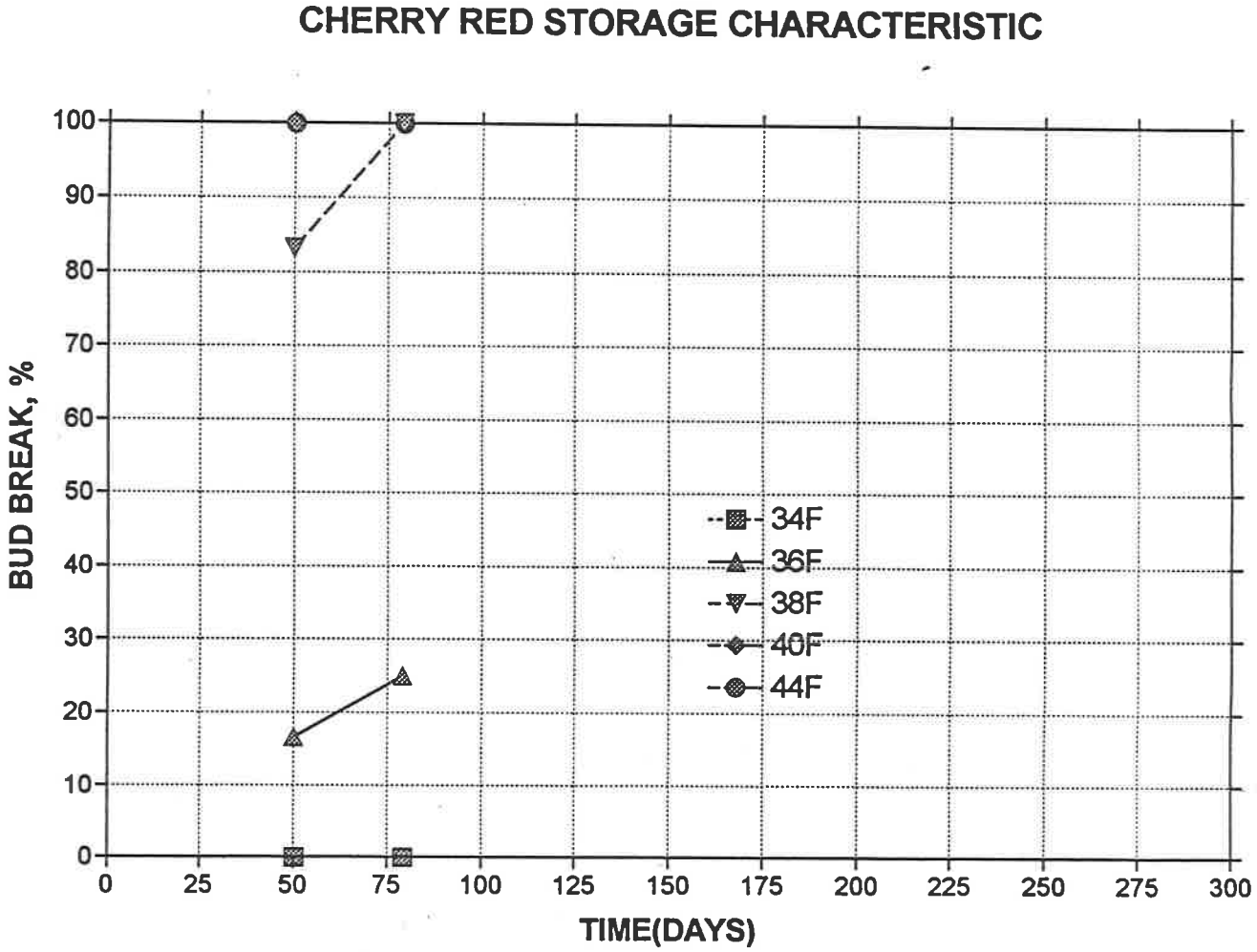
Stushnoff

COMPREHENSIVE REPORT

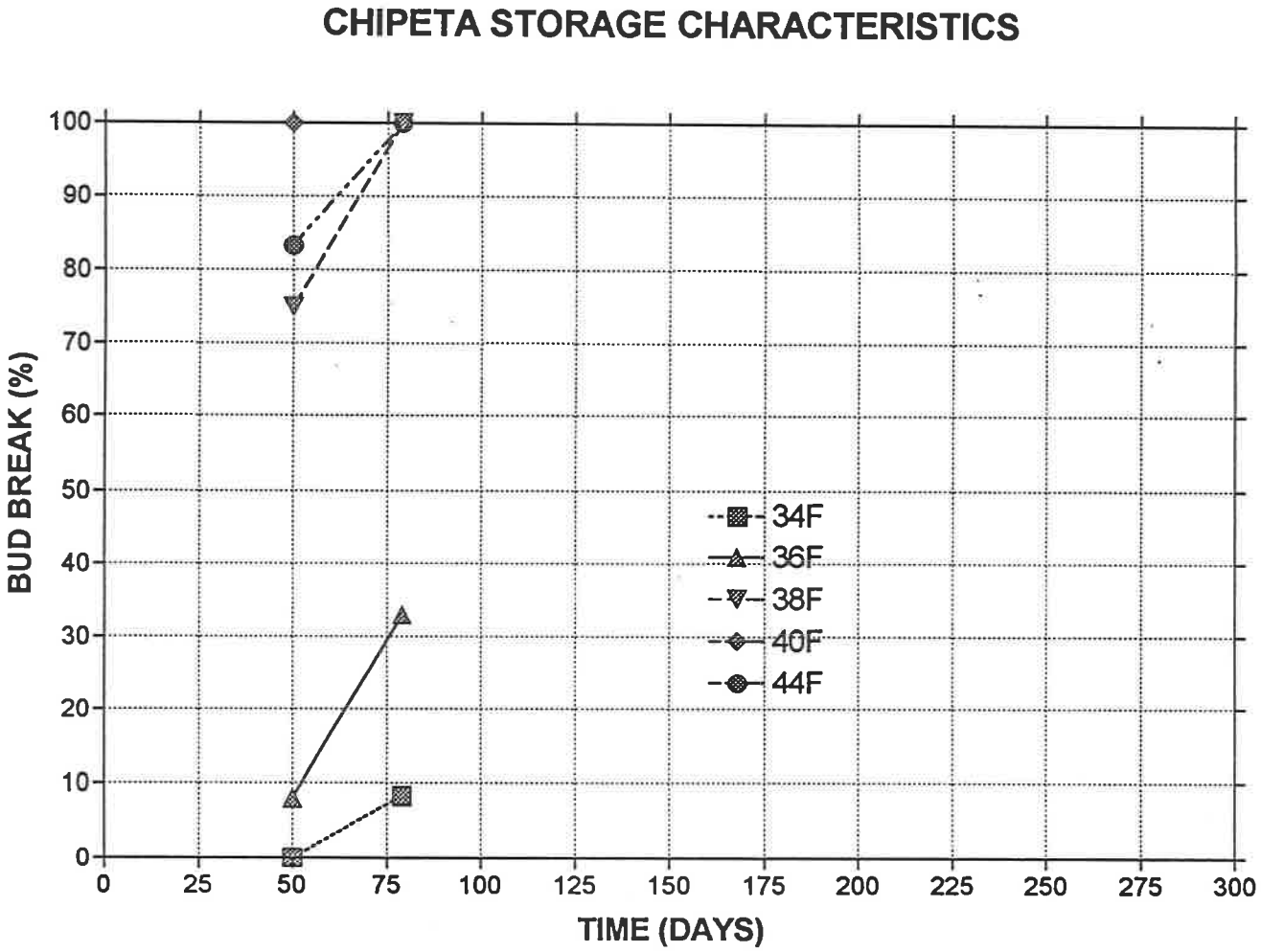
Cultivar storage profiles of field tubers and dormancy in potato minitubers
February 28, 2001
2001 Annual Research Meeting of the SLV Research Center Committee

CONTENTS

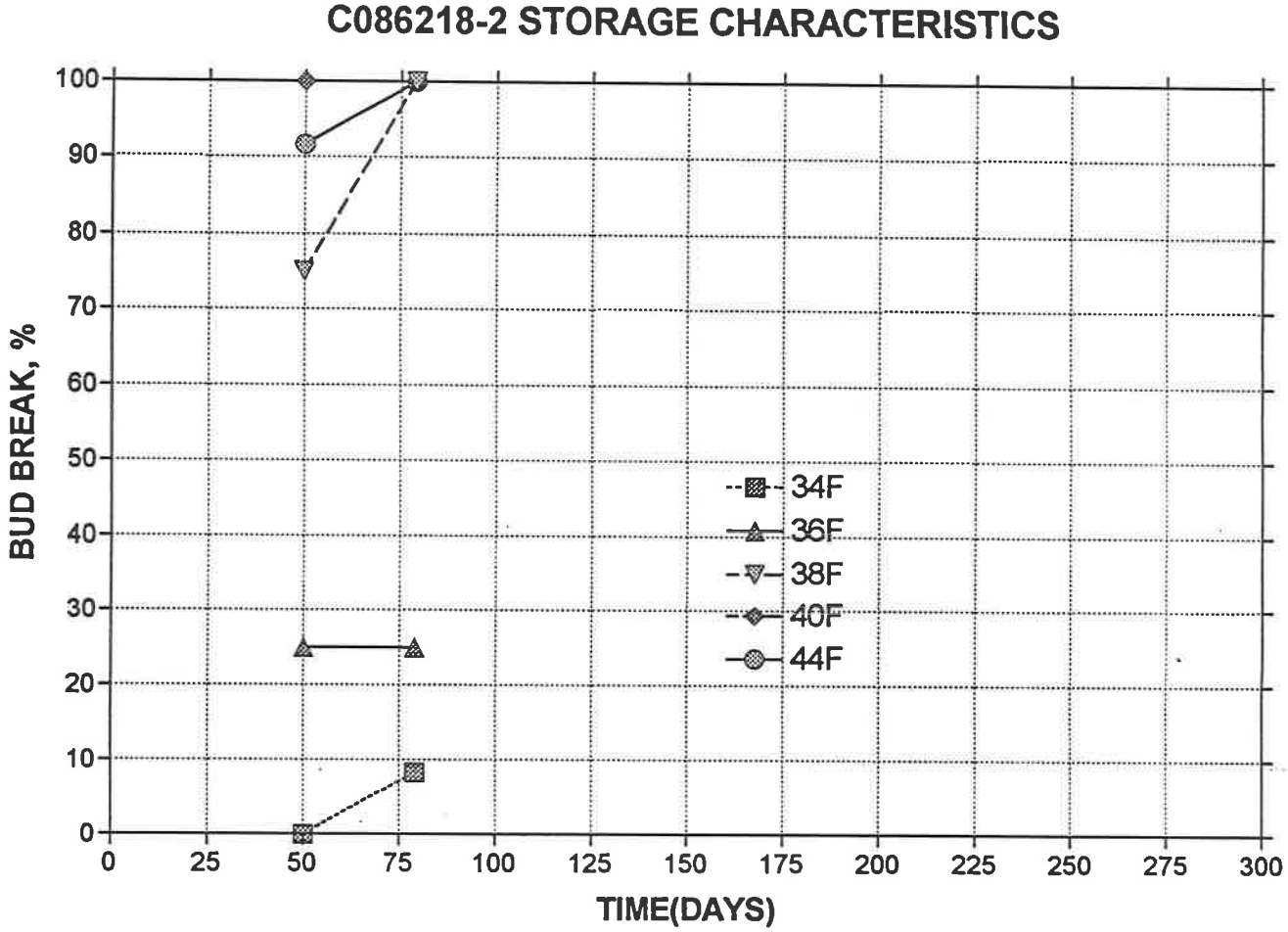
X



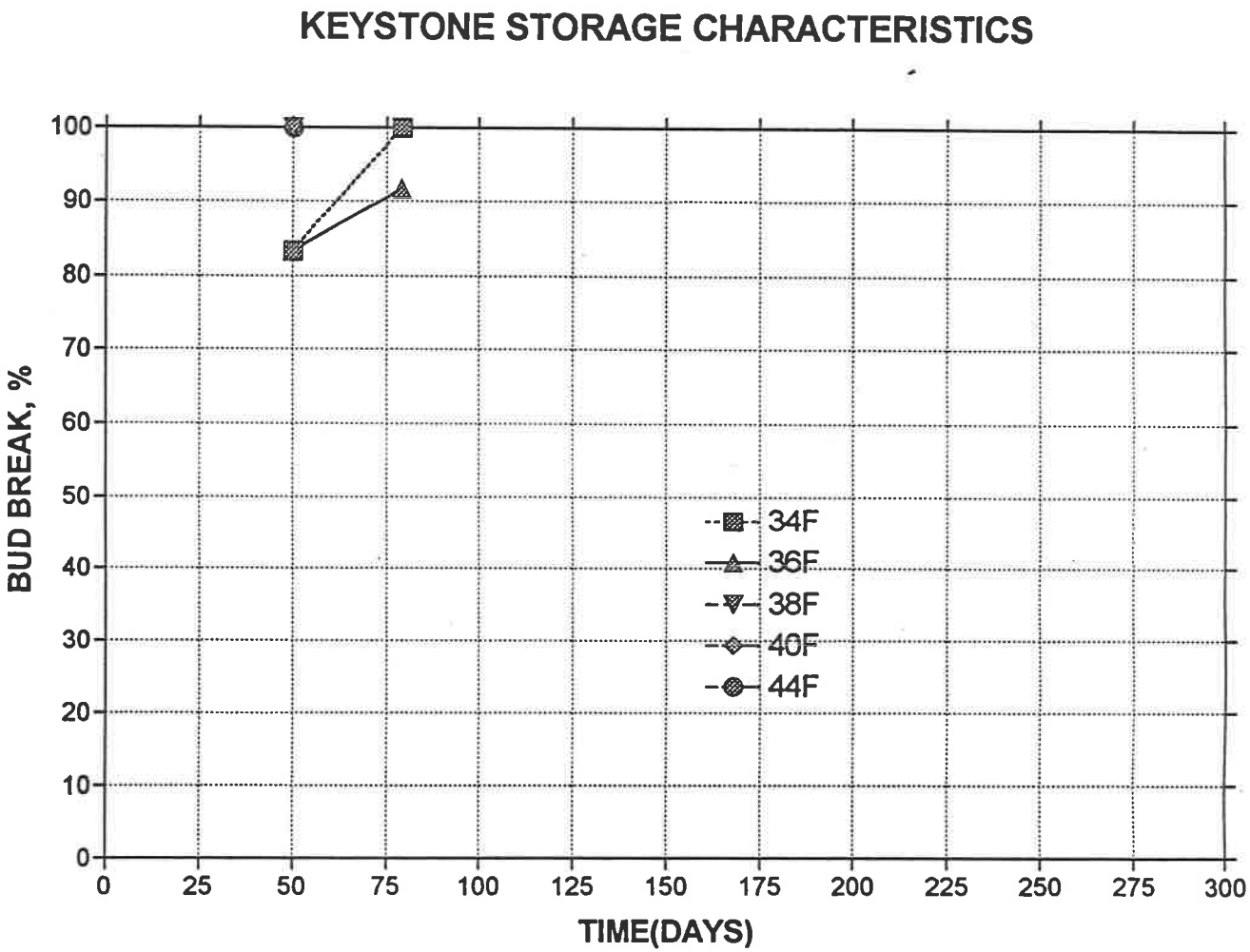
Field tuber storage performance profile for Cherry Red, 2000 fall harvest



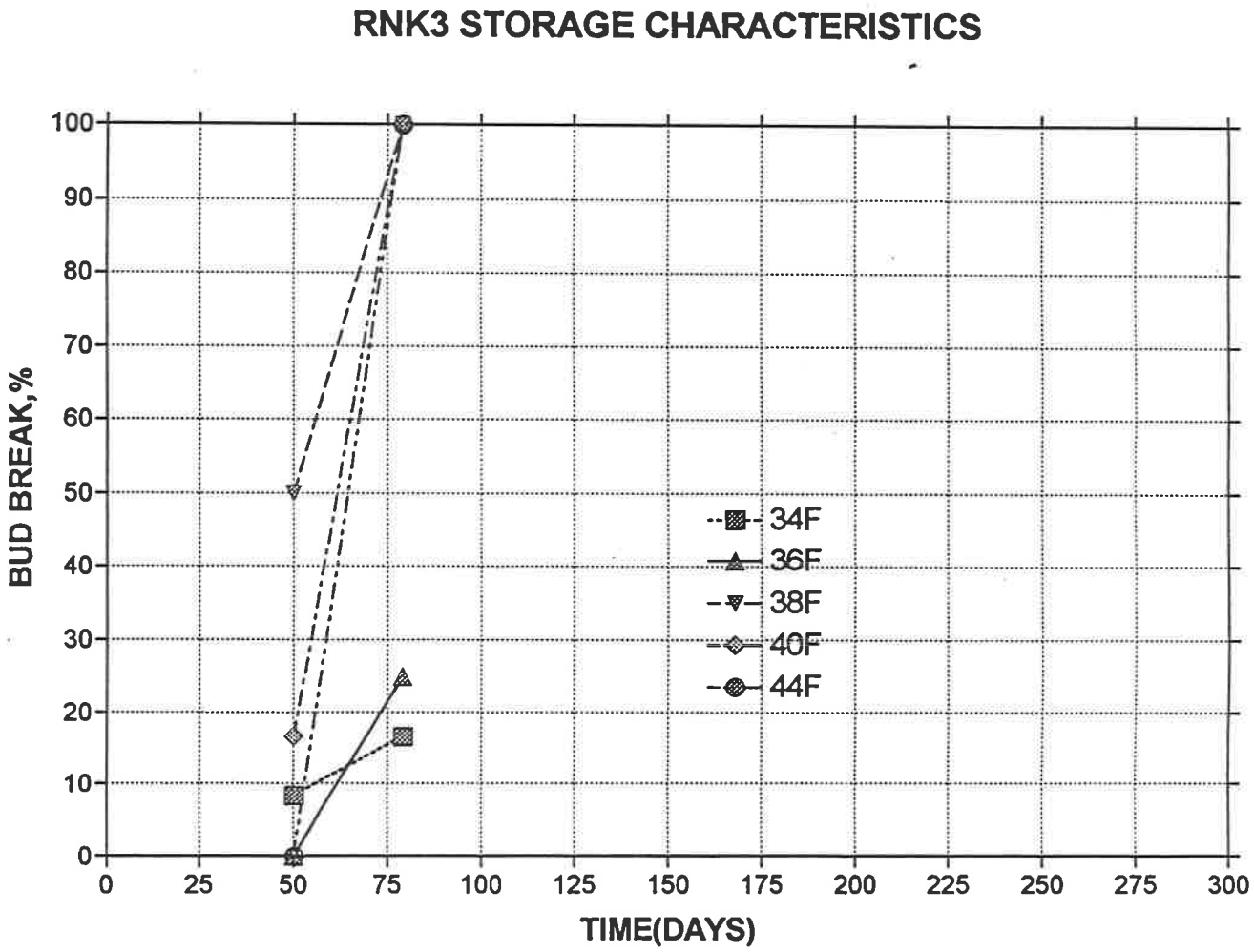
Field tuber storage performance profile for Chipeta, 2000 fall harvest



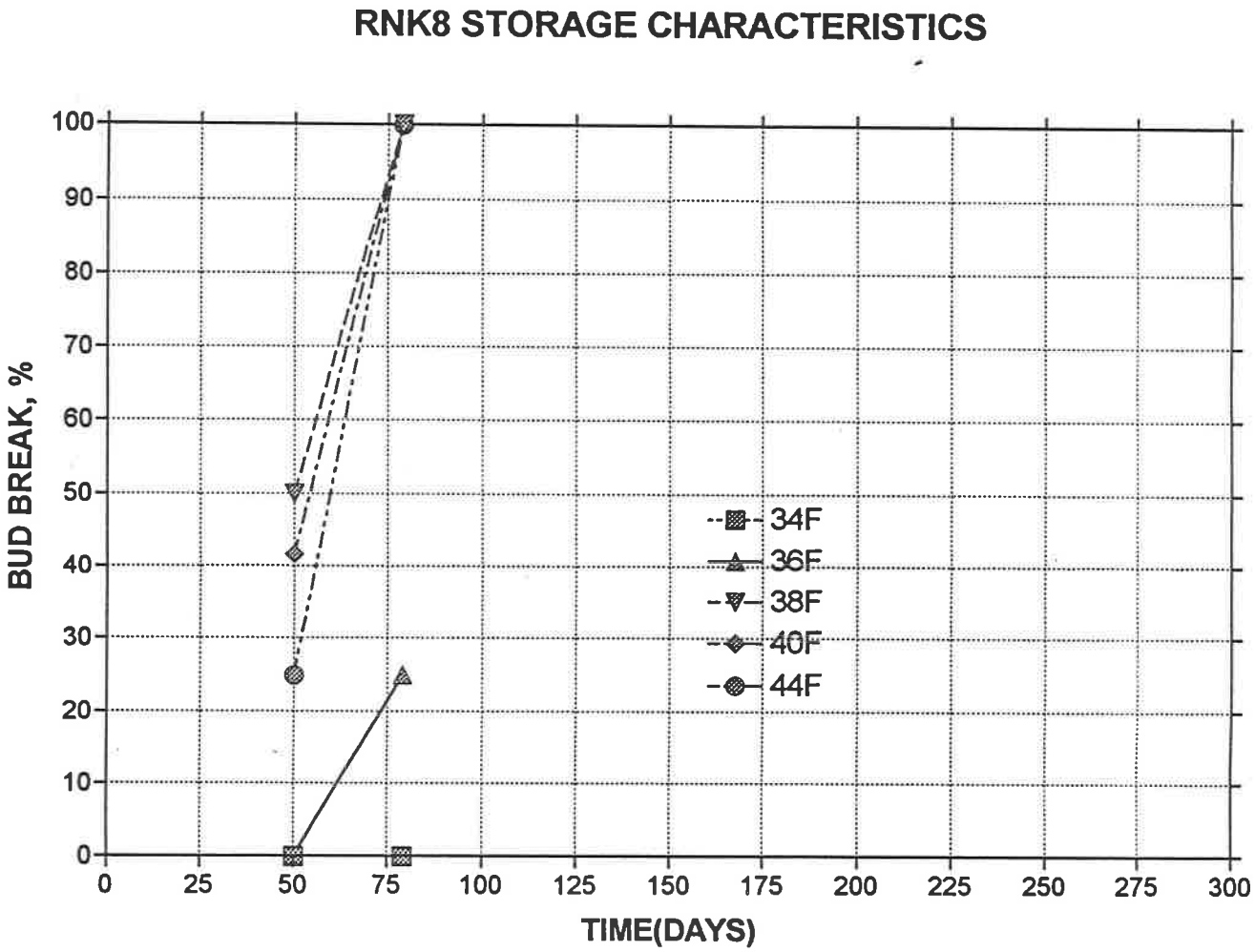
Field tuber performance profile for C086218-2 , 2000 fall harvest



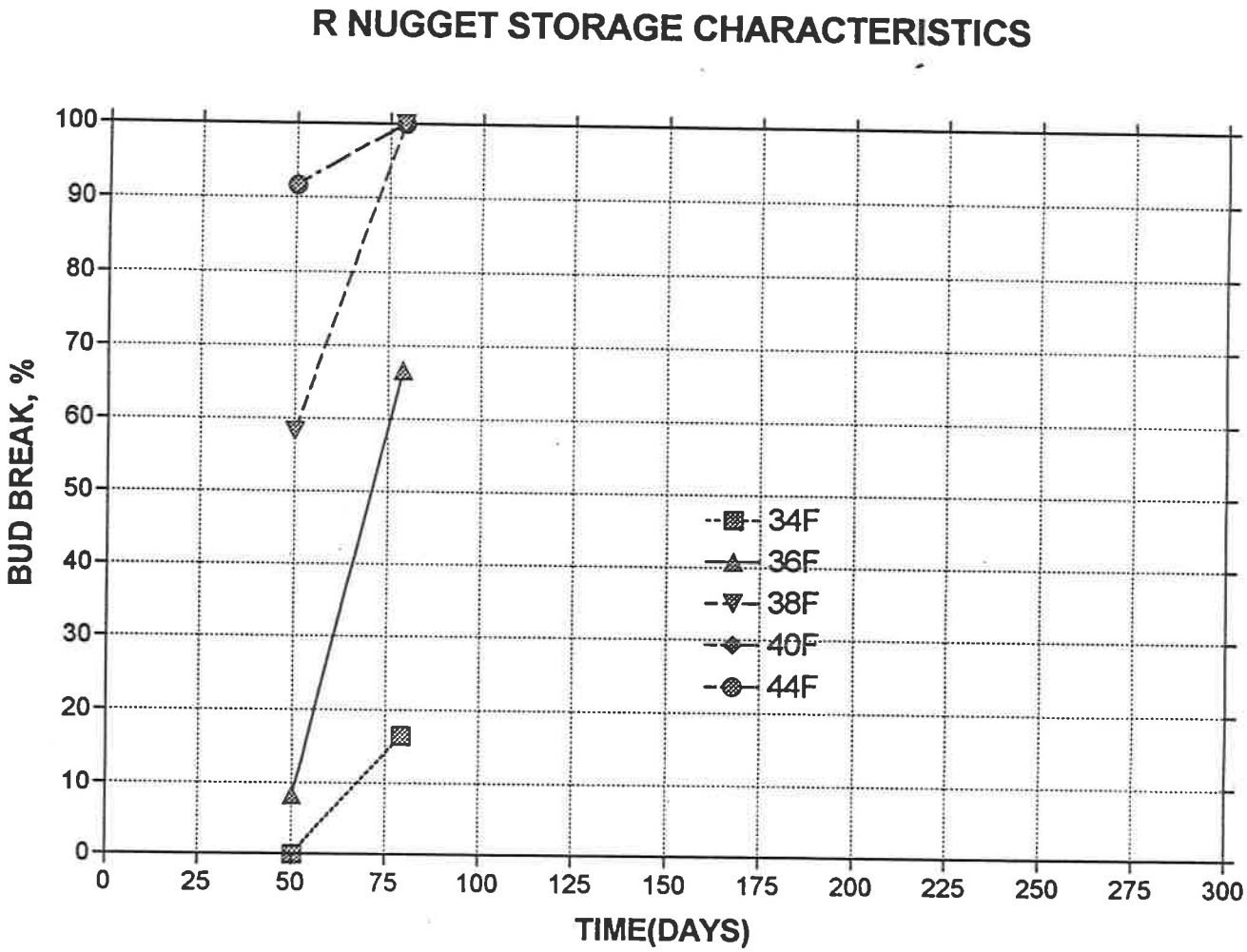
Field tuber performance profile for Keystone, 2000 fall harvest



Field tuber performance profile for Russet Norkotah #3, 2000 fall harvest



Field tuber performance profile for Russet Norkotah #8, 2000 fall harvest



Field tuber performance profile for Russet Nugget, 2000 fall harvest

Table 1. Days in storage to attain 10% tuber bud break for fall 200 harvested field tubers.

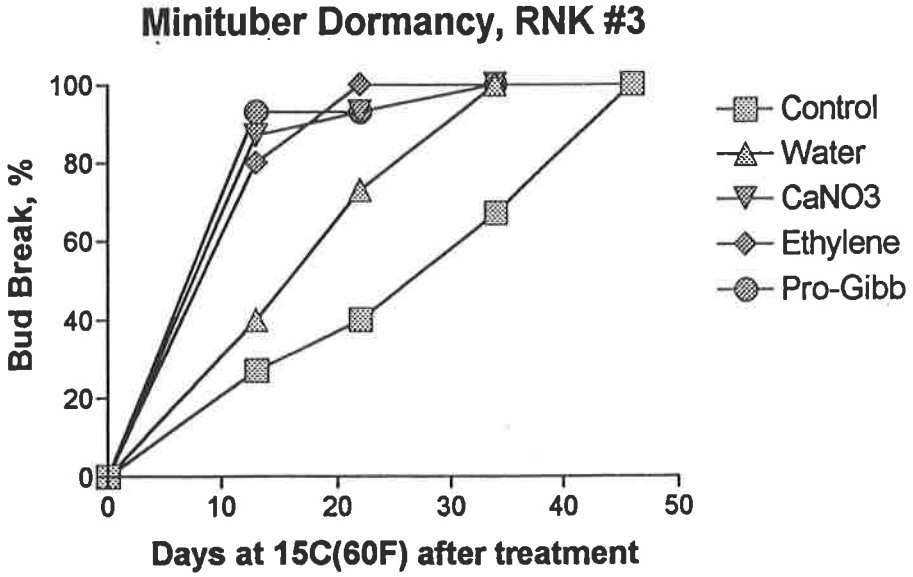
	Storage Temperature (F)				
Variety	44	40	38	36	34
Cherry Red	<50	<50	<50	<50	>79
Chipeta	<50	<50	<50	55	90
C086218-2	<50	<50	<50	<50	85
Keystone	<50	<50	<50	<50	<50
R. Norkotah #3	52	<50	<50	65	60
R. Norkotah #8	<50	<50	<50	63	>79
R. Nugget	<50	<50	<50	52	70

Table 2. Days in storage to attain 50% tuber bud break for fall 2000 harvested field tubers.

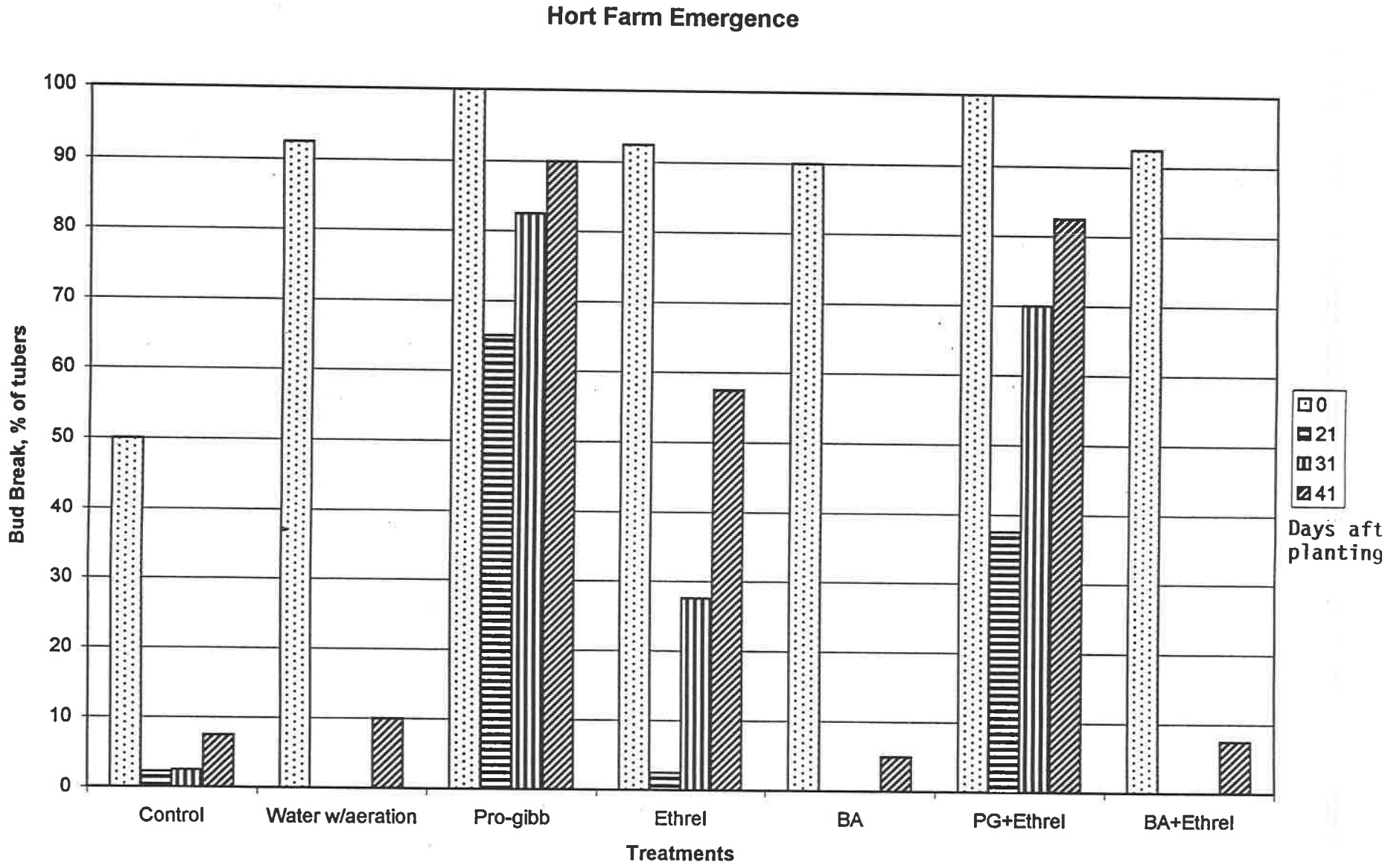
	Storage Temperature (F)				
Variety	44	40	38	36	34
Cherry Red	<50	<50	<50	>150*	>150
Chipeta	<50	<50	<50	100	>200
C086218-2	<50	<50	<50	>150	>200
Keystone	<50	<50	<50	<50	<50
R. Norkotah #3	68	65	50	>100	>200
R. Norkotah #8	60	55	50	>100**	>200
R. Nugget	<50	<50	<50	70	>100

* 1999 storage studies showed that 150 days were required for 50% tuber bud break
** 1999 storage studies showed that 130 days were required for 50% tuber bud break

Field tuber, 1999 fall harvest, dry weight (%) at conclusion of storage time.



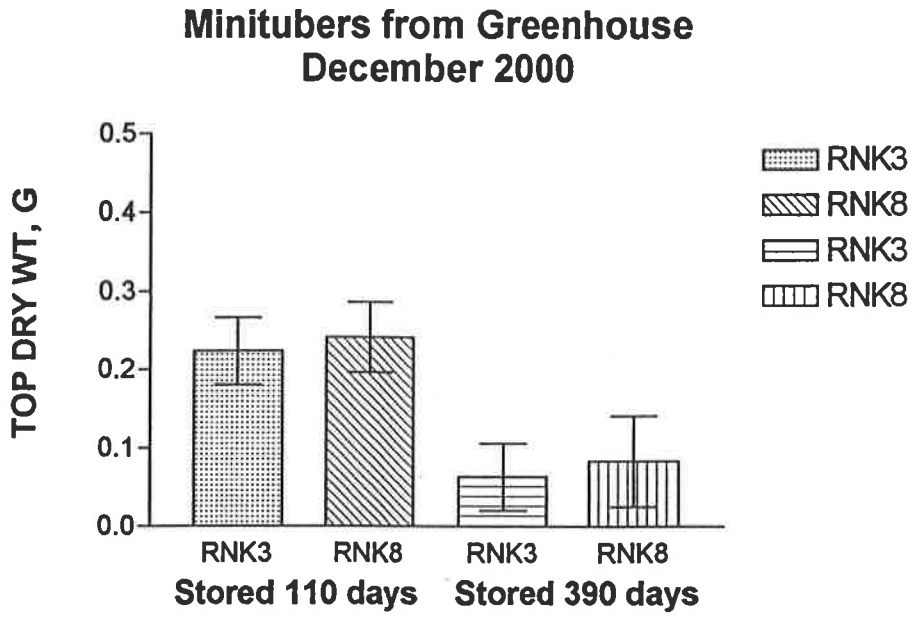
Minituber response to dormancy breaking compounds



Field emergence from minitubers which had previously been treated with dormancy breaking compounds planted at Fort Collins Horticultural Research Center May 2000

Table 3. Minitubers long term storage study, percent of control tubers which had visible sprouts. Tubers were placed either in the incubator at 60F(15C) in the dark and held for 37 days or in the greenhouse in 4" pots in potting mix for 44 days. Tubers had been in storage for approximately 390 days at 36F in small paper bags within cardboard boxes.

CULTIVAR	INCUBATOR	GREENHOUSE
Atlantic	100	100
Centennial	80	80
Chieftain	100	60
Kennebec	100	100
RNK #3	100	80
RNK #8	100	80



Minitubers grown in 4" pots in greenhouse for 45 days after being stored @ 38F for 110 days or @ 36F for 390 days