
What is this I see? Jay coming to another meeting!! I thought we got rid of him last time. He's supposed to be out running for president. -Rich Ozminkowski, March 4, 2016
No!
Oh Crap


HEBER VALLEY
3700
I'm voting for Trump, not this chump
"It's not the tomato flavor that's bad
It's the poor taste."
---Jay Scott, Presidential candidate, 2004


CERVEZA
DOS EQUIS
STAY THIRSTY, my friends™
STAYTHIRSTYMYFRIENDS.com
ENJOY DOS EQUIS® RESPONSIBLY

Dos Equis says ‘adios’ to ‘Most Interesting Man’ pitchman

Actor Jonathan Goldsmith, 77, pitched Dos Equis in ads for about nine years . His final commercial sends Goldsmith on one-way trip to Mars

Even the “Most Interesting Man in the World” is not immune to getting dumped.

Mexican beer brand Dos Equis is letting go of its gray-haired spokesman, 77-year-old Jonathan Goldsmith, and replacing him with another actor.

Goldsmith, known in the ads as the “Most Interesting Man in the World,” has been appearing in Dos Equis commercials for about nine years. He’s usually seen sitting at a table with a group of women before uttering the beer’s slogan, “Stay thirsty, my friends.”

Dos Equis is making the change to attract new drinkers, said Andrew Katz, the brand’s vice president of marketing. Dos Equis, owned by Amsterdam-based Heineken, said sales of the brand have nearly tripled since the ads began airing in 2007.

A new “Most Interesting Man in the World” will appear in commercials later this year. A replacement has been chosen, but Katz declined to say who it is. Goldsmith is not crying in his beer over the change.

“I feel terrific, I really do,” Goldsmith said in an interview. “I’ve had a great time in the last 10 years.”

The ending of the Dos Equis relationship means he can consider TV offers and other ad opportunities, he said.
Fans of the ads approach him all the time.

“It’s overwhelming recognition,” said Goldsmith. “I would be literally mobbed.”

In his last Dos Equis commercial , Goldsmith is shipped off in a rocket on a one-way trip to Mars. He says, “Stay thirsty, my friends,” for the last time as the rocket takes off. Some brands have had a hard time getting rid of beloved pitchmen. Four years ago, travel website Priceline.com tried to kill off the Negotiator, played by actor William Shatner, in a fiery bus crash during a TV spot. But Shatner returned to the role just months later. Goldsmith’s space odyssey is more permanent, Katz said. “It’s a one-way mission.”


DREAM HOMES

Late blight resistant variety development and deployment strategies to combat pathogen spread in the Eastern United States

J. W. Scott, S. F. Hutton, R. Shekate-band
Gulf Coast Research and Education Center
IFAS, University of Florida
14625 CR 672, Wimauma, FL 33598, USA
813-633-4137 sfhutton@ufl.edu
http://tombreeding.ifas.ufl.edu/

USDA NIFA
United States Department of Agriculture
National Institute of Food and Agriculture

UF UNIVERSITY of FLORIDA
IFAS

Thank you Late blight team and USDA NIFA for funding us

USDA
United States Department of Agriculture
National Institute of Food and Agriculture


Judelson


Smart


Fry


Grünwald


Ristaino


Gloy


Gay


McComas


Klessig


Xiao


Girke


Birch


Boyles


Hein


Scott


Johnson


Besley


Seebold


Lozoya


Gugino


Everts


Gevens


McGrath


Stone


Roberts

Developed a National Grower Alert System

USAblight

A National Project on Late Blight of Tomatoes and Potato in the United States

About Late Blight | Occurrence Map | Reporting Outbreaks | Managing Late Blight | Decision Support | About Us | Admin Login

Personnel (Incomplete)

Current Disease Map

Click the map for more information

Reported | Within the past week | Over a week ago

Welcome to USAblight

Submitted by Anonymous on Mon, 05/09/2011 - 18:16

Potato late blight lesion. Image courtesy of Jean Ristaino, NC State University.

Welcome to USA blight, a new national website that will act as an information portal on late blight. You can report disease occurrences, submit a sample online, observe disease occurrence maps, and sign up for text disease alerts. There are also useful links to a decision support system, and information about identification and management of the disease.

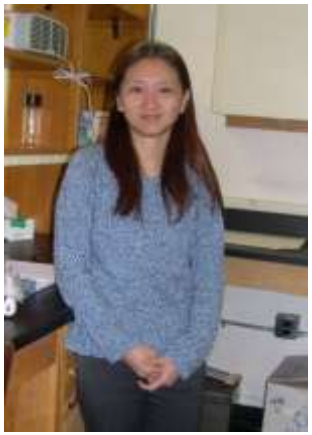
Genotyped and named US lineages

Recent Genotypes of *Phytophthora infestans* in the Eastern United States Reveal Clonal Populations and Reappearance of Mefenoxam Sensitivity

Chia-Hui Hu, Department of Plant Pathology, North Carolina State University, Raleigh, 27695; **Frances G. Perez,** United States Department of Agriculture–Agricultural Research Service (USDA-ARS) PSI-GIFVL, BARC-West, Beltsville, MD, 20705; **Ryan Donahoo,** University of Florida, Florida IFAS-SWFREC, Immokalee, 34142; **Adele McLeod,** Department of Plant Pathology, University of Stellenbosch, Stellenbosch, South Africa; **Kevin Myers,** Department of Plant Pathology, Cornell University, Ithaca, NY; **Kelly Ivors,** Department of Plant Pathology, North Carolina State University; **Gary Secor,** Department of Plant Pathology, North Dakota State University, Fargo, 58108-6050; **Pamela D. Roberts,** University of Florida, Florida IFAS-SWFREC; **Kenneth L. Deahl,** USDA-ARS PSI-GIFVL, BARC-West; **William E. Fry,** Department of Plant Pathology, Cornell University; and **Jean B. Ristaino,** Department of Plant Pathology, North Carolina State University

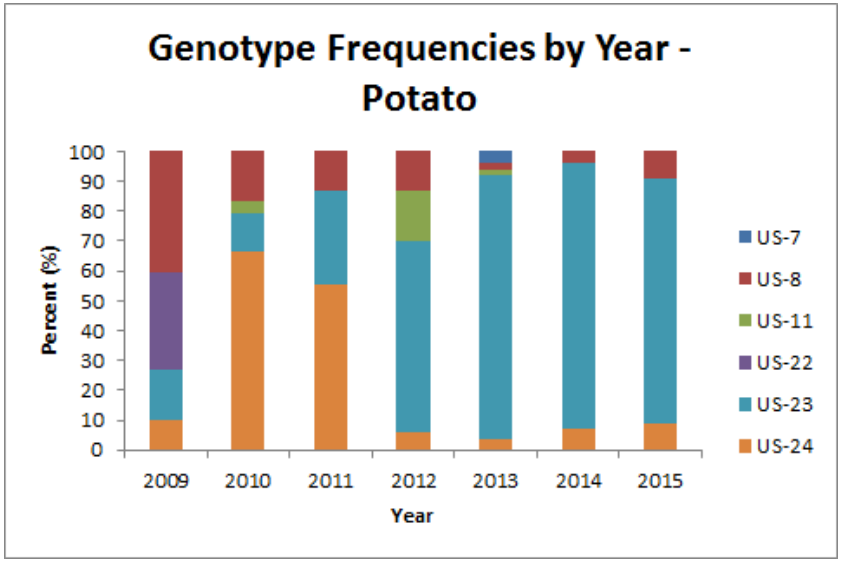
Table 3. Summary of multilocus genotypes of *Phytophthora infestans* collected in the United States and Canada, 2002 to 2009

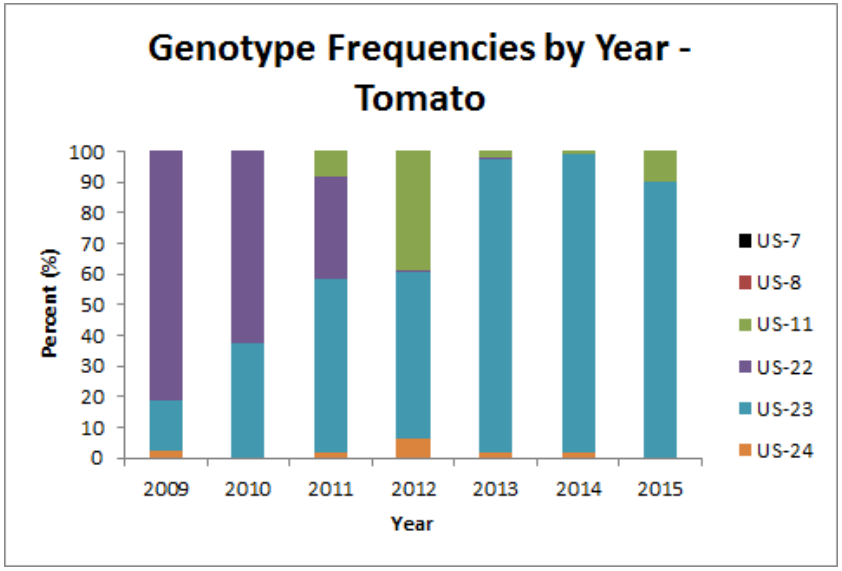
Genotype[b]	Host	MT[c]	Allozyme genotype[a]		Mefenoxam sensitivity[d]	mtDNA[e]	RG57 RFLP[f]
			Gpi	*Pep*			
US-8[g]	Potato	A2	100/111/122	100/100	R/I	Ia	1,5,10,13,14,16,20,21,23,24,25
US-20	Tomato	A2	100/100	100/100	R/I	Ia	1,3,5,7,10,13,14,16,18,20,21,24,25
US-21	Tomato	A2	100/122	100/100	R/I/S	Ia	1,5,10,13,14,18,20,21,24,25
US-22[h]	Potato and tomato	A2	100/122	100/100	S/I	Ia	1,5,13,14,16,20,21,24,25
US-23	Potato and tomato	A1	100/100	100/100	S/I	Ia	1,2,5,6,10,13,14,17,20,21,24,24a,25
US-24	Potato	A1	100/100/111	100/100	I	Ia	1,3,5,7,10,13,14,16,20,21,23,24,25



Hu et al. 2012. Plant Dis. 96: 1323-1330.

Documented Displacement of US-22 by US-23



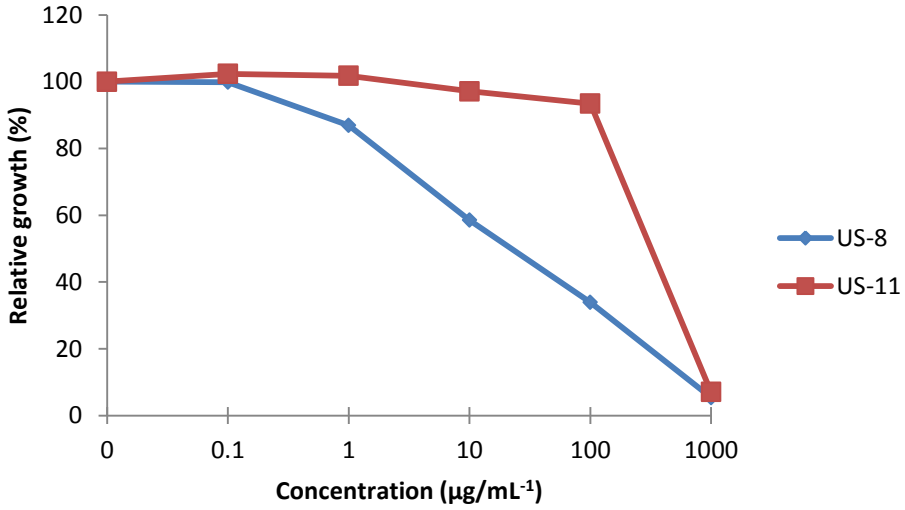


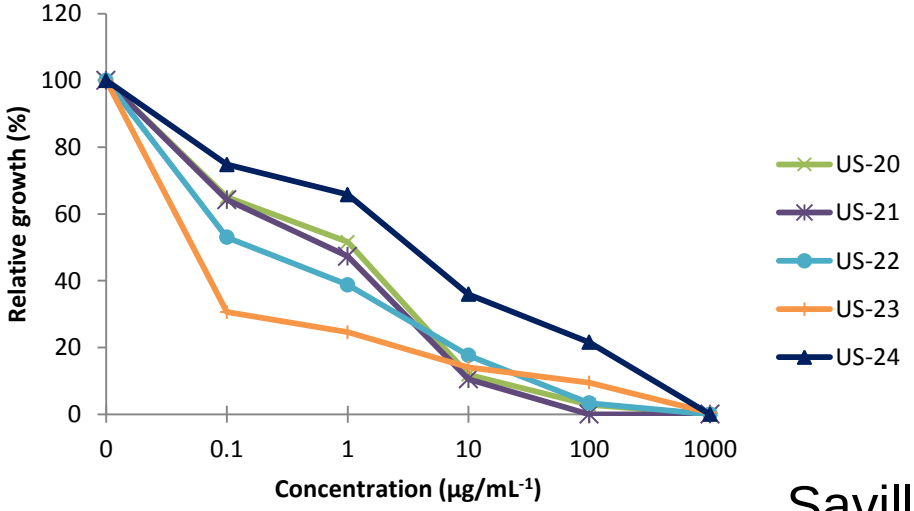
- Fry, W. E, et al. 2015. Re-emerging *Phytophthora infestans*. Phytopathology
- Fry, W. E., et al. 2013. The 2009 Late Blight Pandemic in Eastern USA- causes and results. Plant Dis. 96: 296-306.
- Fry, W. E. et al. The 2009 Late Blight Pandemic in Eastern USA. APSNet Feature August, 2012.

Fungicides used for control

Over 2500 tons active ingredient/year in USA: $200 million

How do the recent US lineages respond to Oomycete target fungicides?





- US-8 and US-11 highly resistant to mefenoxam
- All lineages sensitive to azoxystrobin, cyazofamid, cymoxanil, fluopicolide, mandipropamid,

Saville et al, 2015 Plant Dis 99:659-666

Different sources of inoculum on tomato and potato in NC

US-11 Mefenoxam resistant – Tomato
in Western NC-
FL tomatoes – source of US-11

2012-06-04	
Date Reported	2012-06-08
Host(s)	Tomato
Sample Analysis In Progress	

2012-06-04	
Date Reported	2012-06-08
Host(s)	Tomato
Analysis: US-23 Metalaxyl Sensitive	

2012-06-04	
Date Reported	2012-06-08
Host(s)	Tomato
Analysis: US-23 Metalaxyl Sensitive	

Back to County List

US-23– Mefenoxam sensitive and infects both potato and tomato

US-24 –Source - ND, CA, ME seed potatoes

Western NC and FL connection- share clonal lineages on tomato

Tomato repacking houses – play a role in spread of late blight

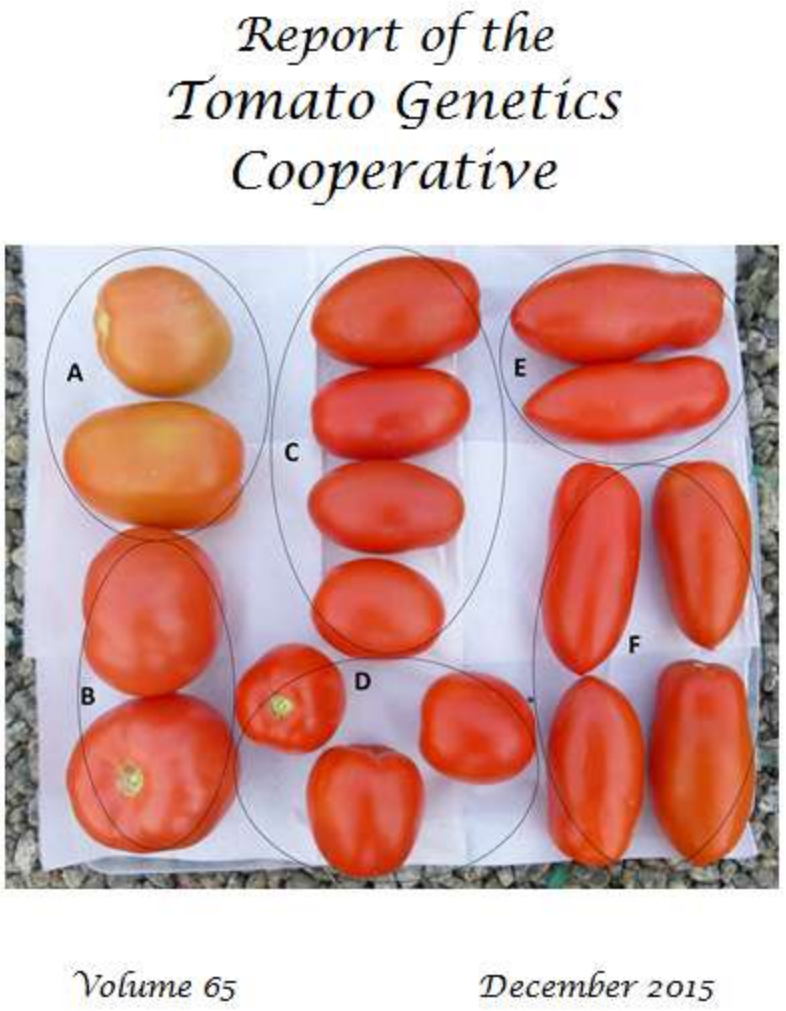
Solving global late blight problems

- Deployment of global disease alert and genotyping system
- Use ICT technology to deliver disease outbreak information - smart phones – crowd sourcing
- Deploy diagnostic apps – Tomato MD
- Deploy transgenic potatoes with stacked R genes in areas where fungicide use is impacted negatively by high rainfall
- Improve seed certification programs and clean seed distribution
- Improve diagnostic capabilities of partner institutions in the developing world and build human capacity
- Continue to use next generation sequence data sets and populations genomic tools to study population biology
- Train next generation of students broadly
- Learn more about the role of hybridization, host jumps and migration in spread of this and other Phytophthora diseases
- Strategically deploy resistant varieties on a landscape level – in US and globally

Why is late blight a re-emerging plant disease ?

- Varied dispersal mechanism
  (airborne inoculum and in plant material)
- Polycyclic nature of disease cycle
- Fungicide resistance
- Ability to shift hosts (potato, tomato, petunia, wild hosts) exploit new niches
- Genome plasticity – effector diversity overcomes host resistance
- Monoculture of susceptible hosts

http://tgc.ifas.ufl.edu/onlinevo.htm



Shekasteband, R., S.F. Hutton, and J.W. Scott. 2015. Designing new DNA markers and determining the effective size of *Ph-2* and *Ph-3* introgressions for late blight resistance stacking purposes in tomato. 2015. Rept. Tomato Genet. Coop. 65:22-31.


Happy 50th Anniversary
TBRT!!


“If only I could grow a good crop of tomatoes I’d retire!!”

TBRT: The Beginning

- A group interested primarily in the Midwest Canning Industry met at field days to discuss breeding methodology
- Early meetings were informal and there was rather free exchange of ideas AND germplasm!
- Tomato Breeding was in its "Golden Age"- F_1 hybrids, mechanical harvest of processing tomatoes, disease resistance etc.

Trait Integration-MAS

Traits

Ty-1

Ty-2

Ty-3

Ty-4

Ty-5

(*Ty-6*)

Sw-5

Sw-7

Frl

Pto

Ph-2

Ph-3

Recurrent Parents

7770

7776

7781

7804 *I-3, og^c*

7907B

7946

7949B

7987 *og^c*

8000 *HT*

8021

8044

8059

8083

8111B

8124C *Sw-5*

8208

8249 *HT*

8283

8293

8296

8297 *og^c*

8436B

8490B

8495

8499

8589

8590

8591

8592

8599

8608

8611

8620

8623

8626

8640

8646

8650

8653B

8735

8820

8834

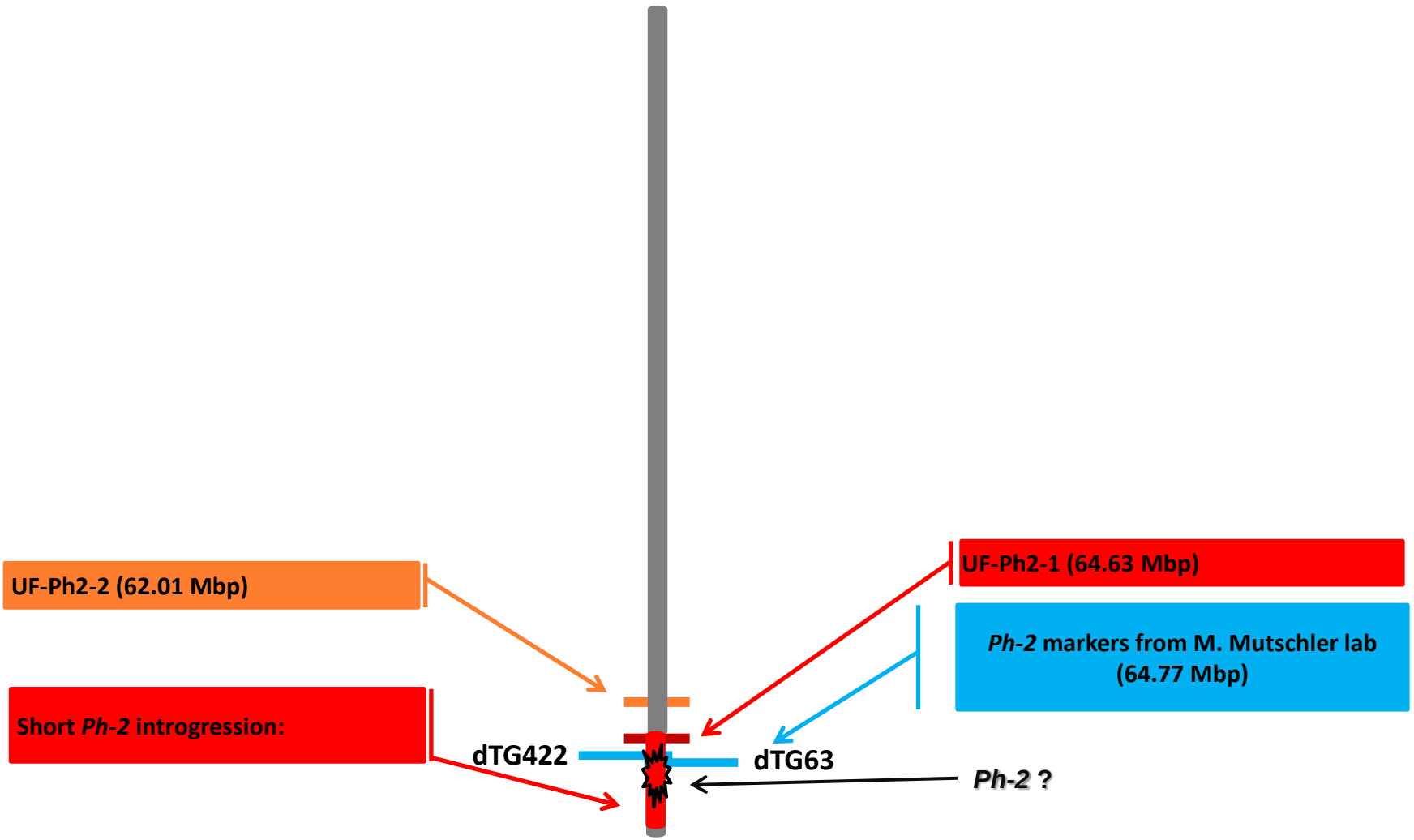
8835

8872

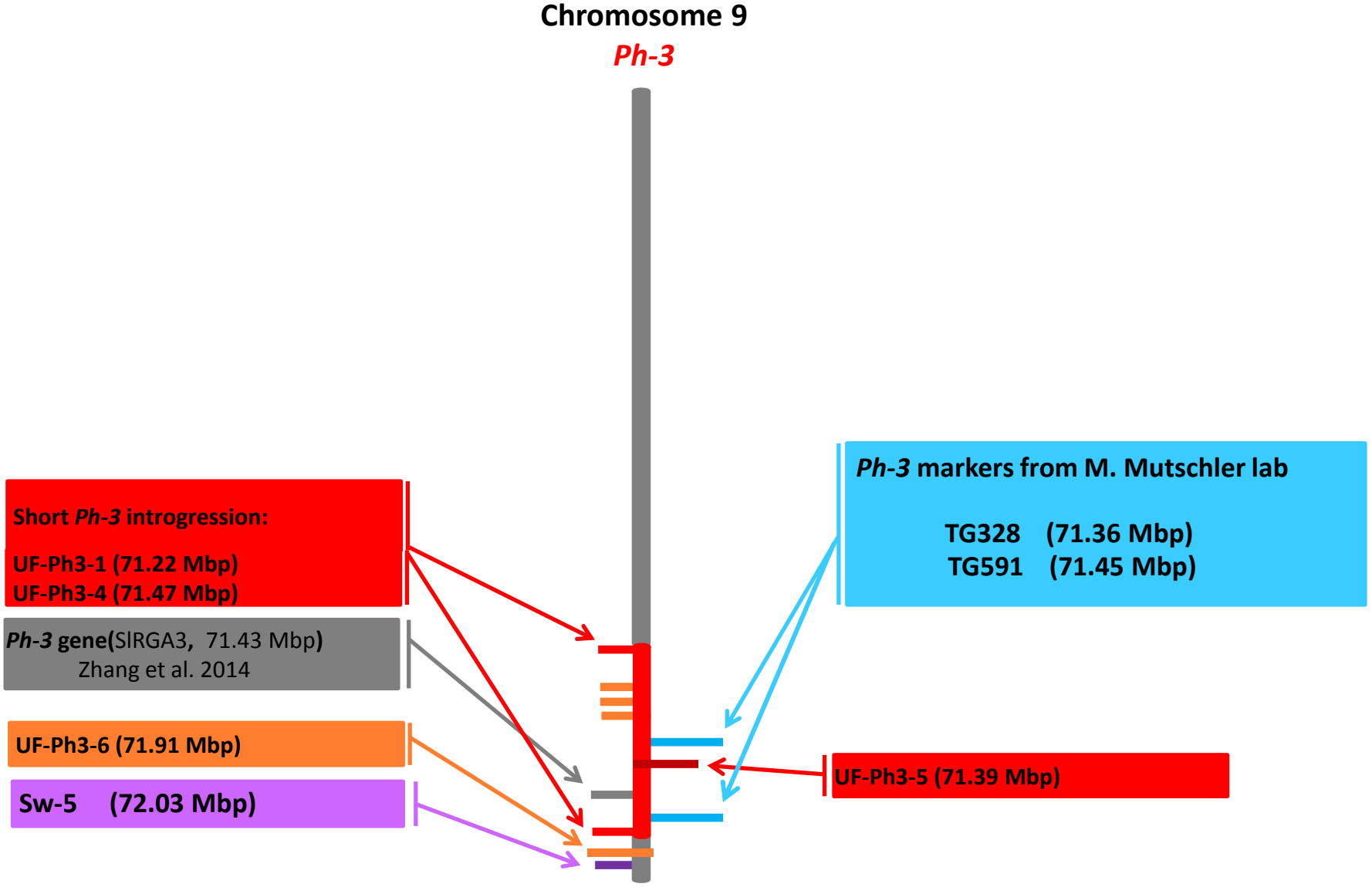
8877

8878

New CAPS Marker for *Ph-2*



New Scar Markers for Ph-3, Expanding from 71.22 to 71.47 Mbp



Total and extra-large marketable yields, percentage of marketable fruit and fruit size for hybrids for fruit harvested breaker and beyond at the Gulf Coast Research and Education Center (Balm) in Spring 2015.

	Marketable yield (25 lb boxes/acre)					
	1st Harvest		Total of 3 harvests		Marketable (%)	Fruit size (oz)
Hybrid	Extra-large	Total	Extra-large	Total		
Tribeca	136 bc	188 c-e	1872 a	2513 a	91 c	6.3 b
Solar Fire (LBR)	265 a	453 a	1069 bc	2031 ab	89 c	5.5 c
Fla. 7770 x Fla. 7946 (LBR)	217 ab	378 ab	951 bc	1756 bc	83 bc	5.5 c
Tasti-Lee (LBR)	58 c	265 bc	730 c	1663 bc	84 c	5.5 c
Tasti-Lee	64 c	213 b-d	662 c	1489 b-d	92 c	5.2 c
Tribeca (LBR)	87 c	91 de	1297 b	1409 cd	74 ab	6.9 a
Solar Fire	130 bc	165 c-e	989 bc	1394 cd	85 c	6.2 b
Florida 47	50 c	56 e	891 bc	1034 d	66 a	7.1 a

Mean separation by Duncan's Multiple Range Test at $P < 0.05$.

Total marketable yield, extra-large yield, fruit size, and percentage culls for tomato hybrids grown at Balm, Florida in fall 2015.

	Marketable yield (25 lb. boxes/A)		Fruit size	Culls
Hybrid	Total	Extra-large	(oz.)	(% by wt.)
7770 x 7946 (LBR)	2420 a[z]	1127 a	5.5 ab	24 a
Solar Fire (LBR)	2184 ab	837 a	5.2 b	19 a
Solar Fire	2145 ab	1159 a	5.7 ab	26 a
Tribeca	1636 ab	1032 a	5.9 a	35 a
Tribeca (LBR)	1409 b	870 a	6.0 a	37a

[z] Mean separation in columns by Duncan's multiple range test at p≤ 0.05.

Late blight disease severity (modified Horsfall-Barrett rating) for tomato hybrids in North Carolina, summer 2015 (Data from Jean Ristaino).

	Date					
	Sept. 1		Sept. 8			
Pedigree	LB	GEOMIDPT	LB	GEOMIDPT	Heterozygous	LB resistant?
Solar Fire –LBR	0	0	0	0	*Ph2 & Ph3*	Yes
Fla. 8975 – LBR	0	0	0	0	*Ph2 & Ph3*	Yes
Tasti-Lee - LBR	0	0	0	0	*Ph2 & Ph3*	Yes
Tasti-Lee – TY1 – LBR	0	0	0	0	*Ph2 & Ph3*	Yes
Fla. 8946 – LBR	0	0	0	0	*Ph2 & Ph3*	Yes
Fla. 8314 – LBR	0	0	0	0	*Ph2 & Ph3*	Yes
Fla. 8900 – LBR	0	0	0	0	*Ph2 & Ph3*	Yes
Solar Fire	9	89.95	11	98.489	None	No
Tasti-Lee	9	89.95	10	94.979	None	No
Fla. 8314	8	80.777	11	98.489	None	No
Tribeca	8	80.777	11	98.489	None	No
Fla. 8900	8	80.777	11	98.489	None	No

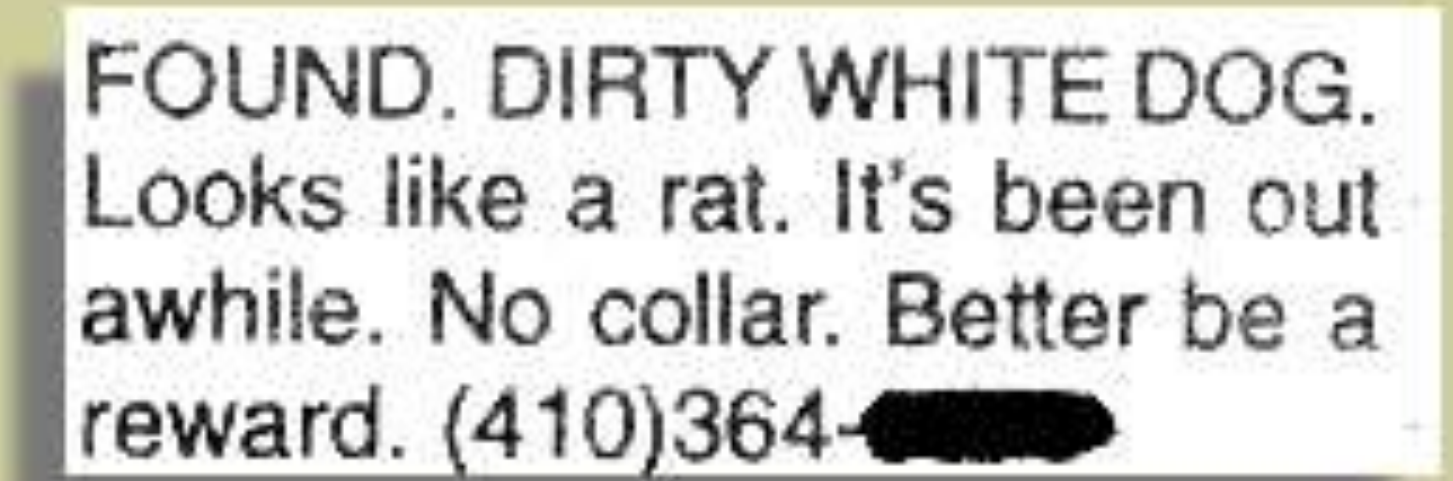
Late blight disease severity for tomato hybrids in Geneva, NY, summer 2015. (Data from Chris Smart).

Pedigree	*Heterozygous Ph Gene*	Infection[z] (%)	Audpc[z] (%)
Solar Fire - LBR	*Ph2 & Ph3*	0.1	1.08
Fla. 8975- LBR	*Ph2 & Ph3*	0.1	0.18
Tasti-Lee - LBR	*Ph2 & Ph3*	0.1	0.74
Tasti-Lee TY1 - LBR	*Ph2 & Ph3*	0.1	0.93
Fla. 8946 - LBR	*Ph2 & Ph3*	0.1	0.84
Fla. 8314 - LBR	*Ph2 & Ph3*	0.1	0.83
Fla. 8900- LBR	*Ph2 & Ph3*	0.1	0.51
Solar Fire	None	99.3	1116.63
Tasti-Lee	None	99.0	1069.63
Tribeca	None	99.8	1164.00
Fla. 8900	None	99.8	1187.25

[z] Mean of 4 replications

New Late Blight Hybrid Evaluation, Fall 2015

- **58 hybrids tested using 11 Late Blight Resistant (LBR) parents**
- **24 hybrids from 7 LBR parents selected for continued trialing in 2016**
- **Additional resistances in some hybrids include TSWV, TYLCV, or fusarium wilt race 3**
- **Is the Extension team interested in trialing (some of) these hybrids in 2016? (Are Seed Companies interested?)**


FOUND. DIRTY WHITE DOG.
Looks like a rat. It's been out
awhile. No collar. Better be a
reward. (410)364-[redacted]


Susceptible Check


NC 63EB *Ph-2*


522
NC 870 *Ph-3*


NC 1CELBR *Ph-2, Ph-3*


509
PI270443


531
NC 1GEM x
PI270443

Summary

- **It has been shown that late blight lineages start in Florida and spread to North Carolina**
- **All molecular markers worked well with no crossovers**
- **CAPS marker Ph2-1 and SCAR marker Ph3-5 linked to *Ph-2* and *Ph-3*, respectively in lines with short introgressions may be of interest to breeders.**
- **Hybrids heterozygous for *Ph-2* and *Ph-3* had excellent resistance in 2 field trials**
- **Some late blight resistant hybrids from the UF program are showing commercial potential**
- **Lines homozygous for *Ph-2* and *Ph-3* did break down late in the season under severe weather conditions in North Carolina and addition of unknown resistance genes provided better protection**

Discussion ?

- **Is it possible that Seed Companies could agree to deploy only varieties with late blight (*Ph-2 & Ph-3*) resistance in Florida?**
- **Do you think there are pathogen strains that are virulent on varieties with *Ph-2 & Ph-3* resistance?**
- **Would widespread deployment of the genes hasten their demise?**
- **Could this concept be applied to other disease resistances?**

Would you have invested?

Microsoft Corporation, 1978


Thank you for your attention
I hope it wasn't too painful

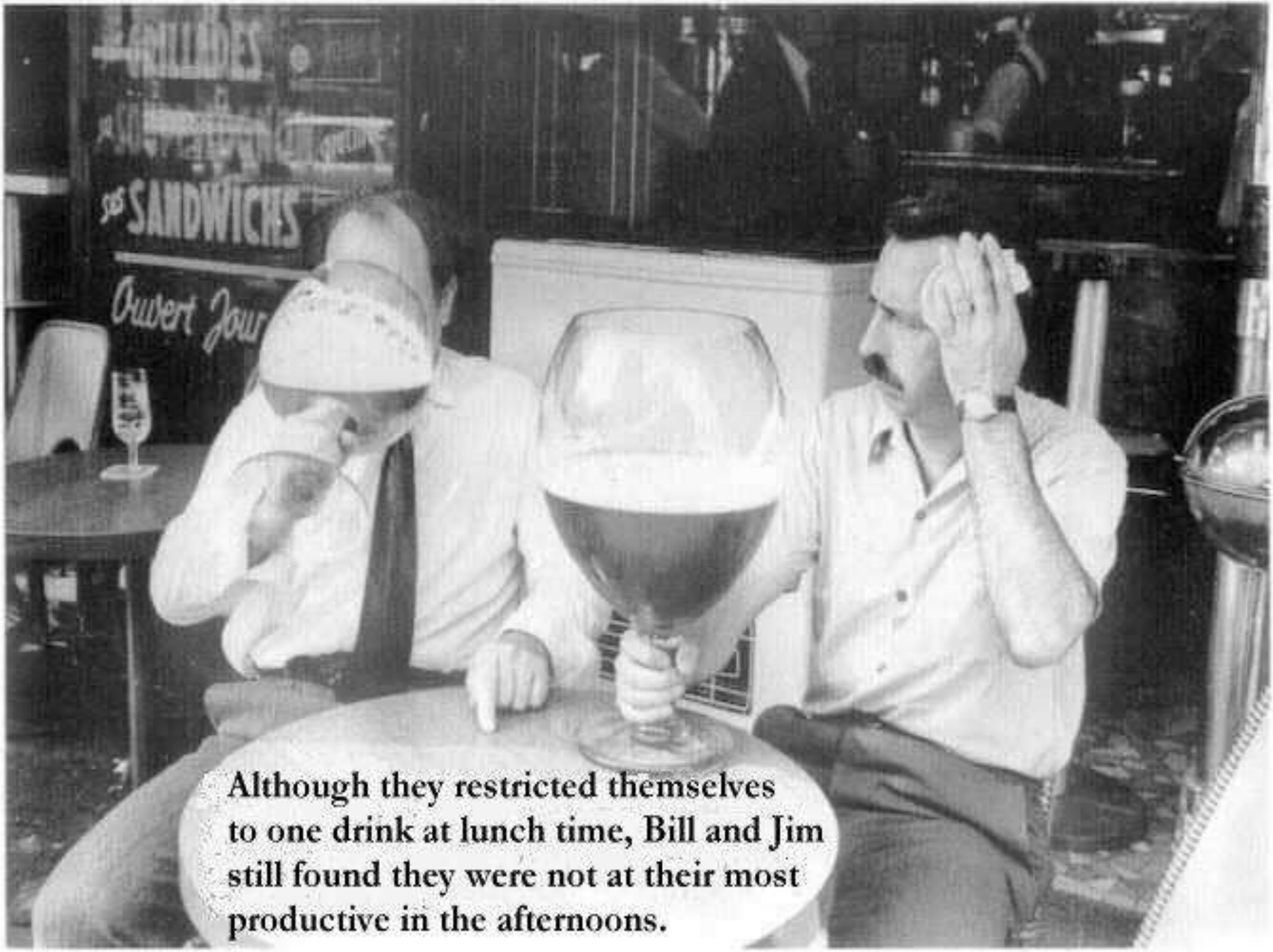
3a. Zen Mindset

Besides a messy desk and all the other great ideas presented in this workshop, it is important to not get upset about all the people whose life function it is to piss you off! Thus, a zen mindset is desirable and to maintain this remember this and take it to heart: **“Never let your research interfere with the functioning of your research center (or department).”**

Namaste

∞. Zen Mindset II

To maintain a Zen Mindset it is best to have time to adjust to bad policies before they occur. When administrators get together and one of them comes up with a bad idea the others are quick to adopt it. Examples are hiring faculty w/o $ for a technician and using Journal Impact Scores to evaluate refereed publications. So when you hear of something bad elsewhere begin to accept it because it is coming home soon.



Although they restricted themselves to one drink at lunch time, Bill and Jim still found they were not at their most productive in the afternoons.