

8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF

9 \$ 3ODQQHG 3URJUDP 6XP PDU\

3URJUDP

1DPH RI WKH 3ODQQHG 3URJUDP

\$JULFXOWXUH DQG )RRG 6HFXULW\

5HSRUWLQJ RQ WKLV 3URJUDP

9 % 3URJUDP .QRZOHGJH \$UHD V

3URJUDP .QRZOHGJH \$UHD V DQG 3HUFHQWDJH

. \$	.QRZOHGJH \$UHD	((WHQVL(RQHQV	L5HQVHDU5K1VHDUFK		
	6RLO 3ODQW :DWHU 1X	WULHQW 5HODW	LRQVKLSV		
	3ODQW *HQHWLF 5HVRXU	FHV			
	3ODQW %LRORJLFDO (IIL	FLHQF\ DQG \$ELRWLF			
	6WUHVVHV \$IIHFWLQJ 3ODQWV				
	3ODQW 0DQDJHPHQW 6\V	WHPV			
	:HHGV \$IIHFWLQJ 3ODQWV				
	,QWHJUDWHG 3HVW 0DQD	JHPHQW 6\VWHPV			

8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF

\$FWXDO GROODUV H[SHQGHG LQ WKLV 3URJUDP LQFOXGHV &DUU\RYH

([WHQVLRQ		5HVHDUFK	
6PLWK /HYHU	E F ([WHQVLRQ	+DWFK	(YDQV \$OOHQ
0DWFKLQJ	0DWFKLQJ	0DWFKLQJ	0DWFKLQJ
\$OO 2WKHU	\$OO 2WKHU	\$OO 2WKHU	\$OO 2WKHU

9 ' 3ODQQHG 3URJUDP \$FWLYLW\

%ULHI GHVFULSWLRQ RI WKH \$FWLYLW\

5HVHDUFK DQG RXWUHDFK FRQWLQXHG WR DVVXUH WKDW EHVW PDUH SURYLGHG WR WDUJHW DXGLHQFH \*URZLQJ WULDOV SURYLGHG Q RI FURSV DV FKDQJHV LQ WKH VXEDUFWLF DQG DUFWLF FOLPDWH RFFXU FRQWLQXHG WR EH UHYLWDOL]HG WR UHPDLQ UHOHYDQW WR UHJLRQDO RQ RQH HGXFDWLRQDO DFWLYLWLHV ZLWK VSHFLILF VHFWRUW RI WKH SFRPPXQLW\ DQG WKH KRUWLFXOWXUDO LQGXVWU\ SURYLGHG LQGLYLGX ,QFUHDVHG UHOLDQFH RQ WKH LQWHUQHW DQG WHFKQRORJ\ HQKDQFHG DQG VWDII XWLOL]HG GLVWDQFH HGXFDWLRQ SODWIRUPV ,QFUHDVLQJ VWUDWHJ\ LQ NHHSLSQJ SHVW VSHFLHV EHORZ WKUHVVKROG OHYHOV 2XV IRUXPV WRXUV DQG FRQVXOWDWLRQV ZLWK VWDNHKROGHUV

%ULHI GHVFULSWLRQ RI WKH WDUJHW DXGLHQFH

7KH WDUJHW DXGLHQFH LQFOXGHG SURGXFHUV DQG FRQVXPHUV DJULEXVLQHVHV LQGXVWU\ OHDGHUV LQGLYLGXDOV DQG JURXSV FRC HQYLURQPHQW SXEOLF UHVRXUFH DJHQFLHV SXEOLF DQG SULYDWH UHVFUDFKHUV DQG XQGHUJUDGXDWLHV DQG JUDGXDWLHV VVXGHQWV 2WK JDUGHQ DQG SODQW DVVRFLDWLRQV SXEOLF DQG FRPPHUFLDO JUHHQK ODQGVFDHV VWDWH DQG IHGHUDO SDUN HPSOR\HHV JDUGHQHUV P DQG XUEDQ PXQLFLSDOLWLHV SHVW FRQWURO RSHUDWRUV SURSHUW\ DQG SULYDWH VFKRRQV UHFUHDWLRQDO IDFLOLWLHV UHVRUWV DQG K GLVWULFWV \$GYLVRUV DQG WKH WDUJHW DXGLHQFH LQFOXGHG WKH \$ &RQVHUYDWLRQ 6HUYLFB WKH 86\\$ )RUHVW 6HUYLFB WKH \$ODVND 'HS JRYHUQPHQWV DQG \$ODVND 1DWLYH FRUSRUDWLRQV

+RZ ZDV H;WHQVLRQ XVHG"

,Q )< IDFXOW\ DQG VWDII DQVZHUHG DJULFXOWXUH DQG KRUWL WKURXJK H;WHQVLRQ V \$VN DQ ([SHUW LQWHUIDFH 7RSLFV LQFOXGHG JDUGHQLQJ IUXLW FURSV IORZHU JURZWK VPDOO DQG ODUJH OLYHVW 6HYHUDO SHUVRQQHO DWWHQGHG DQ H;WHQVLRQ ZHELQDU RQ ZHHG PD ODQGVFDHV \$JHQW DQG HGXFDWLRU PHPEHUVKLSV LQ H;WHQVLRQ V F &LWL]HQ 6FLHQFH ,QYDVLYH 6SHFLHV +RPHSDJH \$XWKRUW %LJ 'DWD ,QWHJUDWHG 3HVW 0DQDJHPHQW

8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF  
9 ( 3ODQQHG 3URJUDP 2XWSXWV  
6WDQGDUG RXWSXW PHDVXUHV

	'LUHFW &RQWDLQWLUVHFW &RQWLUDHFW &RQWDLQWLUVHFW &RQWDFWV \$GXOWV \$GXOWV <RXWK <RXWK		
\$FWXDO			

1XPEHU RI 3DWHQW \$SSOLFDWLRQV 6XEPLWWHG 6WDQGDUG 5HVHDU  
3DWHQW \$SSOLFDWLRQV 6XEPLWWHG  
<HDU  
\$FWXDO

3DWHQWV OLVWHG  
3XEOLFDWLRQV 6WDQGDUG \*HQHUDO 2XWSXW OHDVXUH  
1XPEHU RI 3HHU 5HYLHZHG 3XEOLFDWLRQV

	([WHQVLRQ	5HVHDUFK	7RWDO
\$FWXDO			

9 ) 6WDWH 'HILQHG 2XWSXWV  
2XWSXW 7DUJHW

2XWSXW  
2XWSXW OHDVXUH  
" 2XWSXW )DFXOW\ ZLOO SURYLGH DJULFXOWXUDO DQG KRUWLFX  
ILHOG GD\V DQG FRQIHUHQFHV LQFOXGLQJ ,30

<HDU \$FWXDO

2XWSXW  
2XWSXW OHDVXUH  
" 2XWSXW )DFXOW\ ZLOO SURYLGH DJULFXOWXUDO KRUWLFXOWX  
WKURXJK RQH RQ RQH FRQVXOWDWLRQV DQG FRQVXOWDWLRQV Z  
ZLOO EH FRQWDFW KRUV

<HDU \$FWXDO

8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF

2XWSXW

2XWSXW 0HDVXUH

" 2XWSXW +RUWLFXOWXUDO FURS UHVHDUFK ZLOO FRQFHQWUDW  
DSSURSULDWH WR \$ODVND 3XEOLFDWLRQV DQG SUHVHQWDWLRQ

<HDU \$FWXDO

2XWSXW

2XWSXW 0HDVXUH

" 2XWSXW &RQWUROOHG HQYLURQPHQW KRUWLFXOWXUH ZLOO IR  
WUDQVIHU DQG DSSURSULDWH FURSV DQG EHVVW PDQDJHPHQW SU  
HQYLURQPHQWV 2XWSXW PHDVXUHV ZLOO EH SXEOLFDWLRQV DQ

<HDU \$FWXDO

2XWSXW

2XWSXW 0HDVXUH

" 2XWSXW )RFXV ZLOO EH RQ EHVVW PDQDJHPHQW SUDFWLFHV IRU  
SURGXFWLRQ 2XWSXW PHDVXUHV ZLOO EH SXEOLFDWLRQV DQG S

<HDU \$FWXDO





8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF  
IRU 3ROLVK FDQRROD ZHUH OEV DFUH LQ )DLUEDQNV DQG OEV  
FRPSOHWLQJ D PDVWHU V WKHVLV LV XVLQJ GDWD IURP WKLV SUR  
LPSDFWV RI FOLPDWH FKDQJH RQ ZKHDW JURZWK  
\$VVRFLDWHG .QRZOHGJH \$UHDV

.\$. &RGHQRZOHGJH \$UHD  
6RLO 3ODQW :DWHU 1XWULHQW 5HODWLRQVKLSV  
3ODQW 0DQDJPHQW 6\VWHPV  
:HHGV \$IIHFWLQJ 3ODQWV  
,QWHJUDWHG 3HVW 0DQDJPHQW 6\VWHPV  
'UDLQDJH DQG ,UULJDWLRQ 6\VWHPV DQG )DFLOLWLHV  
(FRQRPLFV RI \$JULFXOWXUDO 3URGXFWLRQ DQG )DUP 0D

## 2XWFRPH

2XWFRPH 0HDVXUHV

2XWFRPH ,QFUHDVH OLYHVWRFN SURGXFHUV DELOLW\ WR XQGHU  
SUDFWLFHV 0HDVXUH ZLOO EH QXPEHU RI SURGXFHUV  
\$VVRFLDWHG ,QVWLWXWLRQ 7\SHV  
" ([WHQVLRQ  
" 5HVHDUFK

D 2XWFRPH 7\SH

&KDQJH LQ \$FWLRQ 2XWFRPH 0HDVXUH

E 4XDQWLWDWLYH 2XWFRPH

<HDU \$FWXDO

F 4XDOLWDWLYH 2XWFRPH RU ,PSDFW 6WDWPHPHQW

,VVXH :KR FDUHV DQG :K\  
0DQ\ \$ODVNDQV GR QRW OLYH QHDU HDVLO\ DFFHVVLEOH VHUYLFH  
UDQFKLQJ KDYH D QHHG IRU LQIRUPDWLRQ RQ KRZ WR EHVW PRQL  
WKDW WKH\ FDQ LGHQWLIL SUREOHHPV HDUO\ ZKHQ WKHUH ZLOO E  
YHWHULQDULDQ DQG RWKHU H[SHUW KHOS LQ PRUH UHPRWH DUHD  
VHFXULW\ DQG KLJK FRVWV RI OLYLQJ /LYHVWRFN UDLVHG LQ \$OD  
KRPH DQG FRPPHUFDO XVH 7KHUH VH1007.HV /LVWRFN EHVRWK



8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF

(LJKW ZRUNVKRSV LQ PXOWLSDQWV LQ KLJK WXQQHO ZRUNVKRSV DV  
GHYHORSPHQWV RQ KLJK WXQQHOV DV DQ RSWLRQ WR DXJPHQW W  
0DVWHU \*DUGHQHUV ,Q VXP WKHUH ZHUH FRQWDFWV ZLWK  
ZRUNVKRSV LQFOXGLQJ LQWHUSUHWLQJ VRLO VDPSOH UHSRUWV  
IUHH IRUDJH DQG SHVWLFLGH VDIHW\ WUDLQLQJV JUHHQKRXVH GI

5HVXOWV

\$OO RI WKH SDUWLFLSDQWV LQ KLJK WXQQHO ZRUNVKRSV DV  
JDLQHG ERWK NQRZOHGJH DQG VNLOOV \$OO RI WKH SDUWLFLSDQWV  
GLIIHUHQW ZRUNVKRSV RQ JDUGHQLQJ DQG VHGG VWDUWLQJ DJUH  
SHUFHQW JDLQLQJ VNLOOV \$ VHULHV RI <RX7XEH YLGHRV FDOO  
YLHZHUV LQVLJKWV IURP PDQ\ ORFDO JURZHUV 7KH SDVVLYH VRO  
2Q DQRWKHU YLGHR D YLHZ FRPPHQWHG ZH WULHG VRLO EORFNW  
H[WUHPHO\ LPSUHVVHG ZLWK WKH KHDOWK RI WKH SODQWV 0DQW  
WRSLFV WKURXJK XSYRWHV DQG FRPSOLPHQWV VXFK DV DQRWKH  
FRRO OXPEHU FRQVWUXFWLRQ RI JUHHQKRXVH

\$VVRFLDWHG .QRZOHGJH \$UHDV

.\$ &RGHQRZOHGJH \$UHD

6RLO 3ODQW :DWHU 1XWULHQW 5HODWLRQVKLSV  
3ODQW 0DQDJPHQW 6\VWHPV  
:HHGV \$IIHFWLQJ 3ODQWV  
,QWHJUDWHG 3HVW 0DQDJPHQW 6\VWHPV  
6WUXFWXUHV )DFLOLWLHV DQG \*HQHUDO 3XUSRVH )DUP  
'UDLQDJH DQG ,UULJDWLRQ 6\VWHPV DQG )DFLOLWLHV  
(FRQRPLFV RI \$JULFXOWXUDO 3URGXFWLRQ DQG )DUP 0DQW

2XWFRPH

2XWFRPH 0HDVXUHV

2XWFRPH ,QFUHDVH WKH QXPEHU RI DGRSWHUV RI QHZ WHFKQRO

\$VVRFLDWHG ,QVWLWXWLRQ 7\SHV

" ([WHQVLRQ

" 5HVHDUFK

D 2XWFRPH 7\SH

&KDQJH LQ \$FWLRQ 2XWFRPH 0HDVXUH

E 4XDQWLWDWLYH 2XWFRPH

<HDU \$FWXDO

8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF

F 4XDOLWDWLYH 2XWFRPH RU ,PSDFW 6WDWHPHQW

,VVXH :KR FDUHV DQG :K\

1HZ WHFKQRORJLHV KHOS HYHURQH LQ WKH DJULFXOWXUH ILH  
VKDULQJ GLDJQRVWLKV DQG RWKHU LPSURYHPHQWV DQG HIILFLH  
FURSV \$ODVNDQV QHHG PRUH RSSRUWXQLWLHV IRU UHSRUWLQJ D  
VKDULQJ REVHUYDWLRQV IURP H[SHULHQFHG JURZHV DQG ZDWFI  
IRU PDQDJLQJ DQLPDO DQG SODQW SURGXFWLRQ ([SRVXUH WR QH  
WKH SRVVLELOLW\ \$ODVNDQV ZLOO DGRSW VXFK WRROV

:KDW KDV EHHQ GRQH

7KH \$ODVND :HHGV ,GHQWLILFDWLRQ DSS FRQWLQXHG WR EH P  
DJHQW SURYLGHG WUDLQLQJV RQ ILUVW GHWHFWLRQ RI LQYDVLVYH  
, PRELOH DSS WR LGHQWL\ DQG UHSRUW WKH ORFDWLRQ RI LQYD  
XWLQJHG LQ FRQMXQFWLRQ ZLWK XQLYHUVLW\ YDULHW\ WULDOV  
VFLHQWLVWV DQG UDWH WKH YDULHWLHV WKH\ KDYH JURZQ IRU W  
FRQWLQXHG WR RIIHU DQ RQOLQH VRLO WHVW FDOFXODWRU WKDW  
DOORZLQJ XVHUV WR HVWLPDWH VRLO IHUWLOLW\ QHHGV DQG XQO

5HVXOWV

7KH \*URZ 7HOO DSS KDV VHHQ LQVWDOODWLRQV RQ L26 D  
ODXQFK LQ 7KH \$ODVND :HHGV ,GHQWLILFDWLRQ DSS KDG  
GRZQORDGV VLQFH LWV ODXQFK &RPPHQWV LQFOXGH 1LFH D  
IHDWXUHG RQOLQH LQ WKH 8 6 &OLPDWH 5HVLOLHQFH 7RRONLW  
RIILFHV XVH WKH VRLO FDOFXODWRU IRU HDFK KLJK WXQQHO SUR  
)< WKH WRRO KDG XQLTXH SDJHYLHZV

\$VVRFLDWHG .QRZOHGJH \$UHDV

. \$ &RGHQZRQH \$UHD

3ODQW \*HQHWLF 5HVRXUFHV

3ODQW %LRORJLFDO (IILFLHQF\ DQG \$ELRWLF 6WUHVVHV

3ODQW 0DQDJPHQW 6\VWHPV

,QWHJUDWHG 3HVW 0DQDJPHQW 6\VWHPV

&RPPXQLFDWLRQ (GXFDWLRQ DQG ,QIRUPDWLRQ 'HOLYH

2XWFRPH

2XWFRPH 0HDVXUHV

2XWFRPH ,QFUHDVH WKH QXPEHU RI DFWLYLWLHV WKDW PRQLWR  
0HDVXUH ZLOO EH WKH QXPEHU RI RXWUHDFK DFWLYLWLHV DQG SX

\$VVRFLDWHG ,QVWLWXWLRQ 7\SHV



8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF

\$QLPDO 3K\VL RORJLFDO 3URFHVVHV

2XWFRPH

2XWFRPH 0HDVXUHV

2XWFRPH 'HPRQVWUDWH HIIHFWLHYH FROODERUDWLRQ EHWZHHQ U  
DJULFXOWXUH DQG KRUWLFXOWXUH LVVXHV

\$VVRFLDWHG ,QVWLWXWLRQ 7\SHV

" ([WHQVLRQ

" 5HVHDUFK

D 2XWFRPH 7\SH

&KDQJH LQ \$FWLRQ 2XWFRPH 0HDVXUH

E 4XDQWLWDWLYH 2XWFRPH

<HDU \$FWXDO

F 4XDOLWDWLYH 2XWFRPH RU ,PSDFW 6WDWHPHQW

,VVXH :KR FDUHV DQG :K\  
9DULHW\ WULDOV DUH WLPH FRQVXPLQJ 6HHG FRPSDQLHV WH  
PDUNHW DW ODUJH LQ WKH /RZHU 7KRXJK YDULH WLHV GHVFULE  
DUH UDUHO\ WHVWHG LQ JURZLQJ VHDVRQV DV H[WUHPH DV \$ODVN  
VWUXJJOH ZLWK WKH WULDO DQG HUURU RI LGHQWLII\LQJ YLDEOH  
VRPH WULHG DQG WUXH YDULH WLHV DUH QR ORQJHU DYDLODEOH  
H[SHQVH WLPH DQG HIIRUW JDUGHQHUV DQG IDUPHUV QHHG WR S  
VXFFHVVIXO

:KDW KDV EHHQ GRQH



8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF

FROOHFWHG DQG WHVWHG UHLQGHU EORRG VDPSOHV IRU GLVHD  
ZDV UHYLHZHG E\ WKH VWDWH YHWHLQDULDQ 6HYHQ VVHHUV ZH  
DQG HYDOXDWHG IRU SRVW VODXJKWHU WHPSHUDWXUH HIIHFWV

5HVXOWV

6DPSOHV VHqw WR WKH 8QLYHUVLW\ RI ,OOLQRLV 0HDW 6FLHQ  
OLSLG FRQWHQW FRRNLQJ ORVV WHQGHUQHVV DQG RWKHU DWWR  
WHQGHUQHVV EHWZHHQ WKH KRXU DQG GD\ FKLOOHG DQG VWR  
UHLQGHU FKLOOHG IRU KRXUV DIWHU VODXJKWHU ZDV IRXQG W  
IUR]HQ LPPHGLDWHO\ DIWHU VODXJKWHU 6XEVHTXHQWO\ UHLQ  
UHVHDUFKHU GHYHORSHG SURWRFRO ZLWK FDUFDVW WHPSHUDWX  
VZDEEHG IRU DHURELF EDFWHULD DIWHU KRXUV \$OO VDPSOHV  
VXJJHVWLQJ UHLQGHU FDQ EH VODXJKWHUHG K\JLHQLFDOO\ LQ W  
ULJRU EHIRUH IUHH]LQJ

\$VVRFLDWHG .QRZOHGJH \$UHDV

. \$ & RGHQRZOHGJH \$UHD

1XWULHQW 8WLOL]DWLRQ LQ \$QLPDOV

\$QLPDO 3K\VLRORJLFDO 3URFHVVHV

(FRQRPLFV RI \$JULFXOWXUDO 3URGXFWLRQ DQG )DUP 0D

9 + 3ODQQHG 3URJUDP ([WHUQDO )DFWRUV

([WHUQDO 1DFWRUV ZKLFK DIIHFVWHG RXWFRPHV

"Natural Disasters (drought, weather extremes, etc.)

"Economy

"Appropriations changes

"Public Policy changes

"Government Regulations

"Competing Public priorities

"Competing Programmatic Challenges

"Populations changes (immigration, new cultural groupings, etc.)

%ULHI ([SODQDWLRQ

Alaska continues to be severely impacted by the falling price of crude oil. The state provides a significant portion of the university's funds, and the university has experienced several consecutive years of reductions. About 40 percent of SNRE funding comes from the state. Between 2014 and 2017, the university system's budget dropped from \$378 million to \$325 million, resulting in 50 discontinued or suspended academic degree and certificate programs and 933 fewer faculty and staff. In FY18, the budget was further reduced to \$317 million. SNRE, in particular, has faced difficulties with the combination of budget cuts and fixed-cost increases restricting hiring for vacant positions. In FY18, key agriculture personnel departed. The Delta district lost administrative support, and an associate professor of range management retired. One of the Experiment Farms experienced director turnover. The merger between AFES and CES has helped maintain research and service, but both units have heavy workloads as we try to keep our productivity high in challenging times.

8QLYHUVLW\ RI \$ODVND &RPELQHG 5HVHDUFK DQG ([WHQVLRQ \$QQXDO 5HSRUW RI \$FF