Pr>F

Model 8 274.3085 34.28856 9.51 0.0006

Error 11 39.65046 3.604588

Corrected Total 19 313.9589

R-Square CV Root MSE Mean

0.873708 12.77469 1.898575 14.862

Source	DF	Type I SS	MS F	Pr	>F
hybrid		5 273.081	54.61621	15.15	0.0001
rep		3 1.227412	0.409137	0.11	0.9504
Source	DF	Type III SS	MS F	Pr	>F
hybrid		5 263.974	52.7948	14.65	0.0002
rep		3 1.227412	0.409137	0.11	0.9504

Dependent Variable: dryyield

Sum of

Source DF SS MS F Pr>F

Model 5 3.61E+08 72280469 8.07 0.058

Error 3 26856867 8952289

Corrected Total 8 3.88E+08

R-Square CV Root MSE Mean

0.930827 16.75879 2992.038 17853.54

Source	DF	Type I SS MS F	Pr>F
hybrid rep		4 2.68E+08 67091147 1 93037759 93037759	7.49 0.0649 10.39 0.0484
Source	DF	Type III SS MS F	Pr>F
hybrid		4 1.95E+08 48650181 1 93037759 93037759	5.43 0.0979 10.39 0.0484
rep		1 2202//22 2202//22	10.33 0.0464

Dependent Variable: drytons

Sum of

Source DF SS MS F Pr>F

Model 5 71.92948 14.3859 8.1 0.0577

Error 3 5.327738 1.775913

Corrected Total 8 77.25722

R-Square CV Root MSE Mean

0.931039 16.73229 1.332634 7.964444

Source DF Type ISS MS F Pr>F

hybrid 4 53.41587 13.35397 7.52 0.0646 rep 1 18.51361 18.51361 10.42 0.0483

Source DF Type III SS MS F Pr>F

hybrid 4 38.74202 9.685504 5.45 0.0975 rep 1 18.51361 18.51361 10.42 0.0483

Dependent Variable: subfreshwt

Sum of

Source DF SS MS F Pr>F

Model 5 19.44677 3.889354 3.55 0.163

Error 3 3.28645 1.095483

Corrected Total 8 22.73322

R-Square CV Root MSE Mean

0.855434 26.46777 1.046653 3.954444

:	Source	DF		Type I SS	MS	F	Pr	>F
	hybrid rep		4	5.135522 14.31125	1.283881 14.31125		1.17 13.06	0.4667 0.0364
	Source	DF		Type III SS	MS	F	Pr	>F
	hybrid		4		0.540293		0.49	0.7474
	rep		1		14.31125		13.06	0.0364
Dependent '	Variable:	brix						
:	Source	DF		SS	MS	F	Pr	>F
	Model		8	419.9201	52.49002		2.52	0.0858
	Error		10	207.9383	20.79383			
,	Corrected	Total		18	627.8584			
	R-Square	CV		Root MSE	Mean			
	0.668813	35.661	185	4.560025	12.78684			
:	Source	DF		Type I SS	MS	F	Pr	>F
	hybrid		5	63.39664	12.67933		0.61	0.6952
	rep		3	356.5235	118.8412		5.72	0.0153
	Source	DF		Type III SS	MS	F	Pr	>F
	hybrid		5	66.62564	13.32513 118.8412		0.64 5.72	0.6745 0.0153
	rep		3	350.5235	110.0412		5.72	0.0153
Dependent	Variable:	dm						
:	Source	DF		SS	MS	F	Pr	>F
	Model		6	0.1255	0.020917		5.34	0.043
	Error		5	0.019567	0.003913			

Corrected Total 11 0.145067

R-Square CV Root MSE Mean

0.865119 12.5953 0.062557 0.496667

Source DF Type ISS MS F Pr>F

entry 5 0.013367 0.002673 0.68 0.657 rep 1 0.112133 0.112133 28.65 0.0031

entry 5 0.013367 0.002673 0.68 0.657

Type III SS MS F

Pr>F

rep 1 0.112133 0.112133 28.65 0.0031

Dependent Variable: subwtdry

Source

DF

Source DF SS MS F Pr>F

Model 6 6.51835 1.086392 5.46 0.0412

Error 5 0.994942 0.198988

Corrected Total 11 7.513292

R-Square CV Root MSE Mean

0.867576 18.42676 0.446081 2.420833

Source DF Type ISS MS F Pr>F

entry 5 2.186342 0.437268 2.2 0.2039

rep 1 4.332008 4.332008 21.77 0.0055

Source DF Type III SS MS F Pr>F

entry 5 2.186342 0.437268 2.2 0.2039

rep 1 4.332008 4.332008 21.77 0.0055

hybrid	height	height	fresh yield	fresh yield	fresh yield	fresh yield	dry yield	dry yield
	cm	stdev	kg/ha	stdev	ton/ac	stdev	kg/ha	stdev
22053	187.325	15.98048	28447.85	3723.6	12.6875	1.661874	12849.46	3613.556
84G62	127	0	21188.87	87.26405	9.45	0.042426	11001.24	
Graze-n-	273.05	44.90128	47197.03	5766.088	21.055	2.566798	29077.24	
M81-E	241.3	23.18692	43768.21	4247.041	19.5275	1.894666	23053.27	8070.394
grazeall	200.025	6.35	26995.94	509.2521	12.0425	0.226771	13887.94	1276.745
sugart	244.475	28.16042	33173.64	5025.317	14.8	2.241919	16011.66	6330.522
lsd	36.91		6625.47		2.95		6733.07	

hybrid	height cm	fresh yield kg/ha	fresh yield ton/ac	dry yield kg/ha	dry yield ton/ac	dry matter s	ub dry	sub fresh w kg	
22053	187.325	28447.85	12.6875	12849.46	5.73	0.52	2.20	2.915	
84G62	127	21188.87	9.45	11001.24	4.91	0.47	2.01	4.2	
Graze-n-	273.05	47197.03	21.055	29077.24	12.97	0.52	2.68	5.65	
M81-E	241.3	43768.21	19.5275	23053.27	10.285	0.53	3.24	4.175	
grazeall	200.025	26995.94	12.0425	13887.94	6.195	0.51	2.04	3.96	
sugart	244.475	33173.64	14.8	16011.66	7.145	0.44	2.37	3.92	
Isd	36.91	6625.47	2.95	6733.07	2.99	0.16	1.15	2.355	

dry yield	dry yield	dry matter	dry matter	sub fresh v	sub fresh w	brix	brix
ton/ac	stdev	%	stdev	kg	stdev	%	stdev
5.73	1.612203	0.52	2.998133	2.915	1.435427	10.59667	9.062673
4.91		0.47		4.2		13.95	1.626346
12.97		0.52		5.65	•	12.7	1.131371
10.285	3.599174	0.53	4.589123	4.175	1.859691	13.375	8.657319
6.195	0.572756	0.51	0.056569	3.96	0.919239	15.4	1.512173
7.145	2.821356	0.44	2.644579	3.92	3.351686	10.69	7.406421
2.99		4.34		2.355		7.18	

brix

%

10.59667

13.95

12.7

13.375

15.4

10.69

7.18

Dependent Variable: height

Sum of

Source DF SS MS F Pr>F

Model 7 143746.9 20535.27 68.28 <.0001

Error 10 3007.382 300.7382

Corrected Total 17 146754.2

R-Square CV Root MSE Mean

0.979507 7.315846 17.34181 237.0444

Source DF Type ISS MS F Pr>F

hybrid 5 142160.4 28432.08 94.54 <.0001 rep 2 1586.484 793.2422 2.64 0.1202

Source DF Type III SS MS F Pr>F

hybrid 5 142160.4 28432.08 94.54 <.0001 rep 2 1586.484 793.2422 2.64 0.1202

Dependent Variable: freshyield

Sum of

Source DF SS MS F Pr>F

Model 7 1.83E+09 2.62E+08 32.62 <.0001

Error 10 80281175 8028117

Corrected Total 17 1.91E+09

R-Square CV Root MSE Mean

0.958049 10.58125 2833.393 26777.5

Source DF Type ISS MS F Pr>F

hybrid	5	1.82E+09	3.64E+08	45.34 < .0001	
ren	2	13611258	6805629	0.85 0.49	57

Source DF Type III SS MS F Pr>F

hybrid 5 1.82E+09 3.64E+08 45.34 <.0001 rep 2 13611258 6805629 0.85 0.457

Dependent Variable: dryyield

Sum of

Source DF SS MS F Pr>F

Model 7 83247508 11892501 6.81 0.0037

Error 10 17464393 1746439

Corrected Total 17 1.01E+08

R-Square CV Root MSE Mean

0.826591 15.244 1321.529 8669.177

Source DF Type ISS MS F Pr>F

hybrid 5 80961259 16192252 9.27 0.0016 rep 2 2286249 1143124 0.65 0.5406

Source DF Type III SS MS F Pr>F

hybrid 5 80961259 16192252 9.27 0.0016 rep 2 2286249 1143124 0.65 0.5406

Dependent Variable: freshtons

Sum of

Source DF SS MS F Pr>F

Model 7 364.8528 52.12182 32.59 < .0001

Error 10 15.99346 1.599346

Corrected Total 17 380.8462

R-Square CV Root MSE Mean

0.958005 10.58828 1.264652 11.94389

Source DF Type ISS MS F Pr>F

hybrid 5 362.1457 72.42914 45.29 <.0001 rep 2 2.707078 1.353539 0.85 0.4576

Source DF Type III SS MS F Pr>F

hybrid 5 362.1457 72.42914 45.29 <.0001 rep 2 2.707078 1.353539 0.85 0.4576

Dependent Variable: drytons

Sum of

Source DF SS MS F Pr>F

Model 7 16.55659 2.365227 6.82 0.0037

Error 10 3.469856 0.346986

Corrected Total 17 20.02644

R-Square CV Root MSE Mean

0.826736 15.23855 0.589055 3.865556

Source DF Type ISS MS F Pr>F

hybrid 5 16.10311 3.220622 9.28 0.0016 rep 2 0.453478 0.226739 0.65 0.5411

Source DF Type III SS MS F Pr>F

hybrid	5	16.10311	3.220622	9.28	0.0016
rep	2	0.453478	0.226739	0.65	0.5411

Dependent Variable: dm

Sum of

Source DF SS MS F Pr>F

Model 7 0.101689 0.014527 24.12 <.0001

Error 10 0.006022 0.000602

Corrected Total 17 0.107711

R-Square CV Root MSE Mean

0.944089 7.056292 0.02454 0.347778

Source DF Type ISS MS F Pr>F

hybrid 5 0.100444 0.020089 33.36 <.0001 rep 2 0.001244 0.000622 1.03 0.3909

Source DF Type III SS MS F Pr>F

hybrid 5 0.100444 0.020089 33.36 <.0001 rep 2 0.001244 0.000622 1.03 0.3909

	height	height	fresh yield	fresh yield	dry yield	dry yield	fresh yield	fresh yield
hybrid	cm	stdev	kg/ha	stdev	kg/ha	stdev	ton/ac	stdev
•								
22053	274.7333	16.2201521	22820	3089.10586	7156.907	972.0255	10.18	1.381557
84G62	70.3	5.4286278	11116.6667	565.0295	5029.663	271.9279	4.956667	0.251064
Graze-N-	362.0333	40.3981848	41776.6667	3586.07143	11424.82	1265.342	18.63333	1.598572
M81-E	262.4333	7.6956698	36323.3333	3163.28284	10398.94	1722.891	16.20333	1.408344
grazeall	197.5	15.7819517	21361.6667	3413.84802	9570.867	1838.64	9.526667	1.524544
sugart	255.2667	8.0039574	27266.6667	1601.17405	8433.863	952.1023	12.16333	0.717937
lsd	31.549		5154.7		2404.2		2.3007	

hybrid	height cm	fresh yield kg/ha	dry yield kg/ha	fresh yield ton/ac	dry yield ton/ac	dm %
22053	274.7333	22820	7156.9067	10.18	3.193333	0.313333
84G62	70.3	11116.6667	5029.6633	4.9566667	2.24	0.453333
Graze-N-	362.0333	41776.6667	11424.82	18.6333333	5.093333	0.273333
M81-E	262.4333	36323.3333	10398.94	16.2033333	4.636667	0.286667
grazeall	197.5	21361.6667	9570.8667	9.5266667	4.266667	0.45
sugart	255.2667	27266.6667	8433.8633	12.1633333	3.763333	0.31
Isd	31.549	5154.7	2404.2	2.3007	1.0716	0.0446

dry yield	dry yield	dm	dm	
ton/ac	stdev	%	stdev	
3.193333	0.431548	0.313333	0.041633	
2.24	0.121244	0.453333	0.005774	
5.093333	0.565361	0.273333	0.011547	
4.636667	0.767224	0.286667	0.032146	
4.266667	0.820386	0.45	0.02	
3.763333	0.423596	0.31	0.017321	
1.0716		0.0446		

Dependent Variable: freshyield

Sum of

Source DF SS MS F Pr>F

Model 5 2.86E+08 57271284 2.87 0.1646

Error 4 79851923 19962981

Corrected Total 9 3.66E+08

R-Square CV Root MSE Mean

0.781949 35.75654 4467.995 12495.6

Source DF Type ISS MS F Pr>F

hybrid 4 2.74E+08 68594514 3.44 0.1295 rep 1 11978361 11978361 0.6 0.4818

Source DF Type III SS MS F Pr>F

hybrid 4 2.74E+08 68594514 3.44 0.1295 rep 1 11978361 11978361 0.6 0.4818

Dependent Variable: dryyield

Sum of

Source DF SS MS F Pr>F

Model 5 32424590 6484918 11.61 0.0354

Error 3 1676274 558758

Corrected Total 8 34100864

R-Square CV Root MSE Mean

0.950844 14.94038 747.5012 5003.228

Source DF Type ISS MS F Pr>F

hybrid	4	31922784	7980696	14.28	0.027
rep	1	501806.6	501806.6	0.9	0.4132

Source DF Type III SS MS F Pr>F

hybrid 4 32350907 8087727 14.47 0.0265 rep 1 501806.6 501806.6 0.9 0.4132

Dependent Variable: freshtons

Sum of

Source DF SS MS F Pr>F

Model 5 59.30016 11.86003 31.44 0.0086

Error 3 1.1318 0.377267

Corrected Total 8 60.43196

R-Square CV Root MSE Mean

0.981271 10.32689 0.61422 5.947778

Source DF Type ISS MS F Pr>F

hybrid 4 59.18496 14.79624 39.22 0.0064 rep 1 0.1152 0.1152 0.31 0.6191

Source DF Type III SS MS F Pr>F

hybrid 4 59.1482 14.78705 39.2 0.0064 rep 1 0.1152 0.1152 0.31 0.6191

Dependent Variable: drytons

Sum of

Source DF SS MS F Pr>F

Model 5 6.480318 1.296064 11.61 0.0354

Error 3 0.334838 0.111613

Corrected Total 8 6.815156

R-Square CV Root MSE Mean

0.950869 14.96646 0.334085 2.232222

Source DF Type ISS MS F Pr>F

hybrid 4 6.381306 1.595326 14.29 0.027 rep 1 0.099013 0.099013 0.89 0.4157

Source DF Type III SS MS F Pr>F

hybrid 4 6.465558 1.616389 14.48 0.0265 rep 1 0.099013 0.099013 0.89 0.4157

Dependent Variable: brix

Sum of

Source DF SS MS F Pr>F

Model 5 84.06538 16.81308 1.57 0.2142

Error 20 214.298 10.7149

Corrected Total 25 298.3634

R-Square CV Root MSE Mean

0.281755 29.68518 3.273362 11.02692

Source DF Type ISS MS F Pr>F

hybrid 4 35.00867 8.752166 0.82 0.5294 rep 1 49.05671 49.05671 4.58 0.0449

Source DF Type III SS MS F Pr>F

hybrid	4	40.17736	10.04434	0.94	0.4625
rep	1	49.05671	49.05671	4.58	0.0449

Dependent Variable: dm

Sum of

Source DF SS MS F Pr>F

Model 5 0.046866 0.009373 18.72 <.0001

Error 12 0.006008 0.000501

Corrected Total 17 0.052874

R-Square CV Root MSE Mean

0.886371 5.940424 0.022376 0.376667

Source DF Type ISS MS F Pr>F

hybrid 4 0.045153 0.011288 22.55 <.0001 rep 1 0.001713 0.001713 3.42 0.0891

Source DF Type III SS MS F Pr>F

hybrid 4 0.043449 0.010862 21.7 <.0001 rep 1 0.001713 0.001713 3.42 0.0891

Dependent Variable: subfreshwt

Sum of

Source DF SS MS F Pr>F

Model 5 26.78815 5.357631 0.59 0.7058

Error 12 108.3518 9.029321

Corrected Total 17 135.14

R-Square CV Root MSE Mean

## 0.198225 37.48295 3.004883 8.016667

	Source	DF		Type I SS	MS	F	Pr>F	
	hybrid rep		4	3.156458 23.6317			0.09 2.62	0.9847 0.1317
	Source	DF		Type III SS	MS	F	Pr>F	
	hybrid rep			4.787598 23.6317			0.13 2.62	0.9674 0.1317
Dependen	t Variable:	subdryw	t					
	Sum Source	of DF		SS	MS	F	Pr>F	
	Model		5	3.583096	0.716619	)	0.69	0.6397
	Error	-	12	12.44013	1.036678	}		
	Corrected	Total		17	16.02323			
	R-Square	CV		Root MSE	Mean			
	0.223619	34.3268	89	1.018174	2.966111			
	Source	DF	Type I SS MS F Pi		>F			
	hybrid rep		4				0.46 1.63	0.767 0.2252
	Source	DF		Type III SS	MS	F	Pr	>F
	hybrid rep		4				0.57 1.63	0.6899 0.2252

hybrid	fresh yield kg/ha	fresh yield stdev	dry yield kg/ha	dry yield stdev	fresh yield ton/ac	fresh yield stdev	dry yield ton/ac	dry yield ton/ac
22053	11545.565	9249.85472	6197.54		8.07		2.76	
Graze-N-	14424.335	690.42613	4525.62	25.11643	6.435	0.30405592	2.02	0.014142
M81-E	21392.175	1539.42096	7960.36	868.9352	9.545	0.68589358	3.555	0.388909
grazeall	9083.915	1596.82389	4343.09	1079.653	4.055	0.71417785	1.94	0.480833
sugart	6032.025	934.94366	2586.685	506.7057	2.695	0.417193	1.15	0.226274
lsd	12405		2378.89		1.95		1.06	

hybrid	fresh yield kg/ha	dry yield kg/ha	fresh yield ton/ac	- / /	brix %	dm %	sub fresh w kg	sub dry wt kg
22053	11545.565	6197.54	8.07	2.76	12.8725	0.354	7.7	2.676
Graze-N-	14424.335	4525.62	6.435	2.02	10.8333333	0.315	8.55	2.67
M81-E	21392.175	7960.36	9.545	3.555	9.142	0.3785	8.2125	3.04
grazeall	9083.915	4343.09	4.055	1.94	11.75	0.4745	7.2	3.445
sugart	6032.025	2586.685	2.695	1.15	10.8	0.429	8.116667	3.426667
lsd	12405	2378.89	1.95	1.06	4.32	0.034	4.63	1.57

brix	brix	dm	dm	sub fresh w	sub fresh w	sub dry wt	sub dry wt
%	stdev	%	stdev	kg	stdev	kg	stdev
12.8725	1.261623	0.354	0.021059	7.7	3.570014	2.676	1.153443
10.83333	0.437798	0.315	0.011518	8.55	2.885308	2.67	0.835943
9.142	7.590229	0.3785	0.031522	8.2125	3.357423	3.04	1.042529
11.75	1.024695	0.4745	0.034648	7.2	1.697056	3.445	1.053589
10.8	2.341207	0.429	0.026153	8.116667	3.108992	3.426667	1.083067
4.32		0.034		4.63		1.57	

Dependent Variable: dryyield

Sum of

Source DF SS MS F Pr>F

Model 7 3.25E+08 46396294 8.09 0.0009

Error 12 68788369 5732364

Corrected Total 19 3.94E+08

R-Square CV Root MSE Mean

0.825216 24.86614 2394.236 9628.498

Source DF Type ISS MS F Pr>F

hybrid 4 2.03E+08 50691713 8.84 0.0014 rep 3 1.22E+08 40669069 7.09 0.0054

Source DF Type III SS MS F Pr>F

hybrid 4 2.03E+08 50691713 8.84 0.0014 rep 3 1.22E+08 40669069 7.09 0.0054

Dependent Variable: drytons

Sum of

Source DF SS MS F Pr>F

Model 7 64.57214 9.224591 8.09 0.0009

Error 12 13.67716 1.139763

Corrected Total 19 78.2493

R-Square CV Root MSE Mean

0.82521 24.85385 1.067597 4.2955

Source DF Type ISS MS F Pr>F

	hybrid rep		4	40.30752 24.26462	10.07688 8.088205		8.84 7.1	0.0014 0.0053
	Source	DF		Type III SS	MS	F	Pr	>F
	hybrid rep		4	40.30752 24.26462	10.07688 8.088205		8.84 7.1	0.0014 0.0053
Dependen	t Variable:	brix						
	Sum Source	of DF		SS	MS	F	Pr	>F
	Model		7	313.55	44.79286	;	6.24	0.003
	Error		12	86.2	7.183333			
	Corrected	Total		19	399.75			
	R-Square	CV		Root MSE	Mean			
	0.784365	24.93	185	2.680174	10.75			
	Source	DF		Type I SS	MS	F	Pr	>F
	hybrid		4				9.01	0.0013
	rep		3	54.55	18.18333		2.53	0.1063
	Source	DF		Type III SS	MS	F	Pr	>F
	hybrid		4		64.75	i	9.01	0.0013
	rep		3	54.55	18.18333		2.53	0.1063
Dependen	t Variable:	dm						
	Sum	of		cc	NAC .	_	5	
	Source	DF		SS	MS	F	Pr	<b>&gt;</b> F
	Model		7	0.09937	0.014196	i	12.16	0.0001

Error 12 0.01401 0.001168

Corrected Total 19 0.11338

R-Square CV Root MSE Mean

0.876433 5.107429 0.034169 0.669

Source DF Type ISS MS F Pr>F

hybrid 4 0.09423 0.023558 20.18 <.0001 rep 3 0.00514 0.001713 1.47 0.2728

Source DF Type III SS MS F Pr>F

hybrid 4 0.09423 0.023558 20.18 <.0001 rep 3 0.00514 0.001713 1.47 0.2728

Dependent Variable: subfreshwt

Sum of

Source DF SS MS F Pr>F

Model 7 0.41028 0.058611 11.49 0.0002

Error 12 0.061202 0.0051

Corrected Total 19 0.471481

R-Square CV Root MSE Mean

0.870193 21.91997 0.071415 0.3258

Source DF Type ISS MS F Pr>F

hybrid 4 0.168919 0.04223 8.28 0.0019 rep 3 0.241361 0.080454 15.77 0.0002

Source DF Type III SS MS F Pr>F

hybrid	4	0.168919	0.04223	8.28	0.0019
rep	3	0.241361	0.080454	15.77	0.0002

Dependent Variable: subdrywt

Source DF SS MS F Pr>F

Model 7 0.022312 0.003187 11.51 0.0002

Error 12 0.003323 0.000277

Corrected Total 19 0.025635

R-Square CV Root MSE Mean

0.870364 16.57501 0.016641 0.1004

Source DF Type ISS MS F Pr>F

hybrid 4 0.003455 0.000864 3.12 0.0564 rep 3 0.018857 0.006286 22.7 <.0001

Source DF Type III SS MS F Pr>F

hybrid 4 0.003455 0.000864 3.12 0.0564 rep 3 0.018857 0.006286 22.7 <.0001

Dependent Variable: freshtons

Source DF SS MS F Pr>F

Model 7 1197.463 171.0661 8.32 0.0008

Error 12 246.8382 20.56985

Corrected Total 19 1444.301

R-Square CV Root MSE Mean

0.829095 31.42382 4.5354 14.433

	Source	DF		Type I SS	MS	F	Pr>	>F
	entry rep		4	870.9864 326.4764			10.59 5.29	0.0007 0.0148
	Source	DF		Type III SS	MS	F	Pr>	<b>≻</b> F
	entry rep		4 3				10.59 5.29	0.0007 0.0148
Dependen	t Variable: Source	freshyield DF	d	SS	MS	F	Pr>	•F
	Model		7	6.02E+09	8.6E+08	3	8.31	0.0008
	Error	1	l2	1.24E+09	1.03E+08	3		
	Corrected	Total		19	7.26E+09	)		
	R-Square	CV		Root MSE	Mean			
	0.829042	31.4319	97	10169.26	32353.24	ļ		
	Source	DF		Type I SS	MS	F	Pr>	>F
	entry rep		4	4.38E+09 1.64E+09			10.58 5.29	0.0007 0.0148
	Source	DF		Type III SS	MS	F	Pr>	>F

4 4.38E+09 1.09E+09

3 1.64E+09 5.47E+08

entry

rep

10.58

5.29

0.0007

0.0148

	fresh yield	fresh yield	fresh yield	fresh yield	dry yield	dry yield	dry yields	dry yield
hybrid	kg/ha	stdev	ton/ac	stdev	kg/ha	stdev	ton/ac	stdev
-								
22053	38,391	9383.64	17.13	4.19	11739.51	2525.09	5.24	1.124841
Graze-N-	54,965	14679.6042	24.52	6.55	14065.37	5150.127	6.2725	2.296742
M81-E	22,911	21220.8099	10.22	9.47	7174.575	4179.833	3.2	1.864099
grazeall	11,068	3138.04472	4.94	1.4	5117.015	1840.061	2.285	0.820752
sugart	34,431	14031.2083	15.36	6.26	10046.02	3137.165	4.48	1.399452
lsd	15,667		7.0		3688.7		1.6448	

hybrid	fresh yield kg/ha	fresh yield ton/ac	dry yield kg/ha	dry yields ton/ac	brix %	dm %	sub fresh w kg	sub dry wt kg
22053	38,391	17.13	11739.513	5.24	8	0.31	0.35225	0.10875
Graze-N-	54,965	24.52	14065.365	6.2725	11	0.26	0.4655	0.11975
M81-E	22,911	10.22	7174.575	3.2	17.5	0.33	0.27325	0.0885
grazeall	11,068	4.94	5117.015	2.285	9.75	0.46	0.189	0.08375
sugart	34,431	15.36	10046.02	4.48	7.5	0.3	0.349	0.10125
lsd								
	15,667	7.0	3688.7	1.6448	4.1292	0.48	0.11	0.0256

brix %		brix stdev	dm %		dm stdev	sul kg	b fresh w	sub fresh v stdev	sub dry wt kg	sub dry wt stdev
	8	2.94392		0.6925	0.020616		0.35225	0.146495	0.10875	0.047388
	11	2.160247		0.7425	0.009574		0.4655	0.158195	0.11975	0.037017
	17.5	2.645751		0.67	0.036515		0.27325	0.101631	0.0885	0.030083
	9.75	3.593976		0.54	0.060553		0.189	0.089342	0.08375	0.032755
	7.5	3.696846		0.7	0.029439		0.349	0.189886	0.10125	0.042422
4.	1292			0.0526			0.11		0.0256	

Dependent Variable: ht

Sum of

Source DF ss ms F PR>F

Model 6 16876.02 2812.671 18.13 0.0001

Error 9 1396.243 155.1382

Corrected Total 15 18272.27

R-Square cv rootmse mean

0.923587 3.834776 12.45545 324.8025

Source DF type1ss ms F PR>F

hybrid 3 12594.13 4198.045 27.06 <.0001 rep 3 4281.89 1427.297 9.2 0.0042

Source DF Type111ss ms F PR>F

hybrid 3 12594.13 4198.045 27.06 <.0001

rep 3 4281.89 1427.297 9.2 0.0042

Dependent Variable: freshyield

Sum of

Source DF ss ms F PR>F

Model 6 3.76E+09 6.27E+08 13.1 0.0005

Error 9 4.31E+08 47854475

Corrected Total 15 4.19E+09

R-Square cv rootmse mean

0.897229 12.21967 6917.693 56611.15

Source DF type1ss ms F PR>F

hybrid	3	3.68E+09	1.23E+09	25.6	<.0001
ren	3	84789325	28263108	0.59	0.6365

Source DF Type111ss ms F PR>F

hybrid 3 3.68E+09 1.23E+09 25.6 <.0001 rep 3 84789325 28263108 0.59 0.636

Dependent Variable: dryyield

Sum of

Source DF ss ms F PR>F

Model 6 3.31E+08 55247594 6.07 0.0086

Error 9 81950440 9105604

Corrected Total 15 4.13E+08

R-Square cv rootmse mean

0.801782 13.87503 3017.549 21748.06

Source DF type1ss ms F PR>F

hybrid 3 3.14E+08 1.05E+08 11.49 0.002 rep 3 17481841 5827280 0.64 0.6082

Source DF Type111ss ms F PR>F

hybrid 3 3.14E+08 1.05E+08 11.49 0.002 rep 3 17481841 5827280 0.64 0.6082

Dependent Variable: freshtons

Sum of

Source DF ss ms F PR>F

Model 6 748.2425 124.7071 13.1 0.0005

Error 9 85.70551 9.522834

Corrected Total 15 833.948

R-Square cv rootmse mean

0.897229 12.21967 3.085909 25.25363

Source DF type1ss ms F PR>F

hybrid 3 731.3698 243.7899 25.6 <.0001 rep 3 16.87271 5.624237 0.59 0.6365

Source DF Type111ss ms F PR>F

hybrid 3 731.3698 243.7899 25.6 <.0001 rep 3 16.87271 5.624237 0.59 0.6365

Dependent Variable: drytons

Sum of

Source DF ss ms F PR>F

Model 6 65.9642 10.99403 6.07 0.0086

Error 9 16.30778 1.811976

Corrected Total 15 82.27198

R-Square cv rootmse mean

0.801782 13.87503 1.346097 9.701579

Source DF type1ss ms F PR>F

hybrid 3 62.48539 20.82846 11.49 0.002 rep 3 3.478811 1.159604 0.64 0.6082

Source DF Type111ss ms F PR>F

hybrid	3	62.48539	20.82846	11.49	0.002
rep	3	3.478811	1.159604	0.64	0.6082

Dependent Variable: dm

Sum of

Source DF ss ms F PR>F

Model 6 0.6373 0.106217 67.8 < .0001

Error 9 0.0141 0.001567

Corrected Total 15 0.6514

R-Square cv rootmse mean

0.978354 9.081098 0.039581 0.435863

Source DF type1ss ms F PR>F

hybrid 3 0.636562 0.212187 135.44 <.0001 rep 3 0.000739 0.000246 0.16 0.9224

Source DF Type111ss ms F PR>F

hybrid 3 0.636562 0.212187 135.44 <.0001 rep 3 0.000739 0.000246 0.16 0.9224

Dependent Variable: subwt

Sum of

Source DF ss ms F PR>F

Model 6 99.24946 16.54158 20.36 <.0001

Error 9 7.311031 0.812337

Corrected Total 15 106.5605

R-Square cv rootmse mean

# 0.931391 26.16817 0.901297 3.44425

	Source	DF		type1ss	ms	F	PF	R>F
	hybrid rep		3	55.25.6	31.73135 1.351808		39.06 < 1.66	0001 0.2432
	Source	DF		Type111ss	ms	F	PF	R>F
	hybrid rep		3				39.06 < 1.66	0001 0.2432
Dependen	t Variable:	drysubw	t					
	Sum Source	of DF		SS	ms	F	PF	R>F

Model 5 0.372567 0.074513 6.63 0.0197

Error 6 0.06745 0.011242

Corrected Total 11 0.440017

R-Square cv rootmse mean

0.84671 17.19352 0.106027 0.616667

Source	DF	type1ss	ms F	Р	R>F
hybrid rep		2 0.305117 3 0.06745	0.152558 0.022483	13.57 2	0.0059 0.2156
Source	DF	Type111ss	ms F	Р	R>F
hybrid		2 0.305117		13.57	0.0059
ren		3 0.06745	0 022483	2	0.2156

	Height	Height	Fresh Yield	Fresh Yield	Dry Yield	Dry Yield	freshtons	freshtons
hybrid	cm	stdev	kg/ha	stdev	kg/ha	stdev	tons/ac	stdev
•			G.		O.			
22053	341.9494	22.26438	45912.84	3937.819	24710.16	3901.243	20.48123	1.756619
Graze-n-	339.8844	16.11224	74377.69	8196.103	19456.22	2226.921	33.17909	3.656194
grazeall	276.225	26.79481	37849.71	1712.417	27080.82	2978.491	16.88435	0.763891
sugart	341.1512	20.48028	68304.35	9285.022	15745.06	2023.318	30.46984	4.141949
Isd	19.924		11065		4826.8		4.9362	

hybrid	Height cm	Fresh Yield kg/ha	Dry Yield kg/ha	freshtons tons/ac	drytons tons/ac	dm %	fresh subw kg	drysubwt kg
22053	341.9494	45912.84	24710.16	20.48123	11.02294	0.535825	2.33575	0.75
Graze-n-	339.8844	74377.69	19456.22	33.17909	8.679214	0.26185	2.70625	0.7075
grazeall	276.225	37849.71	27080.82	16.88435	12.08046	0.71385	1.18	0.3925
sugart	341.1512	68304.35	15745.06	30.46984	7.023701	0.231925	7.555	
lsd	19.924	11065	4826.8	4.9362	2.1532	0.0633	1.4417	0.1835

drytons	drytons	dm	dm	fresh subw	fresh subw	drysubwt	drysubwt
tons/ac	stdev	%	stdev	kg	stdev	kg	stdev
11.02294	1.740303	0.535825	0.040044	2.33575	0.351087	0.75	0.128193
8.679214	0.993406	0.26185	0.014622	2.70625	0.561135	0.7075	0.149304
12.08046	1.328673	0.71385	0.048828	1.18	0.167282	0.3925	0.079004
7.023701	0.902581	0.231925	0.027291	7.555	1.822827		
2.1532	•	0.0633		1.4417		0.1835	

From: <u>James Osborne</u>
To: <u>Dr. Bill Rooney</u>

**Subject:** RE: 2009-2010 Puerto Rico Winter Nursery and Growout Service.

**Date:** Thursday, October 15, 2009 8:51:41 PM

Thanks Bill, you are on the list for the 300 rows. If you find you need more we can

handle it.

Good to hear from you, thanks again,

Jim

From: wlr@tamu.edu

To:

CC: delroy@tamu.edu;

Subject: RE: 2009-2010 Puerto Rico Winter Nursery and Growout Service.

Date: Sat, 10 Oct 2009 23:11:08 -0500

Jim:

I would like 300 plots arranged in 12 rows (6 beds) and 25 ranges. Plots 1 and 2 should be on the same bed, so I'll use 6 full beds only.

Well get the seed to you before Nov 10.

Thanks for coordinating this again.

Regards,

Bill

From: James Osborne

Sent: Thursday, October 08, 2009 12:41 PM

**To:** Dr. Bill Rooney; Dr. Cleve Franks; Dale Wimmer; delroy@tamu.edu; Donnie Swink; Dr. Gary C Peterson; Dr. George Graef; Dr. Gebisa Ejeta; jerry; Jianming Yu; Prihoda, Karen L; Dr. Kassim Al-Khatib; Leslie L Korte; mmolina@ksu.edu; Mitch Tuinstra; Nathan Boardman; Reba Cargile; sbrown; Shan Podduturi; Sharon E. Mitchell, Ph.D.; Stephen Kresovich; Tesfaye Tesso; Lemming, Terry R.; Mark Stelter

**Subject:** 2009-2010 Puerto Rico Winter Nursery and Growout Service.

All,

It is that time of year again!

Crosbyton Seed Company will once again be offering the winter (Off Season) Nursery and Grow out planting Service in the Indios Valley of Puerto Rico. I will have you ship your seed to me here in Kansas, I will assemble it for nursery planting, then forward it to the Crosbyton Seed Company personnel in Puerto Rico. Once again because of family concerns I will not personally be planting again this year, however, the highly experienced employees who planted last season will be planting again this year.

Some points to remember or information for those of you that will be working with us for the first time:

PLEASE try and send your nurseries to me by November 10 so I can have them in planting order and in Puerto Rico for planting the week following Thanksgiving.

Package your seed in the 2 3/8" x 4 1/4" coin envelopes with the 1/4" hole in the flap

and the top of the packet stapled **below** the hole. If you need nursery planting packets they will be available from Crosbyton Seed Company, let us know and we will send them to you as soon as possible.

Plan your nurseries in multiples of 25 or 50 plot increments, (fields will be 25-15 ft. plots long, 2 rows wide = 50 plots/bed).

Be sure and let me know if you want row 1&2 on the same bed or if you want row 1 on the right side of bed #1 and row 2 on the left side of bed #2 so you can work your material walking in he furrow between beds.

Please include your nursery field map so we are sure to plant your nurseries the way you want them. You can also email your maps to me at the sure of the sure of

If any of you have special herbicide experiments I recommend 3 beds/6 rows buffer between treatments to help reduce the chance of drift from resistant onto non-resistant material. The sprayer is 7 beds/14 rows wide, we can spray using just the one side of the sprayer boom (4 beds/8 rows) minimum coverage on one pass.

Please let me know AS SOON AS YOU CAN the approximate number of rows/beds you will be using this year so we can get the land reserved and prepared.

If you know of anyone interested in this service that I have inadvertently missed please forward this email to them or let me know so I can contact them personally. It appears that we will have more corn this year and in the coming years so please include those interested in winter corn nursery space also.

**Thank you all**, I look forward to another productive year for the Corn and Sorghum Research Community!! If you have any questions, please, give me a call or send an email.

Please find attached the price schedule for 2009-2010, which remains the same as 2008-2009 prices.

Regards,

Jim Osborne Crosbyton Seed Company 2500 N. 231st. W. Andale, Kansas 67001-9510 (H) 316.444.2530 (C) 316.734.2303 (Fax) 316.444.2530 (please call first)

From: **Bill Rooney** "James Osborne" To: delroy@tamu.edu

Subject: RE: 2009-2010 Puerto Rico Winter Nursery and Growout Service.

Date: Saturday, October 10, 2009 11:11:08 PM

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Sent: Thursday, October 08, 2009 12:41 PM

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Regards,

Jim Osborne Crosbyton Seed Company 2500 N. 231st. W. Andale, Kansas 67001-9510 (H) 316.444.2530 (C) 316.734.2303 (Fax) 316.444.2530 (please call first) From: Bill Rooney
To: "Joan Frederick"

 Subject:
 RE: 2009-2010 US. Project Budgets

 Date:
 Saturday, October 10, 2009 11:11:08 PM

Joan:

I don't have pass thru funds.

The document went through TAMU Research Foundation when it was originally submitted this summer, so we should be good.

Regards,

Bill

**From:** Joan Frederick [mailto:jfrederi@unlnotes.unl.edu]

Sent: Wednesday, October 07, 2009 2:00 PM

To: wlr@tamu.edu

Subject: 2009-2010 US. Project Budgets

Bill Rooney;

2009-2010 U.S. Project Funds:

I am starting to prepare the paperwork for the allocation of funds for the U.S. Projects. The budgets sent in August is what I have attached.

- 1. I want you to confirm you did NOT allocated any pass thru funds
- 2. I also ask you to confirm that the budget you submitted has gone through your accounting office to finalize. If not please do so and send me the final approved version.

Please respond as soon as you can, so we can prepare the paperwork for your award of funds. Questions? give me a call.

(See attached file: Budget Template TAM 101.xls) (See attached file: DRAFT BUDGETS.xls)

\_\_\_\_\_

Joan Frederick
INTSORMIL
University of Nebraska
114 BCH
Lincoln NE 68583-0748
402-472-7058
jfrederick1@unl.edu

From: Bill Rooney
To: "Donghai Wang"

**Subject:** RE: Acception of your paper

**Date:** Saturday, October 10, 2009 11:11:08 PM

```
Thanks, Donghai
Remind of the Journal Name?
Bill
----Original Message-----
From: Donghai Wang [mailto:dwang@ksu.edu]
Sent: Tuesday, October 06, 2009 10:57 AM
To: Bill Rooney
Subject: Re: Acception of your paper
Bill,
Attached is the latest version of our manuscript,
Best Regards,
Donghai,
Bill Rooney wrote:
> Donghai:
> Can you send me the citation on this manuscript (authors, title) so I can
> add it to my documentation?
> Thanks,
>
> Bill
> Dr. William L. Rooney
> Professor, Sorghum Breeding and Genetics Chair, Plant Release
> Committee Texas A&M University College Station, Texas 77843-2474
> 979 845 2151
> -----Original Message-----
> From: Donghai Wang [mailto:dwang@k-state.edu]
> Sent: Saturday, October 03, 2009 5:22 PM
> To: Xiaorong Wu; Scott Staggenborg; Jianming Yu; Bill Rooney
> Cc: Donghai Wang
> Subject: Fwd: Acception of your paper
>
> AII,
> Just want to let you know that our paper was accepted for publication
> at Industrial Crops and Products(impact factor is about 2),
> Best Regards,
> Donghai,
> ---- Forwarded Message -----
> From: "Naceur Belgacem" < Naceur.Belgacem@efpg.inpg.fr>
```

```
> To: dwang@ksu.edu
> Cc: "Naceur Belgacem" < Naceur.Belgacem@efpq.inpq.fr>
> Sent: Saturday, October 3, 2009 2:04:23 PM GMT -05:00 US/Canada
> Eastern
> Subject: Your Submission
> Ms. Ref. No.: INDCRO-D-09-00376R1
> Title: Features of Sweet Sorghum Juice and Their Performance in
> Ethanol Fermentation Industrial Crops and Products
> Dear Dr D. Wang,
> I am pleased to inform you that your paper "Features of Sweet Sorghum
> Juice and Their Performance in Ethanol Fermentation" has been accepted for
> publication in Industrial Crops and Products.
> Thank you for submitting your work to Industrial Crops and Products.
> Yours sincerely,
> Naceur Mohamed Belgacem, PhD
> Editor-in-Chief
> Industrial Crops and Products
> **************
> For any technical queries about using EES, please contact Elsevier
> Author Support at
                                             Global telephone support is
> available 24/7:
> For The Americas: +1 888 834 7287 (toll-free for US & Canadian
> customers) For Asia & Pacific: +81 3 5561 5032 For Europe & rest of
> the world: +353 61 709190
>
>
```

Donghai Wang Ph.D.
Associate Professor
Biological & Agricultural Engineering
150 Seaton Hall
Kansas State University
Manhattan, KS 66506
Office: 785-532-2919

Fax: 785-532-5825

 From:
 Bill Rooney

 To:
 "John Mullet"

Subject: RE: AGENDA Chevron/AgriLife Quarterly Review in Weslaco

**Date:** Thursday, October 08, 2009 4:01:32 AM

I'll visit with you on Monday when I return.

Bill

From: John Mullet [mailto:jmullet@tamu.edu] Sent: Wednesday, October 07, 2009 11:44 AM

To: Bill Rooney

Subject: Re: AGENDA Chevron/AgriLife Quarterly Review in Weslaco

Thanks Bill, I will be attending and arrive in time Thursday for the ppt. Any relevant information would be helpful.

John

On Oct 7, 2009, at 11:35 AM, Bill Rooney wrote:

Shay:

There's no way I can be in Weslaco in time for presentations on Thursday, so I'll likely not make the trip.

I think that John is confirmed for that trip so I'll convey any pertinent information to him.

Regards,

Bill

From: Simpson, Shay [mailto:shay-simpson@tamu.edu]

**Sent:** Tuesday, October 06, 2009 6:37 PM

To: Bill Rooney

**Subject:** FW: AGENDA Chevron/AgriLife Quarterly Review in Weslaco

Bill:

I don't know if you ever made plans to go to Weslaco for the quarterly review with Chevron. We were not able to adjust the schedule to have the review part on Friday. You are still very welcome to come down after your classes on Thursday and be with the group for the dinner that night and Friday during the tour of sugar cane harvest and the mill. There will still be plenty of opportunity for you to have discussions. The current plan is to have 2 vans transporting all of the group from place to place, BUT Mike is trying to find a bus so we are all together and you could use the microphone to make an "on-the-go" presentation.

Let me know if you want to go. I know you're traveling a lot, so understand if you miss it this time.

Thanks, Shay Shay L. Simpson
Associate Director, Corporate Relations
Texas AgriLife Research
Centeq Building 100D
979-845-6315 Office
979-571-3137 Mobile
<a href="mailto:shay-simpson@tamu.edu">shay-simpson@tamu.edu</a>

From: Simpson, Shay

**Sent:** Tuesday, October 06, 2009 6:27 PM

To: Long, Michelle Y. (YLON) (MYLong); Jones, Doug M

**Cc:** Gould Mike; 'John Mullet'; El-Hout Nael; 'Erik Mirkov'; John Jifon; Ted Wilson (<a href="mailto:lt-wilson@tamu.edu">lt-wilson@tamu.edu</a>); Bill Rooney; McCutchen, Bill; Avant, Bob; Helms, Adam; Nelson, Michelle; Zak, Kendra; Travis Miller; Alex Thomasson; McCutchen, Bill; Slovacek, Jackie;

Baltensperger, David; <a href="mailto:tmaldonado@tamu.edu">tmaldonado@tamu.edu</a>

Subject: AGENDA Chevron/AgriLife Quarterly Review in Weslaco

Michelle and Doug:

Please find attached the close-to-final agenda and attendee list for our meeting in Weslaco next week. Please forward to your team and Curt and Paul. Note that the dress is casual with work shoes as we will be in the fields and in agricultural processing plants both days.

If you have any suggested changes to the schedule, please forward them.

Mike Gould's team will be forwarding a written report soon.

Thanks, Shay

Shay L. Simpson
Associate Director, Corporate Relations
Texas AgriLife Research
Centeq Building 100D
979-845-6315 Office
979-571-3137 Mobile
<a href="mailto:shay-simpson@tamu.edu">shay-simpson@tamu.edu</a>

 From:
 Hale, Anna

 To:
 Bill Rooney

 Subject:
 RE: Any news?

Date: Thursday, September 24, 2009 8:20:53 AM

## Bill-

I'm kind of excited about the interview also, but a little bit apprehensive too. I'm still not sold. I'm relatively happy here if you take one or two people out of the picture. I heard Collins is also going to interview. Even though it's probably not a good idea to do this since I am interviewing for the same position, you should know that he is EXCELLENT. He's very good at quantitative genetics and has more molecular experience than I do. Collins and I work on a lot of projects together and you couldn't ask for a better cooperator.

#### Anna

**From:** Bill Rooney [mailto:wlr@tamu.edu] **Sent:** Thursday, September 24, 2009 6:22 AM

**To:** Hale, Anna

**Cc:** 'George L Hodnett' **Subject:** RE: Any news?

No new information as of yet. It is submitted, but George is the corresponding author, so he'll have to inform you of what is going on.

I'll be happy to answer questions from your in-depth reviewer.

I'm also glad to hear that you are coming for an interview. I knew we would get you here for a seminar and discussion some way!

#### bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151

----Original Message----

**From:** Hale, Anna [mailto:Anna.Hale@ARS.USDA.GOV] **Sent:** Wednesday, September 23, 2009 10:38 AM

**To:** George L Hodnett; Bill Rooney

**Subject:** Any news?

Hey Guys-

Have you heard any news about the pending publication?

I have a question for the two of you. I am up for promotion and am currently preparing my "RPES Case write-up". As part of this write-up, I have to provide a list of names to my "indepth reviewer." This person will be calling people with whom I have interacted and ask them about my role in various projects, etc. Basically, I think they are supposed to determine if I lied on my write-up and if I deserve a promotion. They report to the promotion committee.

Anyway, I was wondering if I could include the two of you (or one of you) on my list. Even if

you are not included on the list, there is a chance you will be called because you are on a submitted paper and will be mentioned in my case write-up. Try to be nice if they call ©

Thanks for letting me work with you on this project. I spoke with our IP guy today via e-mail. National headquarters is now handling negotiations, so I am out of the loop. I was told to "sit tight"

Anna

 From:
 Bill Rooney

 To:
 "Lindra G Blum"

 Subject:
 RE: Approval

**Date:** Friday, October 09, 2009 1:55:02 AM

Lindra:

I approve. Use the accounts you've been using previously.

Regards,

Bill

----Original Message-----

From: Lindra G Blum [mailto:lg-blum@tamu.edu] Sent: Thursday, October 08, 2009 10:35 AM

To: Bill L Rooney Subject: Approval

This takes the place of the Stamp on the Invoice.

Vendor: Transportation

Purchase Order:

Received Date (This is the date you received the Item(s) 09/30/09

Account to use.

Order . Complete or Partial:

Amount: (s) \$72.63 \$45.53 \$158.69 & \$47.54

Approved for Payment:

From: <u>C. Wayne Smith</u>
To: <u>Seth C Murray</u>

Cc: Amir M Ibrahim; David Baltensperger; Dave Byrne; Steve Hague; dirk hays; Creighton Miller; Kevin Crosby;

Dave Stelly; Russell Jessup; Bill L Rooney

Subject: Re: ARP

**Date:** Tuesday, September 01, 2009 11:22:55 AM

Attachments: C. Wayne Smith.vcf

Good ideas and thanks for reminding me of the ARP. I copied all breeders -- hope you don't mind.

I would appreciate other ideas.

As for the cost, this is state money and so there shouldn't be any tuition cost, i.e., OGS will pay the tuition. We could/will adjust the salary in the budget of the proposal such that the student will be responsible for their fees (and maybe insurance).

# Wayne

C. Wayne Smith
Professor and Associate Head
Department of Soil and Crop Sciences
2474 TAMU
Texas A&M University
College Station, TX 77843-2474
979.845.3450
cwsmith@tamu.edu

# >>> Seth C Murray 9/1/2009 11:13 AM >>>

I appreciate you taking the lead on the ARP and have a few critical thoughts before I can add a contribution:

After reading the announcement again with your draft I think I might suggest focusing on a single topic and project (i.e. drought and heat) - which affects every Texas crop. Then we could lay out a single project that could be translated across all crops. For instance, cultivar yield stability trials under multiple environments at varying irrigation levels. Then a student in cotton, wheat, and sorghum could each work on the same thing. This standard project is a similar approach to what Rockefeller has been pushing in African plant breeding education. Though I do not think this is a great plan for educating all students, I think having a co-hort of three students all working on the same project across three different crops would facilitate group learning. If it is food security and poverty and I would still suggest setting a project that could work on all crops where we could propose a standard approach "improving yield in multienviornmental trials".

My second personal concern is that there would be no support for tuition or research. Thinking about the Monsanto fellowship \$9,000 + research materials a year is a decent chunk to come up with without a major grant (for corn producers \$30k is a large - multi-investigator grant - and I only get \$10k). Therefore, rather than myself get a partially funded student I would prefer if another departmental PI got a fully funded student; for instance pay the student a good assistantship that could cover their own fees, and  $\sim \$5000$  of research funding/ year so we would only have to cover tuition or maybe even high enough the student could pay their own tuition. Then there would be no worries about coming up with funds and the student could choose a program based on their own interest. Maybe there is a reason not to do this but it seems like it would be a lot simpler if it was permissible.

Based on your reply - and maybe we should meet about this - I would be happy to write some information on the importance of maize to food security and poverty.

Thanks,

Seth

>>> C. Wayne Smith 08/19/09 8:37 AM >>>

I doubt that there's precedent but I can't be told no if I don't ask. The announcement indicates that a proposal can have only 2 co-PIs and so I had to word the pre proposal in such a manner that no breeder who receives an ARP can mentor one of these graduate students nor interns. I don't see any way around this.

Attached is a first draft on which I would welcome comments and suggestions. I need to explore wording that will immediately tell a reviewer what I'm proposing so that they don't get sidetracked looking for the final research proposal.

Thanks,

Wayne

C. Wayne Smith
Professor and Associate Head
Department of Soil and Crop Sciences
2474 TAMU
Texas A&M University
College Station, TX 77843-2474
979.845.3450
cwsmith@tamu.edu

>>> Stelly\_David <stelly@tamu.edu> 8/18/2009 6:30 PM >>> I am just back into the office after an extended absence and will need to look this ARP over. When I first saw the announcement, I immediately thought of a few of our research fronts that desperately need development and noted restrictions on numbers of proposals.

Is there any precedent for that sort of investment from ARP? ( when I have looked in the past at ARP funding lists, I did not look through for that sort of topic)

David

On Aug 14, 2009, at 10:29 AM, C. Wayne Smith wrote:

- > Guys,
- > IM thinking about submitting a pre proposal with a title something
- > like "Beachell Borlaug Center for Plant Breeding Pilot Program" to
- > ARP. I've given this about 30 minutes of thought so it obviously
- > isn't very far along but I would propose 3 MS graduate students
- > support and 4 summer PB interns. This would consume all of the 100K
- > per year and so the research would have to be at the PI or major
- > professor expense. You'll note that I have not included off campus
- > folks nor hort although I will at some point.
- >
- > I need input:
- > Worthwhile?

```
> Would you participate?
> Can we specify 5+ breeding programs/objectives from which students
> could choose?
> Specify how we'll advertise for graduate students and interns?
> What else???
> Give me your thoughts?
> Wayne
> C. Wayne Smith
> Professor and Associate Head
> Department of Soil and Crop Sciences
> 2474 TAMU
> Texas A&M University
> College Station, TX 77843-2474
> 979.845.3450
> cwsmith@tamu.edu
```

> <C. Wayne Smith1.vcf>

From: Simpson, Shay

To: <u>Bridges, Brenda</u>; <u>Travis Miller</u>

Cc: Simpson, Shay; Avant, Bob; Bill Rooney

Subject: RE: Aug 25 Chevron tour

Date:Wednesday, August 19, 2009 2:32:53 PMAttachments:Ceres TAMU 2009Q2 Quarterly Schedule Draft.doc

FYI, the Ceres meeting will be all day on Tuesday 25<sup>th</sup>. I've attached the tentative agenda. We will be touring fields from 8 to 10 am. At 10:15 am Bill Rooney is scheduled to present his quarterly update to Ceres until 11:45 am and would benefit from hearing the other reports from Trish, John, and Jürg until 2:45 pm. Then the whole group will have discussions until 5 pm.

As you see, this a full day of Ceres meetings planned for quite some time. Maybe Dr. Rooney could have his graduate students meeting with Chevron in the field?

Thanks, Shay

Shay L. Simpson
Associate Director, Corporate Relations
Texas AgriLife Research
Centeq Building 100D
979-845-6315 Office
979-571-3137 Mobile
shay-simpson@tamu.edu

From: Bridges, Brenda

Sent: Wednesday, August 19, 2009 12:33 PM

**To:** Travis Miller

Cc: shay-simpson@tamu.edu; Robert V. Avant Jr. (bavant@tamu.edu); Bill Rooney

Subject: Aug 25 Chevron tour

Travis,

Please call Bill Rooney (he's in his office today) to be sure your visit to the field with Chevron on Aug 25 does not conflict with Rooney's Ceres tour group on the same day. Also, please call Nancy Dunham at 713.954.6242 to find out at which motel they will be staying, so you can meet them there.

Thanks so much for handling this.

Brenda Bridges
Program Associate
Texas AgriLife Research Corporate Relations
College Station TX 77843-2583
O: (979)862-7136

C: (979)324-7823 Fax (979)458-2155

http://agbioenergy.tamu.edu

Go green! Please consider the environment before printing this.

From: Bill Rooney

To: "Borden, Dustin Ross"; "Delroy Collins"

Subject: RE: Bioenergy and Sweets in weslaco

Date: Thursday, October 08, 2009 3:57:57 AM

Looks like it would be tough to impossible to harvest this stuff mechanically. So, I'm inclined to let it go...we'll make a decision by early next week.

Regards,

Bill

----Original Message-----

From: Borden, Dustin Ross [mailto:dborden@neo.tamu.edu]

Sent: Tuesday, October 06, 2009 5:05 PM

To: bill ronney; Delroy Collins

Subject: Bioenergy and Sweets in weslaco

Dr. Rooney and Delroy

I looked at the things in wesalco that we would harvest with the one row and I think that at this point it would not be worth going down there. I could not find where an alley was supposed to be or where the rows were from the front of the field. I have attached some pictures, they don't represent it very well but I think that you can get the overall picture.

The sweets are completely gone, as in beginning to rot on the ground. some of the material in the middle is still standing and we might can take notes on them as to what is still up, but finding the start and stop of the plots will be difficult.

I told Beto that I was going to talk to you and let you make a decision based on the pictures and my opinion, so if you could please let him know what we are going to do with in on Monday the 12th. Im sure he will be calling by tuesday if you don't call him.

I will have my phone, but I don't know if it will work, but call me if you need me.

Thanks

Dustin

Dustin Borden '07 Research Assistant Sorghum Breeding and Genetics Texas A&M University College Station, TX 77843 (979)845-2151 
 From:
 Bill Rooney

 To:
 "Tim Trop"

Subject: RE: Bird Resistant Grain Sorghum

Date: Friday, October 09, 2009 11:13:26 AM

### Tim:

Some of the report is correct; some less so. Much of the questions and concerns have been considered in the past. While it is way too much to put in an e-mail right now, there is significant discussion to be had around the pros/cons of high tannin sorghums and they do offer the best options for bird avoidance (note I didn't say resistance)

Regards,

Bill

-----Original Message-----

From: Tim Trop [

Sent: Friday, October 09, 2009 9:42 AM

To: Bill Rooney

Subject: FW: Bird Resistant Grain Sorghum

-----Original Message-----

From: Thomas Gieskes

Sent: Friday, October 09, 2009 12:01 AM

To: Tim Trop; Dave Hackett

Subject: Bird Resistant Grain Sorghum

Gents,

First, let me thank you for the privilege of your company during our fact

finding mission this week. I thoroughly enjoyed it. Still sitting at the airport, I went back through my earlier downloads and links related to Sorghum, with a little more focus on bird resistance. The reports on high

tannin varieties are unanimous: birds will not touch high tannin sorghum.

The tannin is an issue when feeding the sorghum to cattle (it has to be harvested with a relatively high moisture content, dried and stored over

certain length of time, whereby the tannin will slowly break down to make

the grain palatable. For our purposes, that is a non-issue.

It does make it necessary however to extend our crop tests into product testing as well. When we get the crops in from the test plots, there is an

additional test protocol that we will have to define: drying, milling, fermenting, etc., to determine the composition of the waste streams and the

quality of the DDGS derived from the BR sorghum.

There may be some proprietary and potentially patentable IP in the use of

very high tannin sorghum in arid environments to produce fuel ethanol (a non-edible crop, marginal lands, etc.), destruction of the tannins in

the fermentation and distillation of the ethanol to produce palatable DDGS for ruminants, etc.

Thomas

From: McCutchen, Bill

To: ; wlr@tamu.edu; Schuerman, Peter L.

Cc: ; <u>Irooney@tamu.edu</u>; <u>Turner, Nancy</u>

Subject: Re: Black Sorghum

**Date:** Thursday, November 12, 2009 6:40:26 PM

Bob.

Good discussion today, and I believe we are gaining some alignment in our mutual goals.

Bill

From: Robert Harris

To: McCutchen, Bill; Bill Rooney <wlr@tamu.edu>; Schuerman, Peter L.

Cc: Bill Rooney <wlr@tamu.edu>; Peter B. Harris < >; James Harris

>; Lloyd Rooney <lrooney@tamu.edu>

Sent: Thu Nov 12 13:19:00 2009

**Subject**: Black Sorghum

It is our understanding that Bill Rooney and his staff developed certain varieties of black sorghum but not all black sorghum since we heard that Kansas State had been working on same. Right now, it is believed that these varieties (TAMU's) are lower in phenolics and ORAC value than the variety we are using (NK8830) for our food products but are higher in a special antioxidant, namely, 3-deoxy (short for 3-deoxyanthocyanins) which <u>may</u> be useful in preventing or mitigating colon cancer.

We have two basic objectives:

- 1. <u>Find a better variety of sorghum</u> to replace NK-8830 owned by Sorghum Partners to equal or beat yield (about 7500 per acre) and that offers higher levels of antioxidants as measured by ORAC testing done by Brunswick labs (patented method).
- 2. Evaluate current black (and yellow) varieties developed by TAMU in terms of nutritional and medical benefit. As stated we have ideas on how to use black sorghum in foods and supplements almost immediately and are willing to develop same with our own small test supply with your assistance. We intend to test ORAC values of the current black and yellow as soon as possible.
- 3. Complete a deal based on NIC/SPK becoming your corporate partner in utilizing test funding by the state within the financial limits discussed.
- 4. Think carefully about your limiting our rights to only current varieties based on unreasonable expectation of our best efforts (with your best efforts) and not being protected should we fail to achieve objectives with current varieties.

For your interest, I am showing attachments of our print ad and Kroger tie-in ad for 1/31 in our Cincinnati/Dayton test markets. Also, I attach our radio spots to start next week in Cincinnati and Dayton. Ohio.

Bob

From: **Bill Rooney** 

To:

Subject: RE: Brazil study abroad

Date: Friday, October 09, 2009 2:01:01 AM

## Matt:

Looks like a good opportunity. We can pay tuition/fees on the credit hours, but we can pay for the cost of the trip. If they don't cover it, I assume that you can?

Regards, Bill

-----Original Message-----

From: Sent: Thursday, October 08, 2009 7:41 AM

To: Bill Rooney

Subject: Brazil study abroad

Dr. Rooney,

I was wanting to know if I could go on the Brazil study abroud trip with Dr. Feagly. It is from Jan. 1 through Jan. 18. I wanted to check before I applied but I just saw that the deadline is Oct. 9.

From:
To:
Bill Rooney

**Subject:** RE: breeding/selection assignments in Field 218E

**Date:** Friday, August 21, 2009 8:10:14 AM

**Attachments:** 09 CSf218e 8-15-1.xls

#### Dr. Rooney,

Here are the selections I made in the F3 nursery. For not being a breeding nursery I did find a few winners.

Graduate Student- SCEP Program
United States Department of Agriculture
Agricultural Research Service
Plant Stress and Germplasm Development Unit
3810 4th Street
Lubbock Texas, 79415

-----Original Message-----

From: Bill Rooney [mailto:wlr@tamu.edu]

Sent: Fri 8/14/2009 6:20 PM

To: 'dustin borden';

Cc: 'Collins, Stephen D'

Subject: breeding/selection assignments in Field 218E

# Greetings all,

In the first part of next week, the goal will be to complete selections in breeding nurseries, specifically field 218E. As most of you had practice last week in Field 405, I've assigned you a set of plots in either the F2 or F3 nursery; you will be responsible for selection in those plot numbers. We'll discuss more on Monday morning, but the assignments are arbitrary and can be changed.

F2 nursery

Leo 20001-20200 Payne 20201-20400 Terry 20401-20600 Matt 20601-20800 Dustin 20801-20900

F3 Nursery

Dustin 20975-21198 Chad 21199-21593

We'll talk logistics on Monday. My goal is to be finished with this field by WEDNESDAY August 20

regards,

bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151 
 From:
 Rene Clara

 To:
 Joan Frederick

 Cc:
 Bill Rooney

**Subject:** Re: Budget for the regional local coordination **Date:** Monday, September 21, 2009 5:28:07 PM

Dear Joan,

I need to know when I will have the budget for the regional local coordination. I already am three months old operating with my own funds and have hanging commitments in Guatemala and Nicaragua.

I will be grateful if you can inform me when I can wait for them.

Thanks,

# René Clará V.

INTSORMIL

Host Regional Coordinator

CENTA, Apdo. Postal 885, San Salvador, El Salvador, C.A. Tel. (503) 2302 0239 - (503) 7815 2238 cel.

Fax: (503) 2302 0239

E-mail:

**De:** Joan Frederick <jfrederi@unlnotes.unl.edu> **Para:** Rene Clara

**Enviado:** lunes, 21 de septiembre, 2009 12:26:40

**Asunto:** Re: PCCMCA meeting.

Rene - I just went the emails you sent. The form you sent looks very good. Please go ahead with the receipts and accounting when you have all the information.

Joan Frederick
INTSORMIL
University of Nebraska
114 BCH
Lincoln NE 68583-0748
402-472-7058
jfrederick1@unl.edu

iObtén la mejor experiencia en la web! Descarga gratis el nuevo Internet Explorer 8 http://downloads.yahoo.com/ieak8/?l=e1 
 From:
 Stelly David

 To:
 Bill Rooney

 Cc:
 Stelly David

Subject: Re: Call for 2009 Departmental Awards

Date: Wednesday, October 28, 2009 8:12:37 AM

Attachments: Raska AwardNomn-Stelly 09i28.doc

ATT00041.htm

Thanks. Here is my draft on Wayne.

DS

On Oct 27, 2009, at 11:04 PM, Bill Rooney wrote:

I'll write for Wayne.

Bill

**From:** Stelly\_David [mailto:stelly@tamu.edu] **Sent:** Friday, October 23, 2009 11:02 AM

To: Smith C. Wayne; Kohel Russell; Rooney Bill; Harris Jared; Hodnett George; Saha

Sukumar; Gwyn Jeff; Hanson Robert Jr.

**Cc:** Stelly\_David David M.

**Subject:** Fwd: Call for 2009 Departmental Awards

Importance: High

Would you be willing (if not in conflict with other plans) to join me in nominating Mr. Wayne Raska for this award? He has been my right arm for over 25 years, longevity of which in itself an immensely important factor, as it provided great continuity. Wayne's work and work ethics are highly respected by all who know him and are familiar with his many, many contributions to our overall operations. I opted to ask for a short note from a few of you that have long-since departed my group and TAMU, but who are thus all the more aware of both his long-term dedication to our lab's work for cotton improvement and science, as well as his penchant for organization and "to get it done".

David

5. Technical Staff Support: Technicians, technical assistants,

research assistants or equivalents that do not require a M.S. degree may

be nominated, with emphasis on their sustained contributions.

# Begin forwarded message:

From: "Judy Young" < <u>j-young@tamu.edu</u>>
Date: October 23, 2009 10:45:24 AM CDT

**To:** undisclosed-recipients:;

Subject: Call for 2009 Departmental Awards

\*\* High Priority \*\*

FROM: Mike Chandler, Chair Departmental Awards Committee

TO: All Faculty 09; Center/Station Directors; Support Staff; Graduate Students and Undergraduate Students

DATE: 10/22/2009

SUBJECT: Call for 2009 Departmental Awards

We need to identify and prepare nomination packets for outstanding individuals in the Department of Soil and Crop Sciences. Please help assure that individuals in your group or location are aware and can help recognize others for their contributions to teaching, extension and research.

Nominating procedures and former recipients are provided in the pages that follow. The nomination is basically a two-page summary, a couple of letters of support and up to six pages on the nominees background. The 2009 nomination packet should arrive by 4 p.m. on December 3, 2009.

Please deliver packets to:

Anna Fox
Department of Soil & Crop Sciences
2474 TAMU
217 Heep
College Station, TX 77843-2474
afox@ag.tamu.edu

Please take time from your busy schedule to participate in this worth while endeavor.

AWARDS IN EXCELLENCE PROGRAM
Department of Soil and Crop Sciences, Texas A&M University System

Purpose: The Department established this Awards in Excellence program to recognize employees and others for their contributions and special efforts that enhance teaching, research, and extension activities. A committee appointed by the Department Head manages the program, reviews nominations, and selects final candidates for recognition. Award categories, nomination procedures, and other details are described below.

# Categories of Awards

- 1. Administrative Support: Persons may be nominated who hold a position of clerical staff, account clerks, secretaries, administrative assistants, or similar duties that enhance the work and programs of teaching, extension, and/or research.
- 2. Research Award: This award is for faculty in research for excellence in scientific achievements and career accomplishments, with emphasis on the past three years. Considerations include innovations, collaborations, and applications.
- 3. Research Collaboration: This award is intended for an individual holding a Ph.D., usually post-doctoral research associate and similar position, who has provided outstanding research contributions under the direction of a permanent Faculty member.
- 4. Research Support: This award is for persons holding positions as research technicians, research associates, or equivalent positions that required at least a M.S. degree. Post-doctoral research associates and similar positions do not fall under this category for their contributions to the program.
- 5. Technical Staff Support: Technicians, technical assistants, research assistants or equivalents that do not require a M.S. degree may be nominated, with emphasis on their sustained contributions.
- 6. Graduate Research Award: Nominations should focus on students enrolled in a masters or doctoral program during the past calendar year, working on or off campus, and focus on research conducted at Texas A&M. The nomination may include a list of twelve (12) publications (authored or co-authored during the past five years) and may list significant presentations and awards.
- 7. Extension Awards: This award is for faculty excellence and accomplishments in extension education, including specialists and others, with emphasis on the past three years. Considerations include innovations, cooperation and outreach, and impacts.
- 8. Collaborating County Extension Agent: This award is to recognize county agents and others who have provided direct support for

Specialists in program planning, implementation activities, and/or delivery of Extension programs and may include county-based demonstration/applied research projects, enhanced communication with target audiences to deliver Extension information and resources, or other activities that enhance Extension missions and outreach - on a county, regional, or state basis.

- 9. Teaching Award: This award is recognize outstanding contributions of a faculty member in classroom teaching, advising, mentoring, and/or other activities toward enhancing student experiences in undergraduate or graduate teaching. The nomination may include efforts toward enriched course content, delivery, career development, and impact on students.
- 10. Graduate Teaching Award: This award may be granted to a graduate teaching assistant for outstanding contributions in laboratory, lecture, or non-teaching activities that enhanced student experiences in one or more courses in the Department. The nominee should have been enrolled and functioning as a graduate student during the current calendar year.
- 11. Undergraduate Student Support: This award is intended to recognize an undergraduate student who significantly contributed to teaching, research or extension programs above and beyond usual employment expectations.
- 12. Special Service/Recognition Award: This award recognizes outstanding support by an individual and/or organization for teaching, research, and/or extension programs of the Department. The nomination should summarize contributions and impacts, with emphasis on the past five years. The award may be presented at a time or place to more fully recognize the contributions.

# Eligibility

- 1. Any Soil and Crop Sciences faculty or staff may submit nominations for any category. Student groups may nominate one faculty member for an award.
- 2. Any Soil and Crop Sciences faculty, staff, or student is eligible to receive awards, subject to these constraints:
- a. Members of the Departmental Awards Committee are not eligible to receive an award.
- b. Previous recipients of a Departmental, Association of Former Students, or Agriculture Program award are not eligible for an award in the same category in this program but may be nominated in a different category.
- c. Previous nominees are eligible but must be re-nominated if not

successful. If a candidate is nominated for more than one category, an award may be in only one category.

d. All nominees must have been associated with the Department for at least three years, except for nominees for Graduate, Undergraduate, and Research Collaboration Awards, who must be affiliated with the Department at least in the calender year of nomination.

Nomination and submission procedures:

Nominations should first clearly identify the award category. Nomination packets must include:

- 1. A two-page double-spaced statement summarizing significant accomplishments, achievements, and/or evidence of impacts, with emphasis on recent years and conclude with the nominator's name and date.
- 2. Up to two letters (one page each) supporting the nomination.
- 3. A copy of significant portions (up to six pages) from the nominee's annual achievement report, resume, or comparable information.

## Submission and selection

1. Seven (7) complete collated packets should be prepared with each copy placed in a folder labeled with the award category and the nominee's name.

Packets should be received by 4 PM on December 3, 2009 in the Departmental office.

2. The Departmental Awards Committee will evaluate and select award recipients.

All decisions by the Committee will be final and subject to acceptance by the Head.

Awards will presented at a Departmental meeting or other event for recognition.

A list of former Departmental Award recipients is presented below.

Questions may be directed to the Awards Chairman or the Departmental Office.

Past Recipients - SOIL AND CROP SCIENCES DEPARTMENTAL AWARDS (if no location is indicated, the recipient was at College Station)

- 1. Administrative Support: Debbie Sutherland, Janet Case, Missy Vajdak, Cindy King, Betty Yezak, Jolene K. Hampton, Sherry Higgenbotham, Glenda Kurten, Mary Cooper, Lubbock, Janis Williamson, Overton, Lynette Huval, Tami Hons, Gloria Conrad, Thelma M. Barrett, Lubbock, Tina Nuche, Ginger Franks, Janell McCullough, Martha Hyde, Lubbock, Gladys Beasley, Helen Butler, Carol Rhodes, Joan Cowart, Judy Young, Li Zhang, Kevin Moore
- 2. Research Faculty: Frank, Hons, C. Wayne Smith, Ralph Waniska, Gerald Evers Overton, Kevin McInnes, Richard Loeppert, F. Monty Rouquette, Jr. Overton, Olin Smith, Seeichi Miyamoto El Paso, Charles Simpson- Stephenville, W.R. Ocumpaugh Beeville, Arthur Onken,-Lubbock, Vincent A. Haby- Overton, Larry Wilding, Lloyd Hossner, Charles Wendt -Lubbock, Kirk Brown, Darrell Rosenow Lubbock, Keith McCree, Floyd Fenn El Paso, Allen Wiese- Amarillo, Cleve Gerard Vernon, Kenneth Porter- Amarillo, Ethan Holt, Gerald Smith-Overton, Bill Rooney
- 3. Research Collaboration: Hyeon-Se Lee, Hamid Shahandeh, Sung Hun Park, Nurul Islam-Faridi, Scott Finlayson, Sam Yang
- 4. Research Support: Margaret J. (Peggy) Parsons, William H. (Pete) Higgins Stephenville, Mark H. Hall, Brent A. Bessler, Yoakum, G. Norman White, Stephen Ward, Overton, Charles Woodfin -Lubbock, Doug Nesmith- Lubbock, Cassandra McDonough, Allen Leonard Overton, Indre J. Pemberton Overton, Sam Sifers, James V. Davis Overton, M.J. Florence Overton, L. Richard Drees, Wallace Menn, Jim Thomas, Mary Ketchersid, Chantel Scheuring, John Everitt Lubbock, Randy Bow-Stephenville
- 5. Technical Staff Support: Todd Carpenter, Vince Saladino, Annette Fincher, Joel Kerby -Overton, Frank Fojt, Michael R. Baring, Leon Synatschk, Vicki Gergeni, Kathy Schmitt, Henry Cobb- Lubbock, Jim Crowder, Overton, Lyndon Schoenhals Lubbock, Curtis Gilbert Overton, Gene Bolton, Bobby Bredthauer, Dennis Pietsch, K.C. Donnelly, Robert McGee- Weslaco, Gary Peterson- Amarillo, Wayne Chenault- Amarillo, Gary Nimr Overton, Dawn Deno, Delroy Collins
- 6. Graduate Student Research: Jason Krutz, Lu Tian, Ronnie Schnell, Abdul Mohammed

7. Extension Faculty: Brent Bean- Amarillo, Todd Baughman - Vernon, Randy Boman - Lubbock, Mark McFarland, C.S., Robert Lemon - C.S., Paul Baumann - CS, Travis Miller- C.S. Billy Warrick - San Angelo, Charles Stichler - Uvalde, George Alston - Stephenville, Willis Gaas - C.S., Steve Livingston- C.S., Ed. Colburn - C.S., William Knoop- Dallas, Billy L.

- Harris- C.S., John Bremer- C.C., Neal Pratt- C.S., Dave Weaver- C.S., James Supak -Lubbock, Kenneth Lindsey- Ft. Stockton, Robert Metzer- C.S., Frank Petr- Amarillo, A.C. Novasad- C.S., Jim McAfee-Dallas, Tony Provin C.S., Gaylon Morgan C.S.
- 8. Collaborating County Agent: Ron Leps, Gary Bomar-Abilene
- 9. Teaching Faculty: Richard White, Scott Senseman, Tom Cothren, Ralph Waniska, Mike Chandler, Kirk Brown, Wallace Menn, Harry Cralle, Mark Hussey, Tom Hallmark, Frank Hons, Don Vietor, David Zuberer, Murray Milford, Morris Merkle, J. F. Mills, Sam Feagley, Christine Morgan, Terry Gentry
- 10. Graduate Teaching: Robyn McGilloway, Cecilia Gerngross, Faith Ann Heinsch, Trent Hale, Thomas Brooks, Curtis Wiltze, Michelle Finlayson, Linn White, Travis Waiser, Brad Westmoreland, Sara Lancaster
- 11. Undergraduate Student Support: Travis Waiser, Ashley Fowler, (Gigi) Alicia Mauer, Kristen Kurten, Courtney Swyden, Morgan Arnett, Katrina Hutchinson, Scott Stanislav
- 12. Special Services/ Recognition Award: Doug Jost Monsanto, Jim Faubion -Club Corp,

Norman Rozeff -Rio Grande Valley Sugar Growers, Inc., Billy Turner, Texas Turfgrass Association, Mike Wright and Andy Pontz - KBTX, Ernest Rivers -C.S., Texas Wheat Producers Board, Lamesa Cotton Growers Association, Carl Cox - TFFC, Texas Producers Peanut Board, USGA Green Section, Turfgrass Producers of Texas, Craig Potts - Assistant Athletic Field Manger at Texas A&M University





October 26, 2009

TO: Awards Committee – Department of Soil & Crop Sciences

FR: David Stelly, Professor

RE: Nomination of Dwaine A. Raska for Technical Staff Support

I have led the Cotton Cytogenetics / Wide-cross Introgression Project for 25 years, during most of which Dwaine ("Wayne") A. Raska has been the project's "right arm". Wayne was an hourly student worker when I assumed a faculty position in 1983. A few years later, he completed his B.Sc. and I was able to hire him as a replacement for my pre-existing technician, who departed for Cornell University with her husband. He has proven himself to be an indispensable part of this project and served with distinction for many years as our project's technical guru and research assistant.

The project and the Department have benefited immensely from Wayne's numerous contributions, many far beyond the call of duty, including exceptionally hard work – sometimes over 100 hours per week at crunch times (no bull!). Moreover, Wayne has time and time again found ways to get things done economically. His work ethics have multiplied the benefits of his education, intelligence, organization and diverse handyman skills. His proficiency allows the project to grow large populations in greenhouses (15,000 – 20,000 sq ft / year-round), space-transplanted nursery (2.5 acres) and direct-seeded cotton fields (5-10 acres), work-crew management (5-10 student workers year round), and to make very large numbers of cytogenetic preparations and cytological analyses for cotton cytogenetic stock development (*Gossypium hirsutum* L.) and chromosome substitution (3 alien species), and many additional ad hoc projects. Our project is well recognized for its forte, cotton cytogenetics, throughout the world cotton research community – and Wayne's contributions there have been intrinsic to our success.

His "one-man-army" work ethics, abilities, meticulous attention to planning and detail and ability to operate many facets of the project independently have been a huge benefit to the project, and contributed greatly to our lab's reputation world-wide in the cotton genetics, genomics and breeding research communities. He has routinely interfaced excellently with Farms Services, the the local USDA cotton Germplasm and Plant Pathology groups, and also with the USDA groups at Mississippi State and Stoneville; as well as many others on an ad hoc basis. So, he has impacted not only internal operations, but also external ones.

The longevity of his role in this project (>25 years) has been an immensely important factor, as it has provided great continuity and ever-increasing proficiency and efficiency. Wayne's work and work ethics are highly respected by <u>all</u> who know him and are familiar with his many, many contributions at our workplace. I know that there have been several instances where Wayne could have taken positions offered to him by colleagues here and elsewhere, and probably there were others that I do not know about, but he remained very faithful to our project, too. SCSC has benefited from his deep commitment.

Wayne has long taken a personal pride in our lab and department. There have been many, many instances where Wayne took the initiative to build or modify or fix items in our buildings (#955, 961, 963, 965) and equipment, and devise operation-smoothing and -economizing gadgets or procedures. A few simple examples include repairing equipment and rebuilding our roller gins, lightweight construction of lab items, building a bridge across the constantly flooded ditch between buildings 965 and 955 (we use both), building soil bins, building sidewalks, renovating/fixing greenhouses #961 and #963, and just last week, welding a bike rack. His contributions extend to aesthetics and social matters, too – for example, he has for years planted, replaced and kept up ornamentals in front of New Beasley Lab, which arguably has the best looking greenery of all buildings along Agronomy Rd., the grounds around most of which are poorly landscaped. On a number of occasions, he has provided decorations and time for SCSC Departmental functions. In our lab, he works directly with numerous hourly workers, and has on numerous occasions taken the lead in organizing lab socials that help keep up morale and work efforts.

Wayne Raska's long-term dedication and contributions to our lab, the cotton program and SCSC warrant recognition. I request your support in having the Department recognize Wayne at this time for his contributions --- their longevity, their multi-dimensionality, consistency, and high quality. They reflect exceptional high degrees of competence and commitment.

From: Bill Rooney
To: "Simpson, Shay"

Subject: RE: Ceres Quarterly - January

Date: Monday, October 12, 2009 2:33:34 PM

## Shay:

I'm good for the meeting at anytime in the first couple of weeks. If you can make it the week of Agrilife, that would be fine with me.

Regards,

Bill

----Original Message----

From: Simpson, Shay [mailto:shay-simpson@tamu.edu]

Sent: Monday, October 12, 2009 1:05 PM

To: Bill Rooney; John Mullet; Jürg Blumenthal; David Baltensperger;

Patricia Klein; Bill McCutchen; Bob Avant; Peter Schuerman

Subject: Ceres Quarterly - January

Hi team,

Last December we discussed having our Ceres meetings in January 2010 instead of December 2009. We talked about scheduling for second week of Jan. However, the announcement for the Ag Program just came in to our in boxes and competes for our time that same week in January.

The first week is the cotton Beltwide meetings, but we might be able to work around that - maybe. The week of 18th will probably begin classes.

What is this group's wish for traveling to Thousand Oaks in January?

Shay

Shay Simpson, Associate Dir. Corporate Relations Texas AgriLife Research 979.571.3137 mobile 
 From:
 Sharon Mitchell

 To:
 Bill Rooney

 Cc:
 Stephen Kresovich

 Subject:
 RE: Compositional data

**Date:** Tuesday, September 29, 2009 8:31:28 PM

#### Bill

I goofed. The message that I sent to you was meant for Bill Cox at the Cornell Agricultural Experiment Station. Too many Bills in my address book.

In light of your suggestions, I'll contact you if we have difficulty arranging these analyses with Bill Cox and Jerry Cherney. Thanks so much for your willingness to help.

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Best,
Sharon
At 06:52 PM 9/29/2009, you wrote:
>Sharon:
>Don't know if Steve or I recommended Jerry Cherney (I don't remember doing
>so, but its not a bad idea).
>A couple of things to consider.
>1. We have developed an NIR calibration curve for sorghum biomass using the
>FOSS XDS system. Our curve is based on wet chemistry of 140 samples
>completed by Ed Wolfrum at DOE NREL. The composition estimates are based on
>the NREL workup for biochemical composition (lignin, xylan, glucan, solubles
>etc.) and NOT forage quality (ADF, NDF, IVDMD).
>2. We are now duplicating that set (described in 1) and obtaining wet
>chemistry for forage quality (via Dairy One) and will have a calibration
>curve for the same material for forage quality. Ultimately our goal is to
>merge the two curves or least understand the relationships between the two
>types.
>3. We are happy to collaborate as appropriate to get things done.
>I can visit early Wednesday morning or Thursday morning (7:30-9:00 am EDT).
>Just give me a call and we can talk.
>Regards,
>Bill
>Dr. William L. Rooney
>Professor, Sorghum Breeding and Genetics
>Chair, Plant Release Committee
>Texas A&M University
>College Station, Texas 77843-2474
>979 845 2151
>----Original Message-----
>From: Sharon Mitchell [mailto:sem30@cornell.edu]
>Sent: Tuesday, September 29, 2009 1:25 PM
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>To: Bill Rooney
>Cc: Stephen Kresovich
>Subject: Compositional data
>Hi Bill,
>I had a meeting with Larry Walker yesterday afternoon regarding the
>handling of the compositional analysis for our cellulosic sorghum
>breeding program. It seems that Larry has a fully equipped lab but
>insufficient funding to supply technical help without the procurement
>of additional funds. He was quite clear regarding his vision for the
>Biofuels Research Lab as a research entity and not a service
>facility. I think we can get at least some training for one of our
>technical staff but developing the appropriate calibration equations
>for FT-NIR data from genetically diverse lines (i.e., lines with
>disparate spectra) will be challenging. As of right now, we do not
>have the expertise to do this nor can we expect to get much help from
>Larry without a significant investment of our time and resources.
>At any rate, we should talk about your suggestion of getting Jerry
>Cherney involved in this project. We'll be harvesting sorghum the
>second and third week in October so my time will be limited
>then. Could you meet sometime later this week? I'm tied up on
>Thursday from 9:00am-12:00pm and from 3:00-4:00pm. So far Wednesday
>and Friday are free.
>Thanks,
>Sharon
>Sharon E. Mitchell, Ph.D.
>Manager, Institute for Genomic Diversity Laboratories Biotechnology
>Building, Room 151 Cornell University Ithaca, NY 14853-2703
>sem30@cornell.edu
>Ph:
        (607) 254-4851
        (607) 254-6379
>FAX:
Sharon E. Mitchell, Ph.D.
Manager, Institute for Genomic Diversity Laboratories
Biotechnology Building, Room 151
Cornell University
Ithaca, NY 14853-2703
sem30@cornell.edu
Ph:
      (607) 254-4851
FAX: (607) 254-6379
```

From: Bill Rooney
To: "Slovacek, Jackie"
Cc: "Mullet, John E."
Subject: RE: Confidential

**Date:** Thursday, October 08, 2009 4:02:20 AM

Wednesday, November 4th is the best for me.

#### Bill

----Original Message----

From: Slovacek, Jackie [mailto:j-slovacek@tamu.edu] Sent: Wednesday, October 07, 2009 11:43 AM

To: Bill Rooney Cc: Mullet, John E. Subject: RE: Confidential

I checked with Bill Mc and he says the first week of November is okay. We are available November 4-5th from 11-1:00 pm. Let me know if either day work for you guys.

Thanks Jackie

Jackie Slovacek Assistant to the Associate Director Texas AgriLife Research 113 Jack K Williams Administration Bldg College Station, Texas 77843-2142

979.845.7980 979.458.4765 Fax -----Original Message-----

From: Bill Rooney [mailto:wlr@tamu.edu]
Sent: Wednesday, October 07, 2009 11:39 AM

To: Slovacek, Jackie Cc: Mullet, John E. Subject: RE: Confidential

## Jackie:

I've got plenty to do next week when I return, but if we need to meet

week, then I can make the Tuesday time.

However, I Bill Mc is willing to wait, the first week of November is good

(later in the week).

## Regards, bill

----Original Message----

From: Slovacek, Jackie [mailto:j-slovacek@tamu.edu]

Sent: Tuesday, October 06, 2009 4:17 PM

To: Mullet, John E. Cc: Bill Rooney

Subject: RE: Confidential

I wonder if this lunch can wait until the first week of November? What do you guys think? Bill Mc is out the last week in October.

I will wait to hear from Rooney.

Jackie

Jackie Slovacek Assistant to the Associate Director Texas AgriLife Research 113 Jack K Williams Administration Bldg College Station, Texas 77843-2142

979.845.7980 979.458.4765 Fax

----Original Message-----

From: John Mullet [mailto:jmullet@tamu.edu]
Sent: Tuesday, October 06, 2009 4:10 PM

To: Slovacek, Jackie Cc: Bill Rooney

Subject: Re: Confidential Importance: High

Jackie,

I will be tied up through the end of next week getting the DARPA project done and then heading to the Chevron meeting Wed-Friday next week.

Need to check Bill Rooney's schedule because he is traveling a lot right now.

John

On Oct 6, 2009, at 3:31 PM, Slovacek, Jackie wrote:

```
> See email below:
>
> Bill Mc is available next week for a two hour lunch on Monday, Oct
> 12th
> 11-1 pm, or Tuesday, Oct 13th 11-1 pm.
>
> Please let me know if either of these days work for you.
>
> Thanks
> Jackie
>
> -----Original Message-----
> From: McCutchen, Bill
> Sent: Monday, October 05, 2009 6:18 PM
> To: Slovacek, Jackie
> Subject: Fw: Confidential
> Can you set a 2hr of campus lunch with Bill and John please?
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> Bill
> ---- Original Message -----
> From: Bill Rooney <wlr@tamu.edu>
> To: McCutchen, Bill; Mullet, John E.
> Sent: Sat Oct 03 08:26:59 2009
> Subject: RE: Confidential
> Bill, I'd be happy to discuss integration into the research
> programs.....
> Bill r.
> -----Original Message-----
> From: McCutchen, Bill [mailto:bmccutchen@tamu.edu]
> Sent: Saturday, October 03, 2009 8:01 AM
> To: wlr@tamu.edu; Mullet, John E.
> Subject: Confidential
> Bill and John,
> First I want to say thanks for your leadership and guidance not only
> DARPA, but the significant accomplishments that you have achieved in
> bioenergy over the years. It has been challenging and imperfect,
> but it
> has been fun and rewarding.
> IF we are successful in securing the DARPA funding, could I ask you to
> consider funding a graduate student that might focus on the
> potential to
> transfer insect, herbicide and/or disease traits from sorghum to
> sorcane? I would also like to ask you a favor and allow me to engage
> and provide oversight of this student that would be an student
> appointment in one or both of your labs.
> If you possible, I would like to discuss in person with both of you.
> Thanks for considering.
> Bill
```

From: Slovacek, Jackie
To: Bill Rooney
Cc: Mullet, John E.
Subject: RE: Confidential

**Date:** Friday, October 09, 2009 7:14:27 AM

Meeting has been set for November 4th at 11:00 am in our conference room and lunch will be served.

Thanks Jackie

Jackie Slovacek Assistant to the Associate Director Texas AgriLife Research 113 Jack K Williams Administration Bldg College Station, Texas 77843-2142

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Subject: RE: Confidential

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Subject: Re: Confidential Importance: High

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John

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> IF we are successful in securing the DARPA funding, could I ask you to
> consider funding a graduate student that might focus on the
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> transfer insect, herbicide and/or disease traits from sorghum to
> sorcane? I would also like to ask you a favor and allow me to engage
> and provide oversight of this student that would be an student
> appointment in one or both of your labs.
> If you possible, I would like to discuss in person with both of you.
```

- Thanks for considering. Bill

From: John Mullet
To: Bill Rooney
Subject: Re: Confidential

**Date:** Wednesday, October 07, 2009 11:51:32 AM

Bill,

I talked briefly to Bill Mc this am about this topic He wants to quide a GS on

in sorghum through their use in WH. We are working a bit on the although not with funding from DARPA, and I would be happy to have a student work along with us part time on characterizing these genes in sorghum if you can handle the WH application. Also, if Bill is a member of your department, it makes sense for you/he to be cochairs and I could join as a committee member if need be.

Not sure where the funding comes from to do this....? is not a high priority right now for DARPA work.

Lets talk more before meeting with Bill Mc? Maybe in Weslaco if you will be there Friday am.

John

On Oct 7, 2009, at 11:38 AM, Bill Rooney wrote:

> 113 Jack K Williams Administration Bldg

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> Jackie:
> I've got plenty to do next week when I return, but if we need to
> meet next
> week, then I can make the Tuesday time.
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> project done and then heading to the Chevron meeting Wed-Friday next
> week.
> Need to check Bill Rooney's schedule because he is traveling a lot
> right now.
> John
> On Oct 6, 2009, at 3:31 PM, Slovacek, Jackie wrote:
>> See email below:
>>
>> Bill Mc is available next week for a two hour lunch on Monday, Oct
>> 12th
>> 11-1 pm, or Tuesday, Oct 13th 11-1 pm.
>> Please let me know if either of these days work for you.
>>
>> Thanks
>> Jackie
>>
>>
>>
>> -----Original Message-----
>> From: McCutchen, Bill
>> Sent: Monday, October 05, 2009 6:18 PM
>> To: Slovacek, Jackie
>> Subject: Fw: Confidential
>>
>> Can you set a 2hr of campus lunch with Bill and John please?
>>
>> Bill
>>
>> ---- Original Message -----
>> From: Bill Rooney <wlr@tamu.edu>
>> To: McCutchen, Bill; Mullet, John E.
>> Sent: Sat Oct 03 08:26:59 2009
>> Subject: RE: Confidential
>>
>> Bill, I'd be happy to discuss integration into the research
>> programs.....
>>
>> Bill r.
>>
```

From: Stelly David
To: John Mullet

Cc: <u>Stelly David</u>; <u>Bob Avant</u>; <u>Bill Rooney</u>

**Subject:** Re: DARPA R&D Draft

Date: Wednesday, September 09, 2009 8:55:07 AM

Attachments: GOAL 3 09 08 09 OUTLINE-ds.doc

## John,

I have put a lot of time into this version of Goal-3 based on Bill's Outline form at the starting point. I think it is ready to go as is but of course always welcome another set of eyes. My inclination is to use it to replace whatever you had put into your new version, which I have not had time to look through.

#### David

On Sep 9, 2009, at 7:36 AM, John Mullet wrote:

> <DARPA\_R&D Plan\_90909.doc>

```
> Bob, Bill and David,
> I combined the latest versions of GOALs 1-3 with the Introduction of
> our proposal. Please work from this version from now on so I can
> keep track of modifications.
> I am making some suggestions on GOAL 1 for your consideration.
> Thanks,
> John
```

From: Bill Rooney
To: "Price, Jessica"

Subject: RE: DOE/Biomass review - update follow-up

Date: Tuesday, August 25, 2009 6:39:00 AM

Attachments: Letter to Reviewers - Rooney.doc
2009 2 page CV - Rooney.pdf

Jessica:

As requested.

Bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151

----Original Message-----

From: Price, Jessica [mailto:jessica.price@go.doe.gov]

Sent: Monday, August 24, 2009 6:37 PM

To: GO IBR FOA

Subject: DOE/Biomass review - update follow-up

Hello-

I wanted to send a follow-up email to the one that Liz Moore sent last week. There is one more item that we will need from you. If you are receiving this email you have not sent us a copy of either your resume or the reviewer survey or both. I have attached the reviewer survey. Please fill this out and return it to me with a copy of your resume. If you have already sent one or the other, please send it again to make sure that we have it on file. If I do not receive an electronic copy before Friday (8/28 or 9/11 if you are reviewing the second week) than I will be looking for a hard copy from you at the merit review. It is important that we have this information on file.

Thank you for your attention to this matter. I look forward to meeting you at the Merit Review.

Jessica Price
Project Engineer
Navarro Research and Engineering, Inc.
U.S. DOE Golden Field Office
720-356-1292

# I. CURRENT TITLE AND POSITION

William L. Rooney

Professor

Department of Soil & Crop Sciences, Texas Agrilife Research and Texas A&M University

## II. EDUCATION AND EXPERIENCE

- 2005-present	Professor, Dep. of Soil & Crop Sciences, Texas A&M University
- 2000-2005	Associate Professor, Dep. of Soil & Crop Sciences, Texas A&M University
- 1995-2000	Assistant Professor, Dep. of Soil & Crop Sciences, Texas A&M University
- 1993-1995	Assistant Professor, Dep. of Agronomy, Kansas State University, Manhattan, KS.
- 1992	Ph.D., Plant Breeding and Genetics, University of Minnesota, St. Paul, MN
- 1989	M.S., Plant Breeding, Texas A&M University, College Station, TX.
- 1987	B.S., Agronomy, Texas A&M University, College Station, TX.

III. POSITION DESCRIPTION - Enhance the productivity and profitability of grain, forage and bioenergy sorghum production systems. The sorghum breeding program is used as a mechanism to develop and release sorghum germplasm to meet this goal. In addition to the release of improved sorghum genotypes, research in the program emphasizes the genetic inheritance of disease resistance, grain quality and agronomic productivity and adaptability. The research provides opportunities for graduate student training in fundamental and applied aspects of plant improvement. My program has pioneered the development of sorghum as a bioenergy crop and now is developing agronomic production, harvest and processing logistics.

# IV. SELECTED PROJECT SUPPORT

- Regional Feedstock Partnership Assessment of Sorghum as a Bioenergy Crop, DOE and Sungrant, Rooney and Heilman, \$225,000 4/01/2008 to 03/31/2010
- Genetic Analysis of Sorghum Drought Tolerance Traits. Pioneer Sponsored Research, Mullet and Rooney, \$750,000, with \$250,000 to Rooney 08/01/2008 to 6/30/2011
- Lignocellulosic Feedstock Development for Gen II Biofuels, Chevron Sponsored Research, Gould and Mullet PIs, \$5.4 million, \$765,000 to Rooney, 08/01/2008 to 3/31/2011.
- Enhancement of Sweet Sorghum Breeding Activities, Ceres Sponsored Research, Rooney WL. \$500,000, 09/01/2008 to 8/31/2012.
- Advancing Texas Biofuel Production, Rooney WL and K Chambliss. US Congress Special Appropriations, \$138,000, 07/01/2008 to 6/30/2009
- Novel Bioenergy Crops through Hybridization of Sorghum, Sugarcane and Energycane, Rooney W, Stelly D, Da Silva J, State BIOENERGY Funds, \$230,000, 12/01/2007 to 08/31/2008
- Evaluation of Sweet Sorghum Hybrids as a Bioenergy Feedstock for the South Central U.S. Germplasm Development and Agronomic Practices, Rooney W, Blumenthal J, Bean B, Peterson G, SunGrant Initiative, South Central Region, \$327,125, 07/01/2007 to 06/30/2010
- Genetic Improvement of Sorghum Drought Tolerance, Mullet J, Rooney W, and Payne W, Monocot Improvement Program, \$75,000, September 1, 2007 to August 31, 2008
- Breeding Sorghum for Improved Grain and Forage Quality and Yield for Central America, Rooney W., US AID INTSORMIL CRSP, \$335,732, 07/01/2007 to 09/30/2011
- Integrated Development of Dedicated Bioenergy Sorghums for Crop Production Systems in Texas, Rooney, W, Blumenthal J, Bean B, Amossen S, Peterson G, Odvody G and Parker R, Cropping Systems, \$300,000, 09/01/2007 to 8/31/2009
- Development of Bioenergy Sorghum, Rooney W, Mullet J and Klein P., Ceres, Inc., \$5,317,913, 09/01/2007 to 8/31/2012

# V. SELECTED PUBLICATIONS (66)

- Hernandez, J.R., S. C. Capareda, O. Portilllo, D. B. Hays, and W. L. Rooney. 2009. Simutaneous saccharification and fermentation (SSF) of High Digestable Variety of Grain Sorghum for Ethanol Production. ASBAE (in press).
- Dykes L. L.M. Seitz, W.L. Rooney and Lloyd W. Rooney. 2009. Flavonoid Composition of Red Sorghum Genotypes. Food Chemistry 116:313-317.
- Murray S.C, W.L. Rooney, M.H. Hamblin, S.E. Mitchell, and S. Kresovich. 2009. Sweet sorghum genetic diversity and association mapping for brix and height. The Plant Genome. 2:48-62.
- Rodríguez-Herrera, R\*, Rooney, W. L., Waniska, R. D., Aguilar-González, C. N., Quero-Carrillo, A. R. and Padrón-Corral, E. 2009. Path analysis for kernel traits associated with grain mould resistance in food type sorghum. Archives of phytopathology and plant protection, 42:(2)148 159
- Perumal, R., M.A. Menz, P.J. Mehta, S. Katile, L.A. Gutierrez Rojas, R.R. Klein, P.E. Klein, L.K. Prom, J.A. Schlueter, W.L. Rooney, C.W. Magill 2009. Molecular mapping of Cg1, a gene for resistance to Anthracnose (Colletotrichum sublineolum) in sorghum, Euphytica 165:597-606.
- Balota M, WA Payne, D Rosenow, and W Rooney. 2008. Gas exchange and Transpiration Ratio in Sorghum. Crop Sci 48:2361-2371.
- Murray SC, WL Rooney, SE Mitchell, PE Klein, A Sharma, JE Mullet, and S Kresovich. 2008. Sorghum as a Biofuel Feedstock: II. QTL for Leaf and Stem Structural Carbohydrates. Crop Sci 48:2180-2193.
- Murray SC, A Sharma, WL Rooney, PE Klein, JE Mullet, SE Mitchell, and S Kresovich. 2008. Genetic improvement of sorghum as a biofuel feedstock: I. QTL for stem and grain nonstructural carbohydrates. Crop Sci 48:2165-2179.
- Kuhlman, L.C, B.L. Burson, P.E. Klein, R.R. Klein, D.M. Stelly, H.J. Price, and W.L. Rooney. 2008. Genetic Recombination in *S. bicolor* x *S. macrospermum* Interspecific Hybrids. Genome 51:749-756
- Fernandez, MG, M Hamblin, L Li, WL Rooney, MR Tuinstra, and S Kresovich. 2008. QTL analysis of endosperm color and carotenoid content in sorghum grain. Crop Sci 48:1732-1743.
- Klein RR, JE Mullet, DR Jordan, FR Miller, WL Rooney, MA Menz, CD Franks, and PE Klein. 2008. The Effect of Tropical Sorghum Conversion and Inbred Development on Genome Diversity as Revealed by High-Resolution Genotyping. Crop Sci. 48(S1) S12-S26.

## VI. SELECTED TECHNOLOGY TRANSFER

- Release of Tx2929 to Tx2934 sorghum germplasms. Official Approval: August 2004. Scientists contributing to this release: W.L. Rooney and G.N. Odvody.
- Release of Tx2935 to Tx2944 sorghum germplasms. Official Approval: August 2004. Scientists contributing to this release: W.L. Rooney and G.N. Odvody.
- Release of Tx2912-2920 sorghum germplasms. Official Approval: January 2002. Scientists contributing to this release: W.L. Rooney and S.D. Collins
- Release of Tx2921-2928 sorghum germplasms. Official Approval: January 2002. Scientists contributing to this release: W.L. Rooney and S.D. Collins
- Release of Sorghum Germplasm Lines Tx2909 & Tx2910. Scientists Contributing to this Release: W.L. Rooney, M.A. Hussey, and M.A. Sanderson. Official Release Date: April 23, 1997

# VII. OTHER ACTIVITIES

- a. Associate Editor: Crop Science and Field Crops Research
- b. Chair: Texas Agrilife Research Plant Release Committee

You have been identified as having interest in being a reviewer for solicitations in the Department of Energy's (DOE) Office of the Biomass Program (OBP). If you would like to remain in the reviewer pool, please fill out the information below and return to the Department of Energy's GO Biomass Mailbox (gobiomass@go.doe.gov). Please include a current resume for our files with your submission.

# Areas of Expertise:

For each area, please rate the keywords that best relate to your experience. Rate all that apply on a scale of 1 (familiar) to 5 (expert).

Feedstocks: _2_ Collection _2_ Storage _1_ Modeling _5_ Production/Cultivation	_1 Transport _4_ Geneticall _1_ Forest De _1_ Biocide Us	y Modified		Preprocessing _1_ Markets/Economics Regulatory Other
List of Specific Areas of Expe sorghum, subtropical product			etc.):	
Biochemical Conversion/Proc Enzyme Systems I Pretreatment 0	ermentation	Process Integratio Modeling	n Ec Pro	onomics oducts
List of Specific Areas of Expe	rtise (examples, o	organism types, process t	ypes, pro	oduct types, etc.)
Thermochemical Conversion/ Syngas Production Fuel Upgrading List of Specific Areas of Expe	Syngas C Modeling			
Algae:  Cultivation 0 Carbohydrates I Other List of Specific Areas of Expe		Process Integratio Modeling ioreactors, recovery proc		Oil Recovery Conversion to Fuel
Integrated Biorefineries: Construction Operation of Integrated F	Process D	Design St	artup/Co	mmissioning
Infrastructure: Siting Transportation	Distributio			Pipeline Other
Sustainability:LCA/GHG analysis	Environme	ental (air, water, soil)		Other

Finance/Accounting: Pro forma preparation/review	Insurance	Project Finance	Other				
Project Management: Scheduling Cost Estimating	_ Contract/Subcontract _ Other	Management	Project Controls				
Project Compliance: Regulatory Affairs NEPA	ES&H Other	Permitting	9				
Other (Please List):		<del></del>					
Potential Conflicts of Interest (list organizations, this will need to be updated prior to being assigned to a specific review panel):							
Are you available for the upcoming	to be considered for? nery Operations (Augus	st 2009)	y to Denver, CO.				
Do you have a current CCR and DUNS registration? ☑ Yes ☐ No (Registration information is attached)							
Referrals for other potential reviewers (name, email, phone):							

From: <u>C. Wayne Smith</u>

To: <u>Erik Mirkov</u>; <u>John L Jifon</u>; <u>Nael El-Hout</u>; <u>Qingyi Yu</u>; <u>Bill L Rooney</u>

Cc: Jmgould@tamu.edu

**Subject:** Re: Dr Ana Hale"s Application

**Date:** Tuesday, September 01, 2009 11:57:23 AM

Attachments: C. Wayne Smith.vcf

## John,

I'm going to maintain that we interview Nilesh Dighe since he is a post doc with Bill Rooney and it will cost us little. Then I would rank Ana 3rd and thus Brown to 5th. So my ranking becomes:

- 1. Edme
- 2. Kimberg
- 3. Hale
- 4. Dighe
- 5. Brown
- 5. Agrama
- 6. Perumal
- 7. Shortell

All others not competitive.

I suggest that we interview the top 3 plus Dr. Dighe.

# Wayne

C. Wayne Smith
Professor and Associate Head
Department of Soil and Crop Sciences
2474 TAMU
Texas A&M University
College Station, TX 77843-2474
979.845.3450
cwsmith@tamu.edu

>>> John L Jifon 9/1/2009 11:36 AM >>>

Dear Search Committee Members,

Dr Hale's Application is finally up at the GreatJobs Site. To save you the trouble, I have downloaded/attached all her files for your consideration and ranking.

Let me know you rank her and Dr. Nilesh Dignhe and I'll update the overall hiring matrix.

Thanks

John

From: C. Wayne Smith
To: John L Jifon

Cc: <u>Kathy Ferguson</u>; <u>Judy Young</u>; <u>Bill L Rooney</u>

**Subject:** Re: Dr Patrick Brown's Interview

**Date:** Wednesday, September 09, 2009 3:41:26 PM

Attachments: C. Wayne Smith.vcf

## John,

Do you have the arrival and departure times for College Station for Edme and Collins? If so then we can set up the interview schedules for all three pretty much at the same time.

## Wayne

C. Wayne Smith
Professor and Associate Head
Department of Soil and Crop Sciences
2474 TAMU
Texas A&M University
College Station, TX 77843-2474
979.845.3450
cwsmith@tamu.edu

>>> John L Jifon 9/9/2009 9:43 AM >>>

Dr. Rooney, Dr. Smith

Here (attached) is the Weslaco itinerary for Dr Brown. Judy Young I believe is coordinating meeting schedule for College Station. Let me know if any changes are necessary.

Thanks John.

# Interview schedule:

Dr. Brown, Patrick: Weslaco on Sept 14-15; College Station on Sept 15-16; Dr. Serge Edme: Weslaco on Sept 21-22; College Station on Sept 22-23. Dr. Kimbeng, Collins: Weslaco on Sept 28-29; College Station on Sept 29-30.

From: Bill Rooney
To: "John L Jifon"

**Subject:** RE: Dr Ana Hale"s Application

 Date:
 Tuesday, September 01, 2009 1:50:00 PM

 Attachments:
 HiringMatrix Wslc Breeder 2009 - Rooney.xlsx

John:

My matrix is attached, but here is my ranking as well.

- 1. Kimberg
- 2. Hale
- 3. Edme
- 4. Dighe
- 5. Brown

Ranking I think Dighe and Brown are equal, but experts in different areas.

I think that both Dighe and Hale should be interviewed.

Regards,

Bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151

-----Original Message-----

From: John L Jifon [mailto:jljifon@ag.tamu.edu] Sent: Tuesday, September 01, 2009 11:37 AM

To: Erik Mirkov; John L Jifon; Nael El-Hout; Qingyi Yu; C. Wayne Smith; Bill L Rooney

Cc: Jmgould@tamu.edu

Subject: Dr Ana Hale's Application

Dear Search Committee Members,

Dr Hale's Application is finally up at the GreatJobs Site. To save you the trouble, I have downloaded/attached all her files for your consideration and ranking. Let me know you rank her and Dr. Nilesh Dignhe and I'll update the overall hiring matrix.

Thanks John From: Bill Rooney

To: "Helms, Adam"; "Mullet, John E."; "Stelly David Stelly"; "Avant, Bob"; "McCutchen, Bill"

Subject: RE: Draft DARPA STO slides

**Date:** Tuesday, October 13, 2009 7:54:24 PM

I would only have a 60 month metric IF there is the possibility of a funding extension at the end of 5 years. If there is none, then there is no value in a milestone at the end.

#### Bill

----Original Message----

From: Helms, Adam [mailto:ahelms@dsmail.tamu.edu]

Sent: Tuesday, October 13, 2009 6:25 PM

To: Bill Rooney; Mullet, John E.; Stelly\_David Stelly; Avant, Bob; Steve

Searcy; McCutchen, Bill

Subject: RE: Draft DARPA STO slides

The 54 month metrics need to be changed to a 60 month metric if you want to include them. Please remember that these metrics determine funding for the next stage of funding - Dr. Giroir said that we would be funded for 18 months (18 month metric), then, an additional 18 months (36 month metric), and finally 36 months (final/60 month metric).

I think a 54 month metric/60 month metric would be the metric that we are seeking to complete the goal.

Thoughts?

Adam Helms AgriLife Research Corporate Relations 979-255-0752 (mobile) 979-458-2677 (office)

-----Original Message-----

From: Bill Rooney [mailto:wlr@tamu.edu] Sent: Tuesday, October 13, 2009 5:19 PM

To: Mullet, John E.; 'Stelly\_David Stelly'; Helms, Adam; Avant, Bob;

'Steve Searcy'; McCutchen, Bill Subject: RE: Draft DARPA STO slides

John:

I've merged some of the comments from David with a few of my own. I

put any milestones on goal 2 (leaving that for you).

Regards,

Bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474

### 979 845 2151

-----Original Message-----

From: John Mullet [mailto:jmullet@tamu.edu] Sent: Monday, October 12, 2009 11:43 AM

To: Bill Rooney; Stelly\_David Stelly; Adam Helms; Bob Avant; Steve

Searcy;

Bill McCutchen

Subject: Draft DARPA STO slides

All,

I have drafted a template for us to use to create the DARPA STO slides. Recall that these will be used by Doug Kirkpatrick when he presents this project to the STO committee. Clearly we will need Dr. Giroir's input once we have a good draft ready.

Please look over this draft.

- modify slides pertaining to your Goal and send modifications to Adam so he

can create an updated version for review

- add in 1-3 key milestones/time point for each Goal (currently blank spaces).
- I will work on Goal 2 milestones

David, I did not have a final version of the WH slide (slide 12 in the attached I think). I would suggest changing letter colors where they are

difficult to see (orange on orange for example).

Thanks,

John

From: Stelly David
To: John Mullet

Cc: Stelly David David M.; Rooney Bill; Adam Helms; Bob Avant; Steve Searcy; McCutchen Bill

Subject: Re: Draft DARPA STO slides

**Date:** Monday, October 12, 2009 2:21:40 PM

Attachments: diagram4jm.png

iap diagram4jm.ppt

I am attaching the ppt and a png screen image. Of course, you can make the colors you want in the ppt, but I sought out a higher contrast for you (I changed stigma/style colors, only)... but you might prefer some other colors.

DS

On Oct 12, 2009, at 11:42 AM, John Mullet wrote:

```
> AII,
> I have drafted a template for us to use to create the DARPA STO
> slides. Recall that these will be used by Doug Kirkpatrick when he
> presents this project to the STO committee. Clearly we will need
> Dr. Giroir's input once we have a good draft ready.
> Please look over this draft.
> - modify slides pertaining to your Goal and send modifications to
> Adam so he can create an updated version for review
> - add in 1-3 key milestones/time point for each Goal (currently
> blank spaces).
> - I will work on Goal 2 milestones
> David, I did not have a final version of the WH slide (slide 12 in
> the attached I think). I would suggest changing letter colors where
> they are difficult to see (orange on orange for example).
> Thanks,
>
> John
  <DARPA STO slides 081209.pptx>
>
```

From: <u>John Mullet</u>

To: <u>Bill McCutchen</u>; <u>Bob Avant</u>; <u>Bill Rooney</u>; <u>Stelly David Stelly</u>

Subject: Re: Energy Crops Proposal from TAMUS

Date: Tuesday, August 18, 2009 3:09:13 PM

Attachments: 4. DARPA research plan 2.1.doc

ATT00077.htm

### All,

Would it make sense to work up budgets/objectives/milestones for the three areas of activity described in the 2-pager, aiming initially for for each objective for years 1 and 2? We can then review overall plan, scope and focus and modify as needed.

I am attaching a draft activity outline Bill, David and I started working on 3-4 weeks ago.

I will work some more on the second objective.

Thanks,

John

### 113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

### bmccutchen@tamu.edu

From: McCutchen, Bill

**Sent:** Friday, July 24, 2009 2:24 PM **To:** 'Douglas.Kirkpatrick@darpa.mil'

Cc: Giroir, Brett

**Subject:** Energy Crops Proposal from TAMUS

Doug,

It was great visiting with you and your colleagues last week. Please find attached a two-page proposal (and 3 Figures) entitled "High-Biomass Energy Crops for U.S. Energy Security".

We hope this meets yours and DARPA's expectations. The proposed R&D and corresponding technology platforms will address many energy-security issues for the DOD and the United States.

Please give me a call if you have any questions, and we look forward to your feedback.

Very best regards,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: Kerry Mayfield
To: "Bill Rooney"
Subject: RE: exam

Date:Friday, November 06, 2009 4:20:00 PMAttachments:Mayfield Preliminary Exam WLR.doc

# Here it is back, it was quite thought provoking kerry

Kerry Mayfield 979-845-4195 kerry-mayfield@tamu.edu

From: Bill Rooney [mailto:wlr@tamu.edu] Sent: Friday, November 06, 2009 8:09 AM

To: 'Kerry Mayfield' Subject: exam

Here it is. Have fun. You can type it and send it back or write it and put it on my desk.

Good luck.

Bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151

# Written Preliminary Exam for Kerry Mayfield

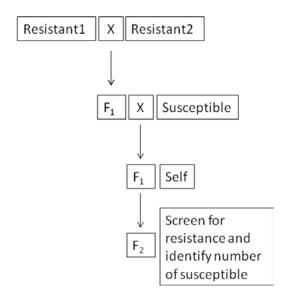
Friday, November 06, 2009

### Closed Book E-mail to me by 6:00 pm

Please respond to each question using well written sentences and/or paragraphs that indicate you can write the English language effectively. As diagrams are needed, please include them as well. You have all day, so I expect legible and clear answers.

1. In your sorghum breeding program, anthracnose resistance is an absolutely critical trait and you have identified two sources of absolute resistance (both are resistant to all pathotypes in your possession). You need to know whether these sources have the same or different resistance genes. Describe the experiment and expected results dependent on whether the resistance is the same gene or different genes.

I will plan to cross the 2 lines, produce the  $F_1$ , cross the  $F_1$  to a susceptible "tester" (TCF<sub>1</sub>). Self the TCF<sub>1</sub> produce a segregating  $F_2$  population. At this point, screen for resistance. If two genes controlling resistance, segregation at this point should be 9:3:3:1. If the genes in question are recessive in the population,  $1/16^{th}$  of the plants will be completely resistant. If the resistance comes from the same gene, then you should observe  $1/4^{th}$  of the plants resistant. Both of the last statements are assuming the genes are recessive, which is how the trial is set up to identify; though would be applicably the same if the gene was dominant in that the susceptible would be either  $1/16^{th}$  or  $1/4^{th}$  of the plant population. If the genes were dominant, and there were two genes controlling, then there would be  $15/16^{th}$  of the plants would be resistant, however only  $9/16^{th}$  of the plants would be homozygous and breed true. If the resistance is recessive, screening in the  $F_2$  would also allow for the selection of those lines which carry both alleles (if there are two), for use in future breeding activities.



2. Write a succinct (1 page max) but descriptive case to justify funding for interspecific/intergeneric hybridization for crop improvement. This is not crop dependent and must describe why this work is important.

Crops used today are reaching a genetic bottle neck from being selected within for desired alleles. This selection has reduced the amount of genetic variability directly available to breeders. Breeders have the option of sorting through non-adapted germplasm for specific variation, but this may be time consuming and not constructive use of the breeder's time when the trait desired is available in a wild relative of the target crop or in a different genus with a different crop or even a "weed".

Interspecific hybridization may allow introgression of alleles for desired traits from wild relatives of a given crop species. This technique has been used in the past and needs to continue in the future for identification of new alleles for crop improvement. Alleles introgressed and selected from wild relatives will typically exploit the wild relatives ability to survive conditions less favorable for the domestic species. Alleles for improved quality, such as the case with vegetables and cotton (nutrition and strength, respectively) are additional uses.

Intergeneric hybridization may allow for the introgression of alleles from different genus when possible and can help create germplasm superior in desired traits, not naturally available, from the donor genus. Intergeneric hybridization is more complex than interspecific hybridization and requires a different system, but the benefits of using this technology will give crop improvement the needed traits within a species for even further advances.

Funding of these two approaches should continue, to explore and exploit genetic variation found in wild relatives of crops and in crops and weeds not currently being cultivated. The two approaches will aid in breeding crops to help feed the expanding world population and to aid in meeting biofuel requirements. The use of these initerspecific/intergeneric hybridization will facilite moving alleles from one species or genus to a target species without the use of transgenic methods.

- 3. Due to political mandates that dictate we will not use "food" crops for biofuel, the fledgling biofuel industry is grasping for alternative plant species as sources of biomass for biofuel conversion. Worldwide five prominently mentioned species are tropical sugarbeets, switchgrass, camelina, miscanthus and algae. None of these crops have much commercial production but all have been widely publicized as the answer to our biomass production problems.
  - a. What is your opinion of the political mandate that NOT use food crops as fuel sources?
  - b. For the five species listed, how will it be used for biofuel production (ie, oil, ligncelluosic, starch, etc.).

c. Of the five, which would you recommend for investment and development to someone interested in commercial sales of a crop. Explain why.

My opinion of the use of "food" crops as a fuel source has grown to be a rather complex opinion, as this is not a simple straight forward issue, which includes politics, agronomics, genetics, breeding and industrial efforts. The biofuel industry is growing and maturing, albeit at a relatively slow pace compared to that which the politicians and many constituents would like; therefore, a deep look needs to be taken into the structure of the industry to identify my opinion of it. Ethanol plants have been using grains as a feedstock for many years, producing a set amount of fuel for local and specialized markets. Due to political and environmental concerns, biofuels (ethanol, diesel, and others) have been pushed upon us, without a mature infrastructure available for the implementation of their use. Infrastructure has since been enlarged to help conform to the demands by political pressures to maximize current production practices and meet certain production levels; however, the current commercial technology available for using food sources as a starch from grains or oil feedstock do not have the capability of meeting increasing requirements by the government for implementation of biofuel use. This low level of production from "food" used as a feedstock in the long term is not sustainable; however, there has to be a starting point somewhere, we cannot wait until the "silver bullet" comes about. New technologies are being investigated and pilot plants are being implemented for the use of non-food sources (biomass) as a feedstock. Several of these new technologies (lignocelluloses, sweet stem, algae, etc) out produce food sources for biofuels 3-5x (or more). This increase could help in stabilizing and reduce the use of certain "foods" for feed stock usage.

So with that being said, in a short statement, use of "food" stuffs as feed stocks in an initial push is acceptable; however, the continued and expanded use of the "food" as feed stocks is not sustainable and needs to be addressed as a beginning technology in an industry that is overall still in infancy, then as time progresses and new technologies come online, phased out.

I am not familiar with tropical sugar beets as well as some of the others, but considering the name I would think relations would be made to the sugar beets produced in the Texas Panhandle, western Nebraska, etc would be used as a starch source for the production of ethanol.

Switchgrass and miscanthus would be ideal candidates for lignocellulosic conversion to create a feedstock for ethanol production, partially due to their wide adaptation to growing regions and ability to grow in marginal environments (switch grass, I am not familiar with environmental distribution for miscanthus)

Camelina and algae would be used for oil production. Camelina produces a high percentage of oil in its seeds. Several algae have been identified which produce large amounts of oil and are capable of growing in harsh areas, i.e. high saline, desert.

Recommendation of only one would be difficult. Different technologies and different needs from different areas worldwide exist. Locally, I would recommend the use of switchgrass. As a potentially new market, switch grass has been identified to have a very large growing region of production and produces well under less than ideal conditions. Not having a vast amount of knowledge about the other four species, I would recommend switchgrass

However, OVERALL, I would tend to recommend camelina. Currently there is no market for the other four (I am not sure about the tropical sugar beets). Use of camelina could

potentially work in with other oil seed crops currently being used to produce bio-diesel. This would lead to a more immediate return of investment.

4. How do commercial companies integrate the transgenic and traditional breeding approaches?

Commercial companies identify and utilize transgenic breeding approaches to incorporate traits discovered both in crop species along with other organisms into existing and new germplasm. Although once thought, at the beginning of the "molecular era" of plant breeding, traditional plant breeders would go by the wayside companies soon learned traditional plant breeders and traditional plant breeding activities were necessary and a complement to incorporate the discoveries discovered in the molecular lab. Today, larger companies utilize both transgenic and traditional breeding programs. Transgenic breeding programs identify molecular traits of interest and incorporate these traits into existing germplasm and identify which transformation event is best suited for use. Traditional breeding programs identify and create superior germplasm which later have the molecular traits incorporated and also evaluate those sets of germplasm with the transgenic traits included.

- 5. ALS and ACCase herbicide tolerance is being promoted for the sorghum industry.
  - a. How was ALS herbicide resistance transferred to grain sorghum?
  - b. Should agriculturists/agronomists have any concerns regarding ALS herbicide resistance in sorghum?
  - c. What should be the concern of the sorghum industry pertaining to the transfer of this trait to sorghum?

I believe there were (are) two groups working independently on introgressing ALS herbicide resistance. In one case, I believe ASL herbicide resistance was transferred to sorghum through traditional breeding activities with the assistance of marker assisted selection after identification of resistance in shatter cane in Kansas. The rights to this technology have been licensed to a seed company to disseminate the product to other companies and to producers. In the second case, I believe transgenic approaches have been used; where the gene may have been transferred from corn to sorghum. I don't think the second case (if this is how it really panned out) contained the efficacy in resistance the first case showed.

Agronomists/Agriculturalists should be concerned with ALS herbicide resistance in sorghum. Johnson grass (*Sorghum halapense*) is a wild relative of sorghum, which can outcross with *S. bicolor*. *S. halapense* is labeled as a noxious invading weed. In the areas where sorghum would be grown, possible out crossing through pollen flow from *S. bicolor* to *S. halapense* could create in subsequent generations a noxious weed resistant to a herbicide used for control in crops such as corn.

The sorghum industry should have great concern of having this trait in sorghum. I would say approximately 90-95% of the world sorghum seed production industry is concentrated in the northern high plains of Texas. Through possible out crossing, with Johnson grass, this could create problems for rotations of crops in the production areas to produce clean seed. An aspect other than seed production could be one of

perception by non-farmers/agricultural related persons including those against the use of genetically modified organisms. It could be perceived that the sorghum industry doesn't care about the environment and may have created a "super weed" in species which readily cross with sorghum.

6. Tell me about heritability. Include in the discussion the types, how they are measured (with examples) and how they are used. In the discussion, please explain how heritability estimate can be highly variable.

Heritability is a variable measure used to help explain genetic effects expressed at or across environments in relation to the phenotypic effects. Two different types (mainly) of heritability have been used in the past to describe a ratio of variation in measured traits in both plants and animals. Broad sense heritability (H²) identifies the ratio of genotypic variance ( $\sigma^2_g$ ) to phenotypic variance ( $\sigma^2_g$ ). Narrow sense heritability (h²) is a measure of the additive genetic variance ( $\sigma^2_A$ ) to the phenotypic variance ( $\sigma^2_g$ ). Narrow sense heritability can also contain  $\sigma^2_A$ \*  $\sigma^2_A$  additive interaction (epistatic) effects as well as others.

$$H^{2} = \frac{\sigma^{2}_{D} + \sigma^{2}_{A}}{\sigma^{2}_{D} + \sigma^{2}_{A} + \sigma^{2}_{E}} \qquad h^{2} = \frac{\sigma^{2}_{A}}{\sigma^{2}_{D} + \sigma^{2}_{A} + \sigma^{2}_{E}}$$

Heritability measurements can be highly variable, due to many aspects of the test conducted. Several factors affecting variability include environment the experiment was conducted, the populations used and the testing method used. One example of variability of heritability estimates reviewed through literature is in aflatoxin research. Reported heritabilities have ranged from ~.15-.6 in the narrow sense. I don't know of any which have really reported broad sense heritability. Much of this variation is due to the three reasons cited above. Many scientists are evaluating aflatoxins in corn in a diverse set of environments, with different germplasm and using different evaluation methods.

7. On which continent were MOST of our major crops (and animals) domesticated? Can you provide me with a logical reason as to why most of our domesticated plants (and for that matter, animals) came from this single continent?

Most of our major crops (major exception of corn and squash) were domesticated on the Eurasia continent. Within that continent, most were domesticated in the Fertile Crescent area in what we would consider southwest Asia (Middle East). This is considered the area where people began to stop being nomadic hunter gatherers and started to cultivate crops and later animals. Also, aiding in dissemination of the crops from this area, the Eurasian continent is relatively wide (the widest east/west continent). This geographical placement enabled crops to disseminate out of their respected centers of origin over larger areas faster (east/west) than the few crops in the four smaller continents which did not have the long latitudinal axis.

Dissemination of crops from these centers of origin on a longitudinal movement allowed the crop to maintain the same photoperiod response, rather than the crop going through a latitudinal change in production region.

8. Do you think it possible to develop a corn that is immune to aflatoxin? If so, how will that be accomplished?

I believe producing a corn that is immune to aflatoxin accumulations is possible; though, not by traditional breeding practices only. Many QTL and direct germplasm sources for reducing aflatoxin have been identified in at many environments. These QTL need to be further evaluated at the molecular (sequence) level or utilize a more dense set of markers through identified QTL region to identify what genes are being coded for and to have a better estimate of the location of the QTL for transfer. Further use of proteomics in conjunction with better mapping and genotyping practices may help lead to, and identification of genes being expressed in corn during and after infection.

Parallel to the efforts in corn, improving genetic research on *Aspergillus flavus* will help identify why the fungi produce aflatoxin and what genes are up or down regulated in producing aflatoxin. The recent sequencing of the *A. flavus* genome will aid in new discoveries from the fungi. Identification of stresses which signal which genes produce aflatoxins when may lead to a transgenic approach. If gene which code for proteins to stop synthesizing aflatoxin are identified, these genes could then be transformed into corn. Expression of these genes could signal to *A. flavus* upon infestation to not produce aflatoxins.

Both avenues must be followed at the same time, to help account for possible mutations or migration of genes which signal to the fungi to stop making aflatoxins or genes detected in corn are over come. With the health risks of aflatoxin, utilizing redundant (different) systems for resistance would only make sense. Redundant systems would also give more time between identification of resistance and time when resistance is lost (overcome by fungi).

 From:
 Bill Rooney

 To:
 "Rene Clara"

 Subject:
 RE: Expenses report

**Date:** Wednesday, October 07, 2009 11:39:39 AM

#### Rene:

Thanks for the information. I'll look for the package and once approved, I'll send it on to Joan.

Regards,

Bill

From: Rene Clara [

Sent: Tuesday, October 06, 2009 12:53 PM

**To:** Bill Rooney **Cc:** Joan Frederick

**Subject:** Expenses report

Dear Dr. Bill,

This morning I sent to you the expenses report of PCCMCA meeting of Vilma, Salvador, Mario Jaco and René Clará, by *EMS* courier.

We all spend the received money, neither return nor restoration money. Jaco bought the ticket, but it did not use it, because at the last hour the CENTA Director did not authorize his trip. This ticket is available in CENTA.

Vilma and Salvador did not use the funds for buy of tickets of plane because they obtained it of FOCAGRO.

Regards,

## René Clará V. INTSORMIL

Host Regional Coordinator

CENTA, Apdo. Postal 885, San Salvador, El Salvador, C.A.

Tel. (503) 2302 0239 - (503) 7815 2238 cel.

Fax: (503) 2302 0239

E-mail

 From:
 C. Wayne Smith

 To:
 Bill L Rooney

 Subject:
 RE: Fall TA

**Date:** Monday, August 10, 2009 3:01:22 PM

Attachments: C. Wayne Smith1.vcf

I won't go down that road. What about Payne Burks?

**CWS** 

C. Wayne Smith
Professor and Associate Head
Department of Soil and Crop Sciences
2474 TAMU
Texas A&M University
College Station, TX 77843-2474
979.845.3450
cwsmith@tamu.edu

>>> "Bill Rooney" <wlr@tamu.edu> 8/10/2009 2:33 PM >>> Wayne:

If she will commit to the fall semester, I have no issues. However, I have a first draft of her dissertation and she will likely defend in late September. If a job appears, I expect she'll leave as soon as possible. If a job doesn't then I imagine she'll be glad to stay and teach until December.

You should ask her what she would like to do.

Regards,

Bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151

-----Original Message-----

From: C. Wayne Smith [mailto:cwsmith@tamu.edu]

Sent: Monday, August 10, 2009 10:58 AM

To: Bill L Rooney Cc: Glenda Kurten Subject: Fall TA

Bill,

I have penciled in to TA SCSC 105 during the Fall 09 Semester.

Any issues?

Wayne

C. Wayne Smith

Professor and Associate Head Department of Soil and Crop Sciences 2474 TAMU Texas A&M University College Station, TX 77843-2474 979.845.3450 cwsmith@tamu.edu 
 From:
 C. Wayne Smith

 To:
 Bill L Rooney

 Subject:
 RE: Fall TA

**Date:** Monday, August 10, 2009 4:41:23 PM

Attachments: C. Wayne Smith1.vcf

I could put him in the single section lab with Harry (other students will teach 2 sections).

**CWS** 

C. Wayne Smith
Professor and Associate Head
Department of Soil and Crop Sciences
2474 TAMU
Texas A&M University
College Station, TX 77843-2474
979.845.3450
cwsmith@tamu.edu

>>> "Bill Rooney" <wlr@tamu.edu> 8/10/2009 3:26 PM >>> Awfully early in the career for but I'll ask him.

Bill

Dr. William L. Rooney Professor, Sorghum Breeding and Genetics Chair, Plant Release Committee Texas A&M University College Station, Texas 77843-2474 979 845 2151

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Sent: Monday, August 10, 2009 3:00 PM

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cws

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