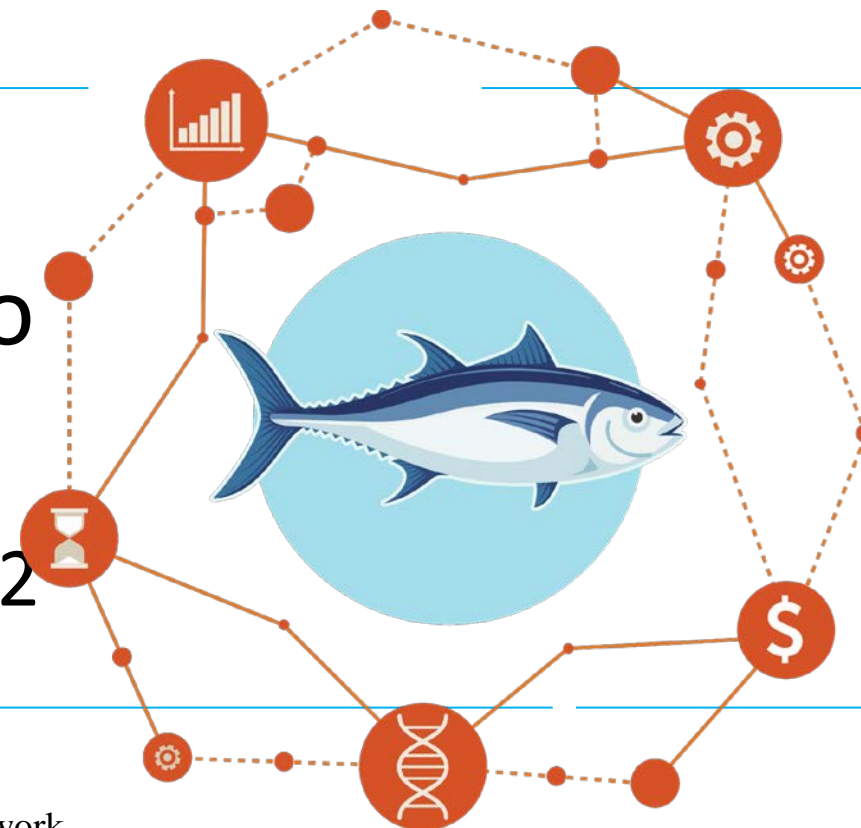




Evaluación de estrategias de ordenación (MSE) para el atún rojo

Material adicional

Reunión intersesiones de la Subcomisión 2
14 de octubre de 2022



Referencias

Página de bienvenida: <https://iccat.github.io/abft-mse/> con Shiny Apps y diagramas tipo patchwork

1. Guía de decisiones ([PA2 BFT MSE OCT_02_SPA](#)) MSE para el atún rojo del Atlántico – Paquete de resultados finales y guía de decisiones
2. SCRS_2022_169. Resultados, características e interpretaciones de los cuatro procedimientos de ordenación cantidades de la MSE para el atún rojo restantes

Otras diapositivas

Primary Performance Quilt Plot

CSVExcel

BR

CMP	Type	Tuning	Variant	West					East					Tot
				PGK (Mean)	AvC10 (50%)	AvC30 (50%)	VarC (50%)	LD (15%)	PGK (Mean)	AvC10 (50%)	AvC30 (50%)	VarC (50%)	LD (15%)	
BR5a	BR	5	a	0.6	2.77	2.43	8.81	0.42	0.6	51.97	41.42	15.6	0.45	0.27
BR6a	BR	6	a	0.71	2.57	2.2	8.21	0.45	0.7	46.49	38.13	14.63	0.51	0.27
BR5c	BR	5	c	0.6	2.74	2.46	10.49	0.4	0.6	48.37	41.28	18.65	0.41	0.68
BR6b	BR	6	b	0.7	2.55	2.18	9.75	0.43	0.7	43.27	37.2	17.14	0.44	0.71
BR5b	BR	5	b	0.6	2.7	2.4	10.37	0.4	0.6	47.75	41.17	17.96	0.38	0.72

Secondary Performance Quilt Plot (East / Eastern)

CSVExcel

CMP	Type	Tuning	Variant	East										Tot
				C1 (50%)	AvC20 (50%)	AvgBr (50%)	Br20 (50%)	Br30 (5%)	LD (5%)	LD (10%)	POF (Mean)	PNRK (Mean)	OFT (P>0)	
BR5a	BR	5	a	40.57	47.63	1.21	1.15	0.44	0.27	0.38	0.11	0.93	0.88	0.52
BR6a	BR	6	a	40.57	44.29	1.34	1.29	0.58	0.33	0.43	0.06	0.97	0.92	0.13
BR5c	BR	5	c	40.57	48.45	1.25	1.21	0.33	0.21	0.33	0.13	0.89	0.85	0.67
BR6b	BR	6	b	40.57	41.81	1.38	1.35	0.42	0.25	0.36	0.08	0.93	0.87	0.41
BR5b	BR	5	b	40.57	48.09	1.26	1.22	0.25	0.17	0.3	0.15	0.87	0.82	0.82

Secondary Performance Quilt Plot (West / Western)

CSVExcel

CMP	Type	Tuning	Variant	West										Tot
				C1 (50%)	AvC20 (50%)	AvgBr (50%)	Br20 (50%)	Br30 (5%)	LD (5%)	LD (10%)	POF (Mean)	PNRK (Mean)	OFT (P>0)	
BR5a	BR	5	a	2.69	2.46	1.37	1.33	0.46	0.2	0.29	0.18	0.86	0.85	0.66
BR6a	BR	6	a	2.69	2.38	1.5	1.47	0.54	0.2	0.3	0.09	0.94	0.92	0.1
BR5c	BR	5	c	2.69	2.64	1.4	1.37	0.43	0.19	0.27	0.18	0.87	0.83	0.72
BR6b	BR	6	b	2.69	2.11	1.53	1.51	0.46	0.18	0.28	0.09	0.94	0.92	0.31
BR5b	BR	5	b	2.69	2.43	1.42	1.39	0.38	0.17	0.27	0.17	0.87	0.84	0.82

Primary Performance Quilt Plot

CSV

Excel

FO

CMP	Type	Tuning	Variant	West					East					Tot
				PGK (Mean)	AvC10 (50%)	AvC30 (50%)	VarC (50%)	LD (15%)	PGK (Mean)	AvC10 (50%)	AvC30 (50%)	VarC (50%)	LD (15%)	
FO5a	FO	5	a	0.61	2.89	2.59	14.88	0.4	0.6	46.88	37.19	16.68	0.45	0.28
FO6a	FO	6	a	0.71	2.66	2.37	15.03	0.41	0.7	42.71	33.46	16.45	0.52	0.37
FO5c	FO	5	c	0.62	2.59	2.51	17.41	0.42	0.62	47.15	37.75	19.85	0.41	0.54
FO6b	FO	6	b	0.71	2.43	2.3	17.27	0.42	0.7	43.08	34.46	19.13	0.46	0.66
FO5b	FO	5	b	0.61	2.59	2.51	17.12	0.4	0.6	47.15	38.29	19.35	0.37	0.7

Secondary Performance Quilt Plot (East / Eastern)

CSV

Excel

CMP	Type	Tuning	Variant	East										Tot
				C1 (50%)	AvC20 (50%)	AvgBr (50%)	Br20 (50%)	Br30 (5%)	LD (5%)	LD (10%)	POF (Mean)	PNRK (Mean)	OFT (P>0)	
FO5a	FO	5	a	38.29	43.88	1.39	1.35	0.3	0.25	0.36	0.25	0.8	0.83	0.65
FO6a	FO	6	a	38.29	38.87	1.52	1.49	0.45	0.34	0.45	0.13	0.9	0.89	0.11
FO5c	FO	5	c	38.29	44.51	1.39	1.35	0.25	0.21	0.33	0.22	0.81	0.81	0.69
FO6b	FO	6	b	38.29	40.19	1.49	1.46	0.35	0.26	0.37	0.13	0.89	0.87	0.3
FO5b	FO	5	b	38.29	44.97	1.36	1.33	0.18	0.16	0.28	0.24	0.78	0.79	0.88

Secondary Performance Quilt Plot (West / Western)

CSV

Excel

CMP	Type	Tuning	Variant	West										Tot
				C1 (50%)	AvC20 (50%)	AvgBr (50%)	Br20 (50%)	Br30 (5%)	LD (5%)	LD (10%)	POF (Mean)	PNRK (Mean)	OFT (P>0)	
FO5a	FO	5	a	2.96	2.81	1.37	1.31	0.37	0.16	0.25	0.19	0.86	0.88	0.74
FO6a	FO	6	a	2.96	2.55	1.48	1.45	0.42	0.16	0.25	0.08	0.94	0.93	0.28
FO5c	FO	5	c	2.96	2.68	1.4	1.36	0.38	0.18	0.27	0.17	0.87	0.88	0.51
FO6b	FO	6	b	2.96	2.44	1.5	1.47	0.38	0.15	0.25	0.08	0.94	0.93	0.35
FO5b	FO	5	b	2.96	2.7	1.39	1.34	0.31	0.14	0.25	0.19	0.85	0.87	0.88

Primary Performance Quilt Plot

CSV Excel

LW

CMP	Type	Tuning	Variant	West					East					Tot
				PGK (Mean)	AvC10 (50%)	AvC30 (50%)	VarC (50%)	LD (15%)	PGK (Mean)	AvC10 (50%)	AvC30 (50%)	VarC (50%)	LD (15%)	
LW5a	LW	5	a	0.6	2.41	2.25	16.52	0.48	0.6	43.96	36.33	18.35	0.45	0.25
LW6a	LW	6	a	0.7	2.04	1.97	16.5	0.5	0.7	36.41	32.08	17.68	0.51	0.33
LW5c	LW	5	c	0.6	2.22	2.22	17.74	0.47	0.6	47.09	37.88	20.25	0.39	0.65
LW5b	LW	5	b	0.6	2.21	2.22	17.34	0.46	0.6	45.02	37.04	19.72	0.37	0.66
LW6b	LW	6	b	0.7	2.02	1.97	17.42	0.47	0.7	37.94	32.22	19.08	0.44	0.74

Secondary Performance Quilt Plot (East / Eastern)

CSV Excel

CMP	Type	Tuning	Variant	East										Tot
				C1 (50%)	AvC20 (50%)	AvgBr (50%)	Br20 (50%)	Br30 (5%)	LD (5%)	LD (10%)	POF (Mean)	PNRK (Mean)	OFT (P>0)	
LW5a	LW	5	a	43.2	40.46	1.33	1.3	0.41	0.27	0.37	0.18	0.87	0.87	0.61
LW6a	LW	6	a	43.2	34.79	1.48	1.47	0.51	0.32	0.43	0.09	0.94	0.91	0.13
LW5c	LW	5	c	43.2	43.16	1.29	1.24	0.31	0.19	0.3	0.16	0.87	0.85	0.8
LW5b	LW	5	b	43.2	41.73	1.3	1.26	0.28	0.18	0.28	0.17	0.86	0.84	0.88
LW6b	LW	6	b	43.2	35.78	1.46	1.42	0.41	0.23	0.35	0.07	0.94	0.89	0.34

Secondary Performance Quilt Plot (West / Western)

CSV Excel

CMP	Type	Tuning	Variant	West										Tot
				C1 (50%)	AvC20 (50%)	AvgBr (50%)	Br20 (50%)	Br30 (5%)	LD (5%)	LD (10%)	POF (Mean)	PNRK (Mean)	OFT (P>0)	
LW5a	LW	5	a	2.45	2.39	1.41	1.37	0.48	0.22	0.32	0.21	0.85	0.86	0.65
LW6a	LW	6	a	2.45	2.07	1.56	1.54	0.55	0.23	0.33	0.12	0.93	0.92	0.13
LW5c	LW	5	c	2.45	2.36	1.44	1.4	0.49	0.22	0.32	0.21	0.85	0.84	0.64
LW5b	LW	5	b	2.45	2.36	1.43	1.4	0.43	0.2	0.3	0.21	0.84	0.84	0.87
LW6b	LW	6	b	2.45	2.06	1.57	1.56	0.49	0.21	0.3	0.12	0.93	0.91	0.37

TC

CMP	Type	Tuning	Variant	West					East					Tot
				PGK (Mean)	AvC10 (50%)	AvC30 (50%)	VarC (50%)	LD (15%)	PGK (Mean)	AvC10 (50%)	AvC30 (50%)	VarC (50%)	LD (15%)	
TC5a	TC	5	a	0.6	2.67	2.4	7.51	0.4	0.6	41.07	36.18	10.01	0.41	0.28
TC6a	TC	6	a	0.71	2.37	2.13	7.09	0.45	0.7	36.33	32.27	9.41	0.49	0.3
TC6c	TC	6	c	0.71	2.33	2.1	8.24	0.43	0.71	36.25	32	11.11	0.44	0.67
TC6b	TC	6	b	0.71	2.33	2.1	8.22	0.43	0.71	35.89	31.69	11.05	0.43	0.68
TC5c	TC	5	c	0.6	2.6	2.39	8.53	0.37	0.6	40.4	36.01	11.9	0.35	0.69
TC5b	TC	5	b	0.61	2.69	2.38	8.49	0.37	0.6	40.12	35.76	11.84	0.34	0.71

Secondary Performance Quilt Plot (East / Eastern)

[CSV](#)
[Excel](#)

CMP	Type	Tuning	Variant	East										Tot
				C1 (50%)	AvC20 (50%)	AvgBr (50%)	Br20 (50%)	Br30 (5%)	LD (5%)	LD (10%)	POF (Mean)	PNRK (Mean)	OFT (P>0)	
TC5a	TC	5	a	41.28	39.02	1.38	1.36	0.38	0.24	0.35	0.18	0.85	0.83	0.67
TC6a	TC	6	a	38.91	34.38	1.52	1.51	0.49	0.32	0.42	0.09	0.93	0.89	0.17
TC6c	TC	6	c	38.5	34.24	1.55	1.54	0.43	0.26	0.36	0.08	0.93	0.87	0.27
TC6b	TC	6	b	38.29	33.86	1.56	1.55	0.42	0.25	0.35	0.07	0.93	0.87	0.27
TC5c	TC	5	c	40.94	38.74	1.41	1.39	0.3	0.18	0.27	0.17	0.84	0.81	0.81
TC5b	TC	5	b	40.78	38.43	1.42	1.39	0.26	0.16	0.26	0.17	0.84	0.81	0.85

Secondary Performance Quilt Plot (West / Western)

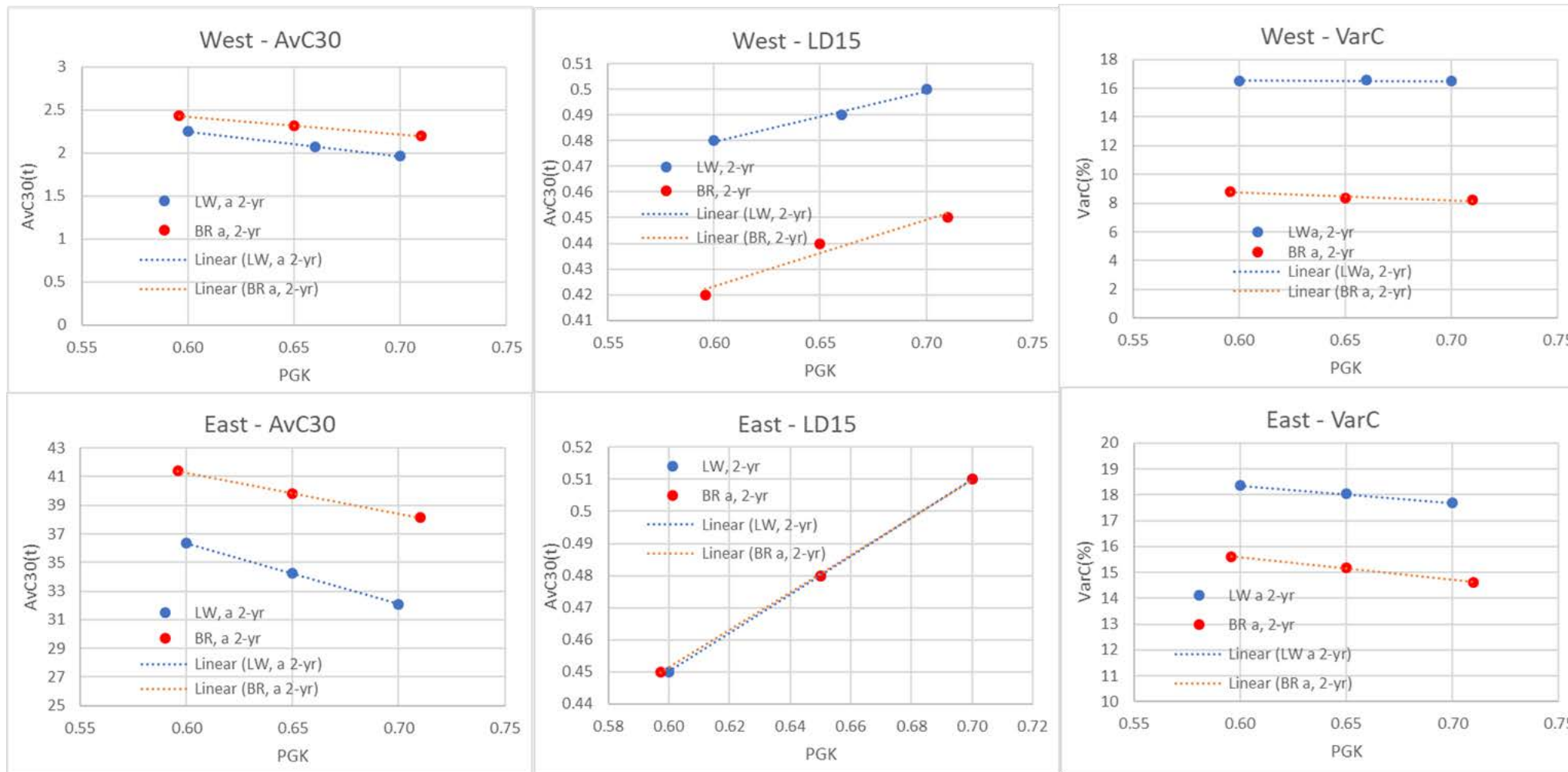
[CSV](#)
[Excel](#)

CMP	Type	Tuning	Variant	West										Tot
				C1 (50%)	AvC20 (50%)	AvgBr (50%)	Br20 (50%)	Br30 (5%)	LD (5%)	LD (10%)	POF (Mean)	PNRK (Mean)	OFT (P>0)	
TC5a	TC	5	a	2.65	2.53	1.44	1.43	0.35	0.17	0.26	0.24	0.81	0.87	0.74
TC6a	TC	6	a	2.5	2.23	1.56	1.57	0.46	0.21	0.3	0.12	0.91	0.92	0.2
TC6c	TC	6	c	2.47	2.2	1.59	1.59	0.4	0.19	0.28	0.1	0.93	0.93	0.21
TC6b	TC	6	b	2.46	2.2	1.59	1.6	0.4	0.18	0.28	0.11	0.92	0.93	0.24
TC5c	TC	5	c	2.62	2.5	1.46	1.45	0.3	0.14	0.23	0.22	0.83	0.87	0.81
TC5b	TC	5	b	2.62	2.49	1.46	1.45	0.28	0.13	0.23	0.22	0.83	0.87	0.84



Punto de decisión nº 2: El desempeño de PGK65 % se sitúa a medio camino entre el 60 y el 70 %

La relación entre PGK y las estadísticas clave de desempeño es lineal y PGK65 está casi a mitad de camino entre el PGK60 y el PGK70 tanto para BR (2 años) como para LW. Para BR-3 con un intervalo de tres años son similares



La Subcomisión 2 podía elegir entre 60 y 70, los resultados se podían ver por interpolación



Posible punto de decisión adicional: Cambio mínimo del TAC

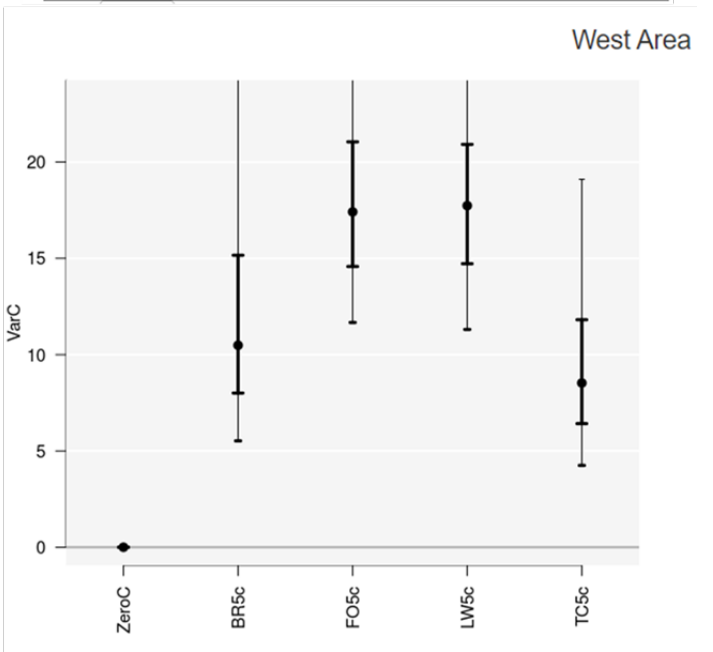
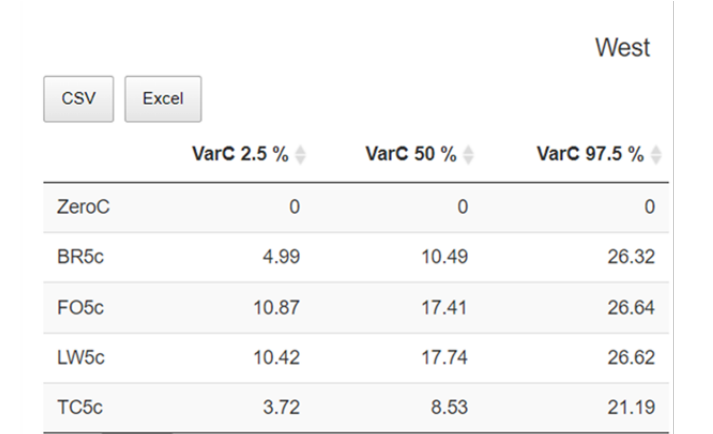
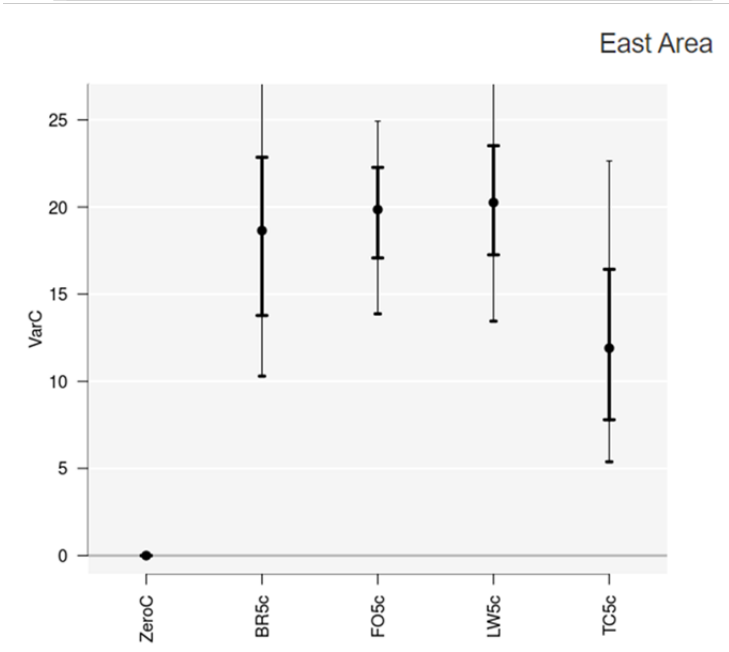
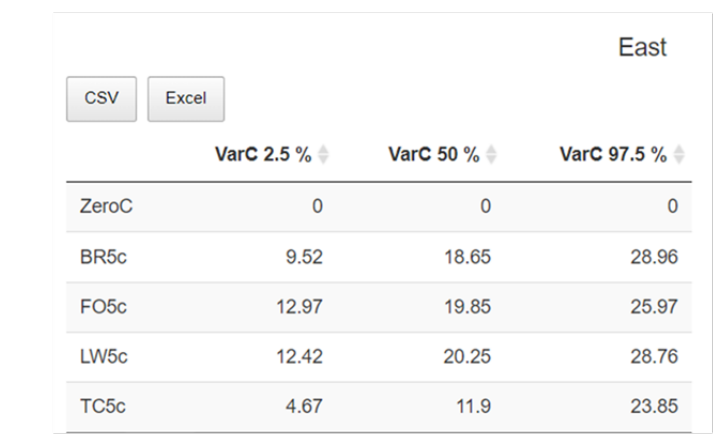
BR probada con un cambio mínimo de TAC de 100 t - oeste y 1000 t - este

La Subcomisión 2 puede elegir cualquier cambio de TAC mínimo o ninguno, podría ser diferente entre el este y el oeste; los resultados serán casi idénticos a los de los MP, excepto para una VarC más elevada

	TAC inter.	PKG	Br30	LD*15%	LD*10%	AvC30	C1	VarC
EAST								
New package - 0.6 vs 0.7 PKG and 2 vs 3 yr intervals								
BR5a	2	0.60	1.17 (0.44; 2.15)	0.45	0.38	41.42 (12.29; 75.35)	40.57	15.60 (8.73; 22.76)
BR5b	3	0.60	1.17 (0.25; 2.22)	0.38	0.30	41.17 (13.20; 71.21)	40.57	17.96 (10.00; 25.71)
BR6a	2	0.70	1.32 (0.58; 2.34)	0.51	0.43	38.13 (11.77; 68.21)	40.57	14.63 (7.55; 22.58)
BR6b	3	0.70	1.34 (0.42; 2.42)	0.44	0.36	37.20 (12.73; 64.07)	40.57	17.14 (8.29; 25.78)
WITH MIN CHANGE = 1000mt								
BR5a	2	0.60	1.18 (0.44; 2.16)	0.45	0.38	41.33 (11.24; 75.38)	40.57	15.98 (8.95; 26.12)
BR5b	3	0.60	1.16 (0.25; 2.22)	0.38	0.29	41.17 (12.99; 71.21)	40.57	18.31 (10.03; 26.66)
BR6a	2	0.70	1.32 (0.58; 2.34)	0.51	0.43	38.08 (10.95; 68.21)	40.57	15.18 (7.68; 25.78)
BR6b	3	0.70	1.34 (0.41; 2.43)	0.44	0.36	37.28 (12.65; 64.07)	40.57	17.57 (8.33; 27.37)
Percentage change								
BR5a	2	0.00	-0.85 (0.00; -0.47)	0.00	0.00	0.22 (-8.54; -0.04)	0.00	-2.44 (-2.52; -14.76)
BR5b	3	0.00	0.85 (0.00; 0.00)	0.00	3.33	0.00 (1.59; 0.00)	0.00	-1.95 (-0.30; -3.70)
BR6a	2	0.00	0.00 (0.00; 0.00)	0.00	0.00	0.13 (6.97; 0.00)	0.00	-3.76 (-1.72; -14.17)
BR6b	3	0.00	0.00 (2.38; -0.41)	0.00	0.00	-0.22 (0.63; 0.00)	0.00	-2.51 (-0.48; -6.17)
WEST								
New package - 0.6 vs 0.7 PKG and 2 vs 3 yr intervals								
BR5a	2	0.60	1.25 (0.46; 2.37)	0.42	0.29	2.43 (0.90; 3.60)	2.69	8.81 (4.95; 21.38)
BR5b	3	0.60	1.28 (0.38; 2.40)	0.40	0.27	2.40 (0.94; 3.53)	2.69	10.37 (5.51; 24.16)
BR6a	2	0.71	1.41 (0.54; 2.53)	0.45	0.30	2.20 (0.87; 3.27)	2.69	8.21 (4.72; 21.07)
BR6b	3	0.70	1.45 (0.46; 2.57)	0.43	0.28	2.18 (0.91; 3.20)	2.69	9.75 (5.20; 24.86)
WITH MIN CHANGE = 100mt								
BR5a	2	0.60	1.25 (0.46; 2.37)	0.42	0.28	2.44 (0.81; 3.61)	2.73	10.00 (4.70; 30.00)
BR5b	3	0.61	1.27 (0.38; 2.40)	0.40	0.26	2.41 (0.91; 3.54)	2.73	10.95 (4.79; 28.94)
BR6a	2	0.71	1.42 (0.55; 2.53)	0.45	0.29	2.20 (0.81; 3.27)	2.73	9.61 (4.28; 30.00)
BR6b	3	0.70	1.44 (0.45; 2.58)	0.43	0.27	2.19 (0.91; 3.20)	2.73	10.97 (4.40; 30.00)
Percentage change								
BR5a	2	0.00	0.00 (0.00; 0.00)	0.00	3.45	-0.41 (-0.00; -0.28)	-1.49	-13.51 (5.05; -40.32)
BR5b	3	-1.67	0.78 (0.00; 0.00)	0.00	3.70	-0.42 (-0.19; -0.28)	-1.49	-5.59 (13.07; -19.78)
BR6a	2	0.00	-0.71 (-1.85; 0.00)	0.00	3.33	0.00 (5.90; 0.00)	-1.49	-17.05 (9.32; -42.38)
BR6b	3	0.00	0.69 (2.17; -0.39)	0.00	3.57	-0.46 (0.00; 0.00)	-1.49	-12.51 (15.38; -20.68)

Porcentaje de años en los que el cambio de TAC es superior al 30 % (para 60% PGK y +20/-35)

	E	W
BR5c	6,5 %	1,9 %
FO5c	6,3 %	4,8 %
TC5c	2,0 %	0,6 %
LW5c	7,4 %	4,3 %



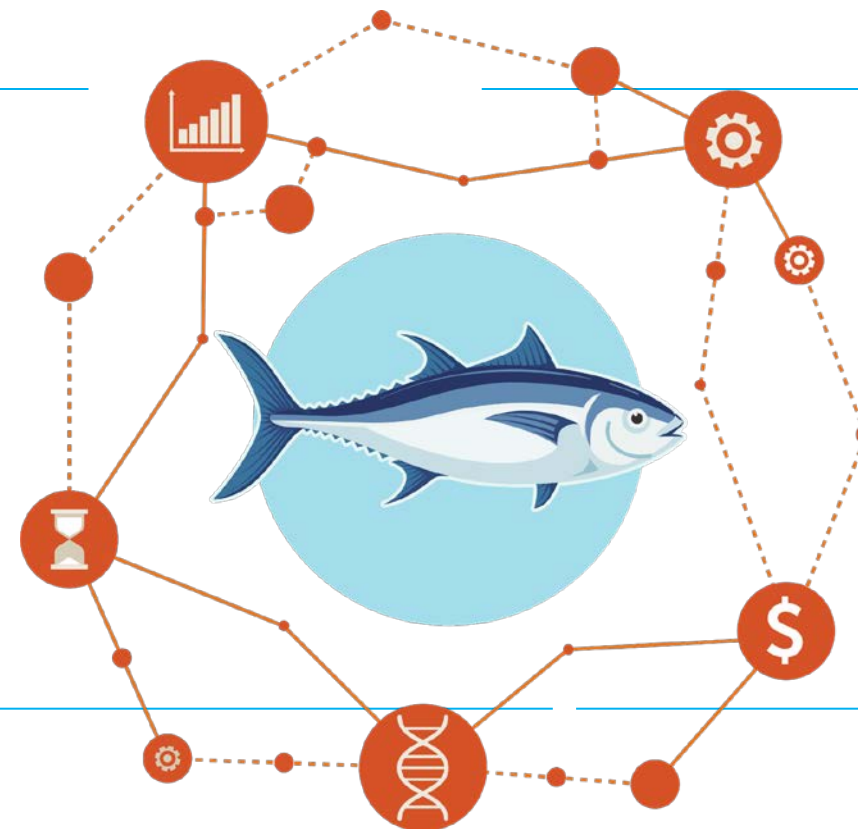


BFT Management Strategy Evaluation (MSE)

Additional material
Panel 2 Intersessional
14 October 2022

References

1. [Splash Page: https://iccat.github.io/abft-mse/](https://iccat.github.io/abft-mse/) with Shiny Apps and quilt plots
2. Decision Guide ([PA2 BFT MSE OCT 02 ENG](#)) Atlantic Bluefin Tuna MSE – Final Results & Decision Guide Package
3. SCRS_2022_169. Results, features, and interpretations of the four remaining BFT MSE candidate management procedures

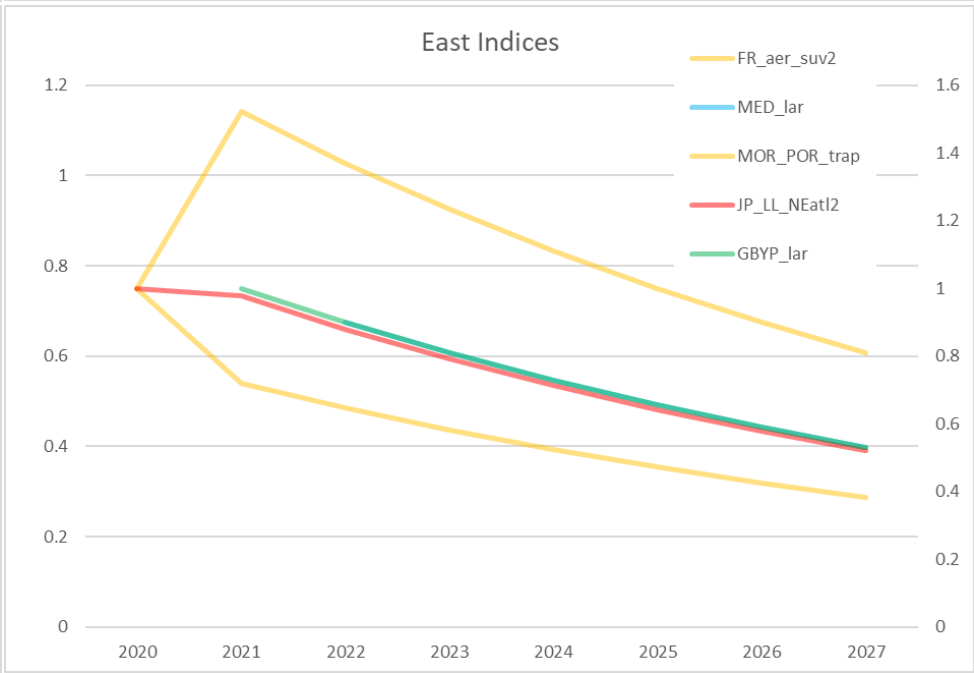
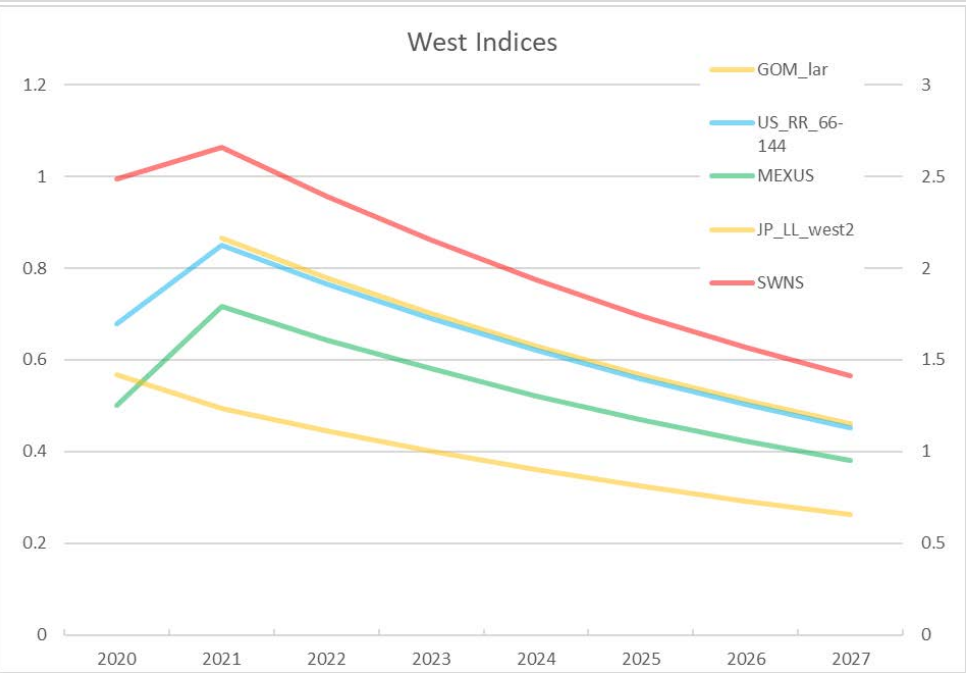
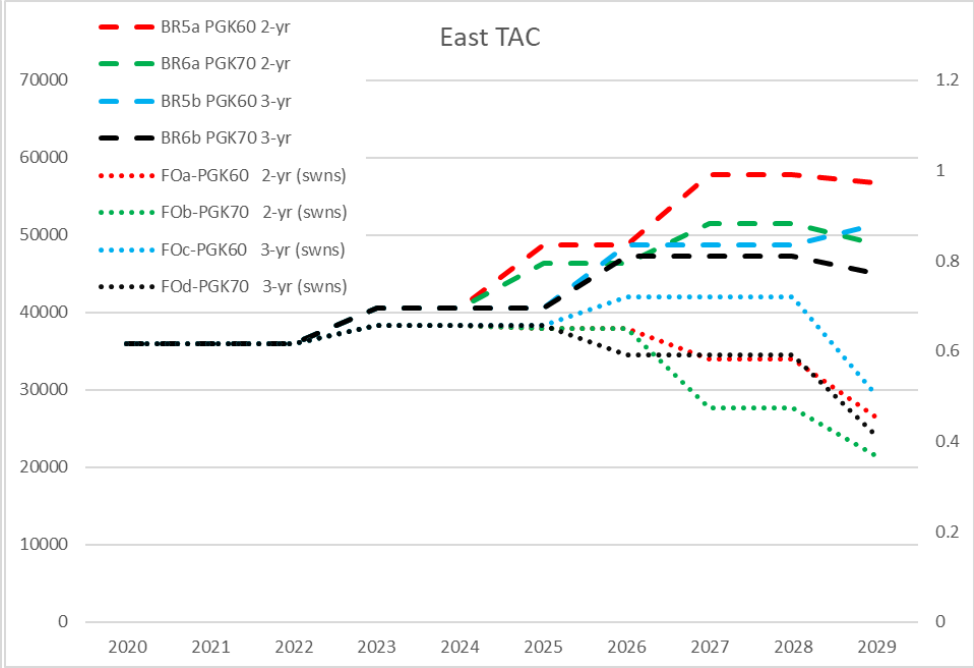
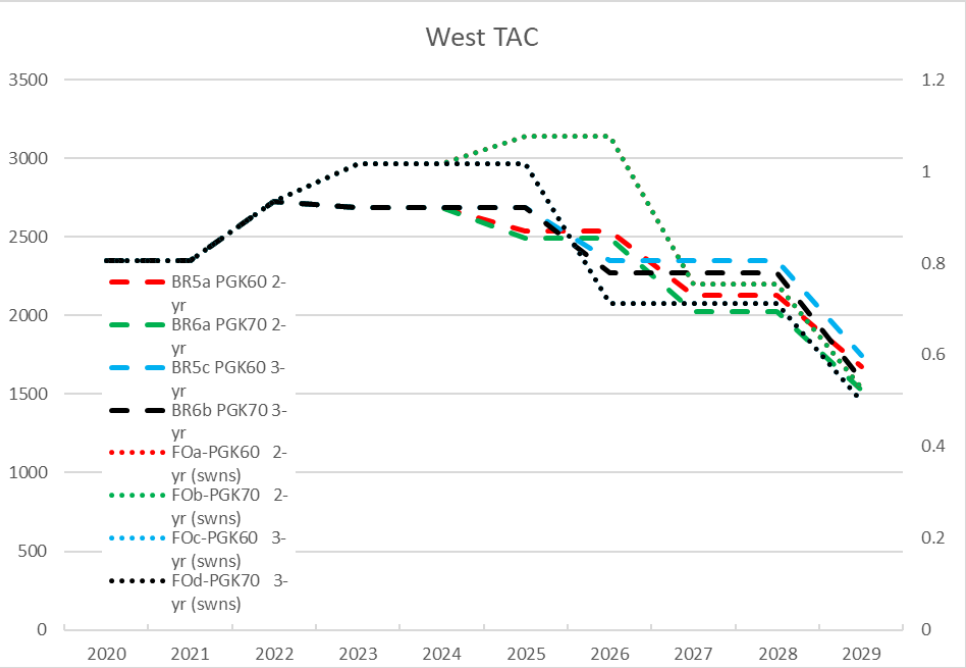


Other Slides/
Autres diapositives/
Otras diapositivas

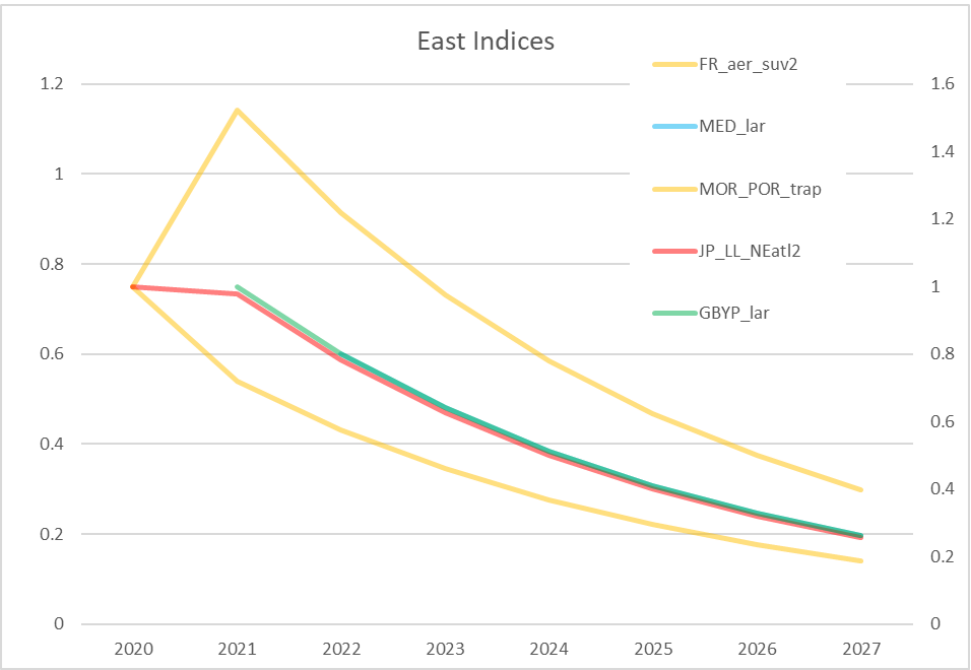
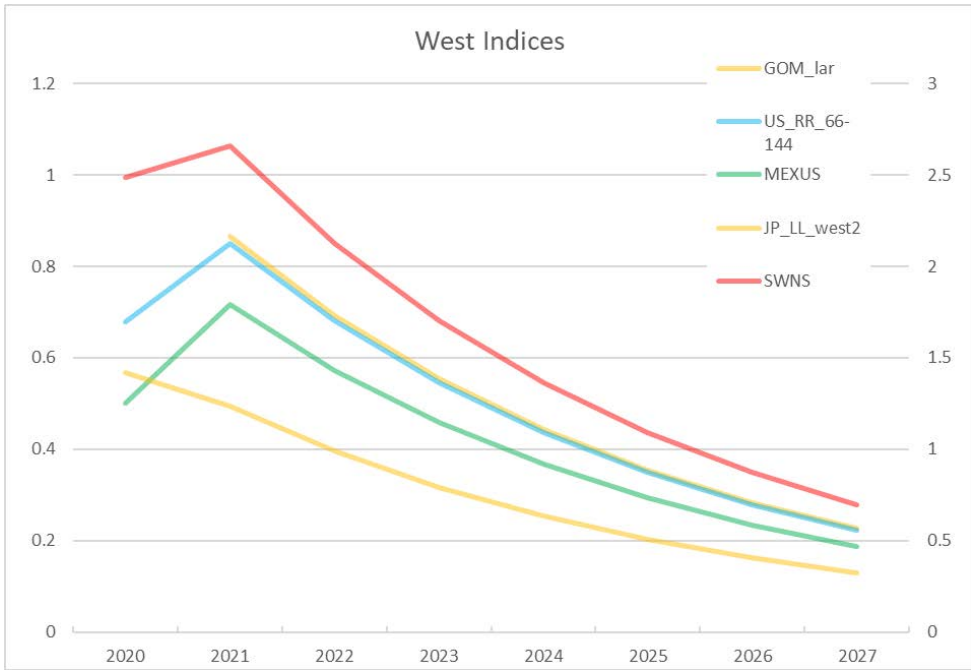
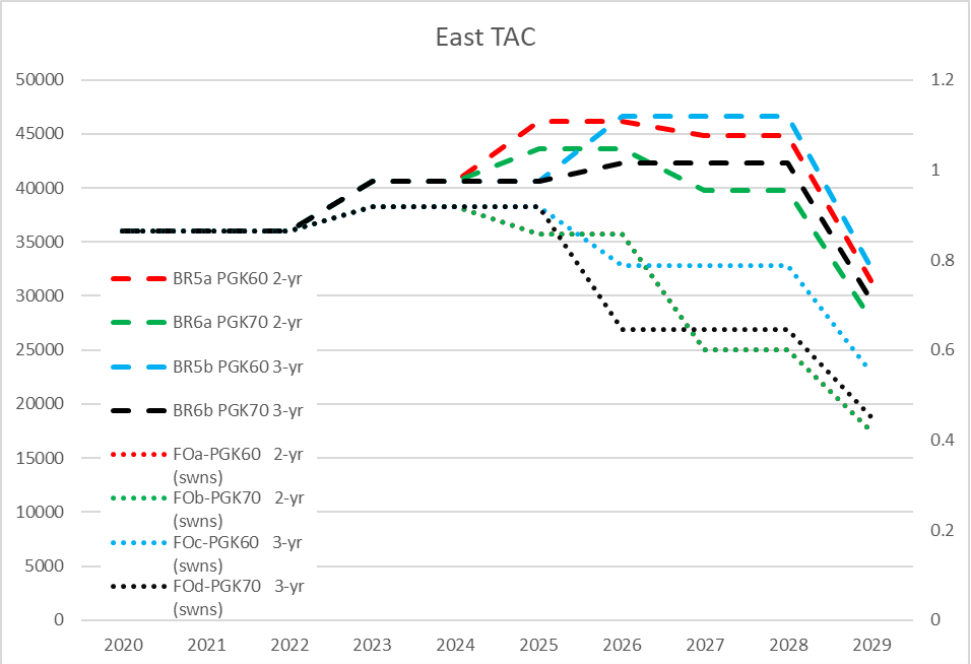
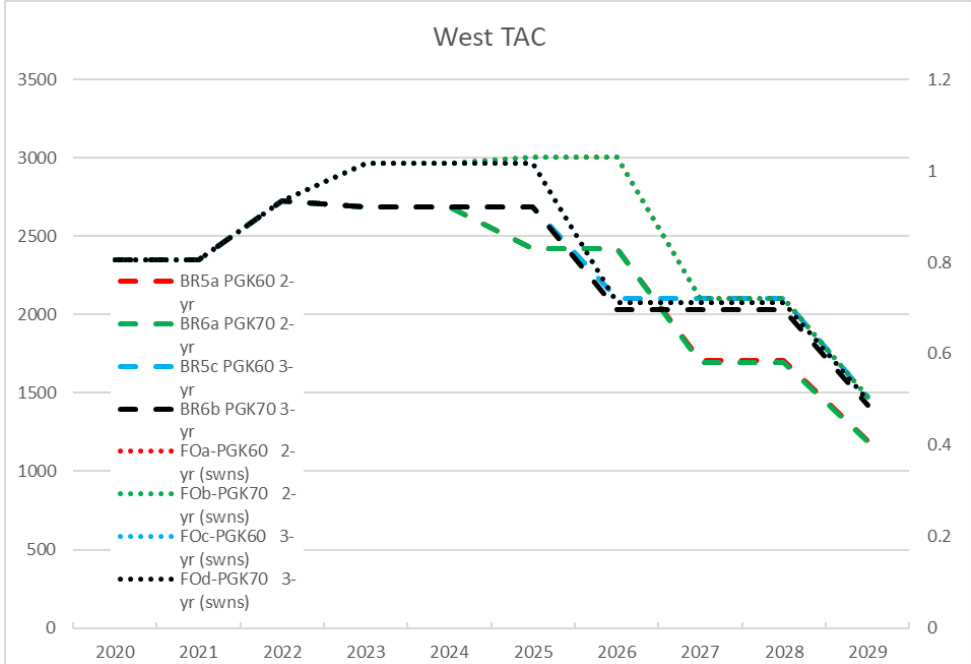
Constant indices



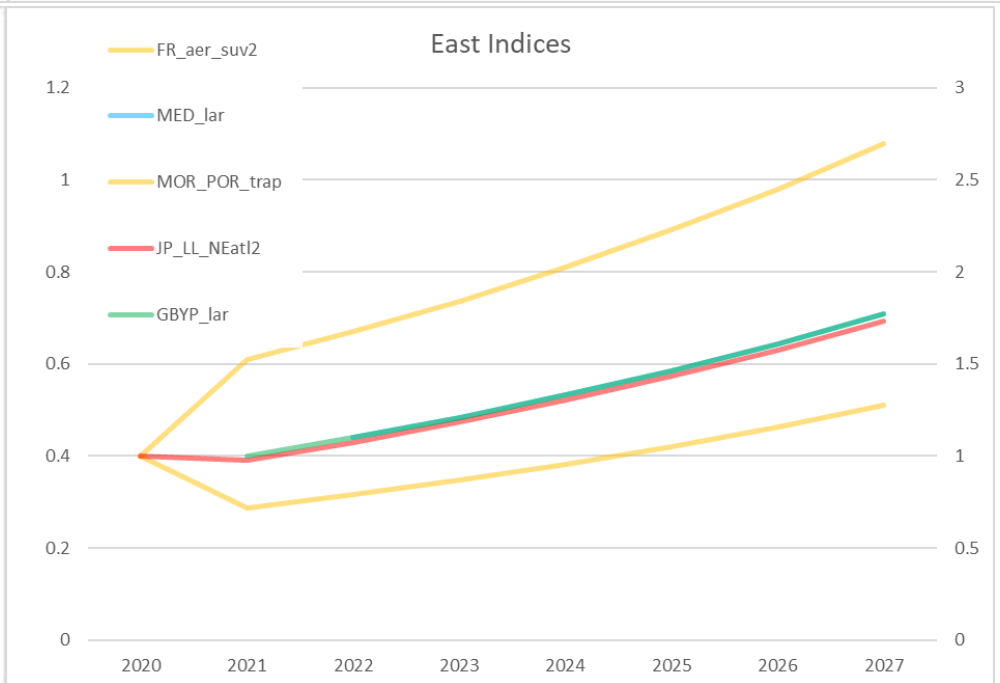
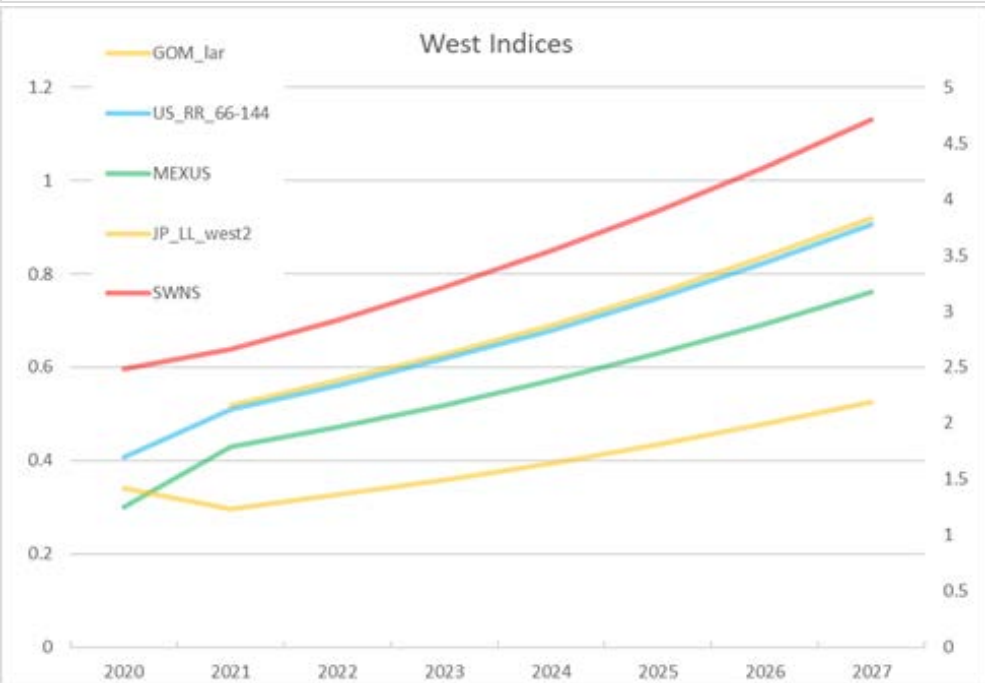
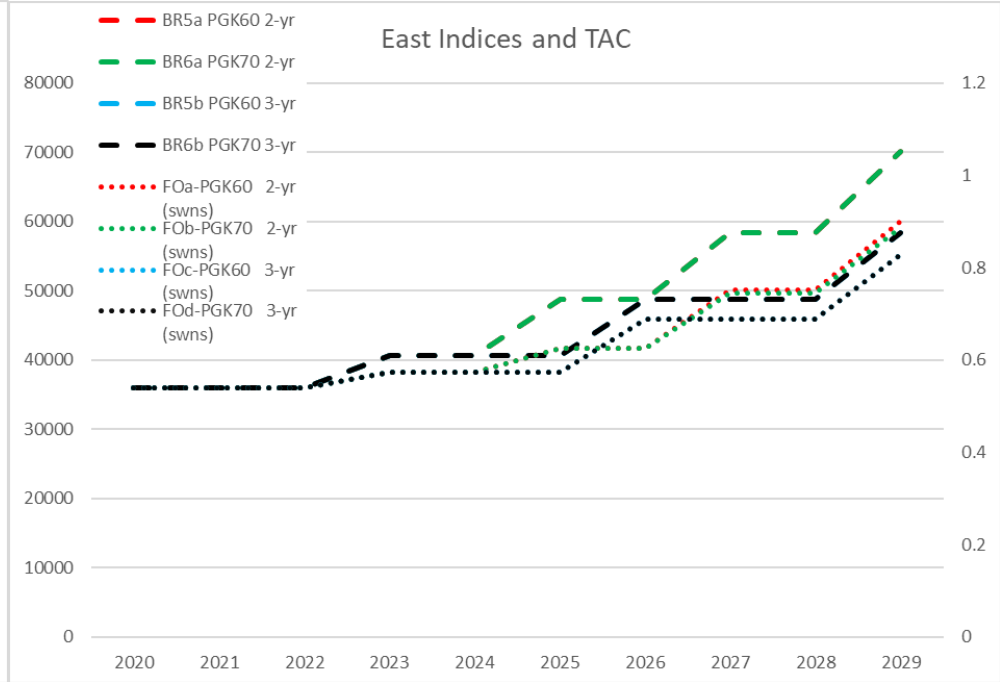
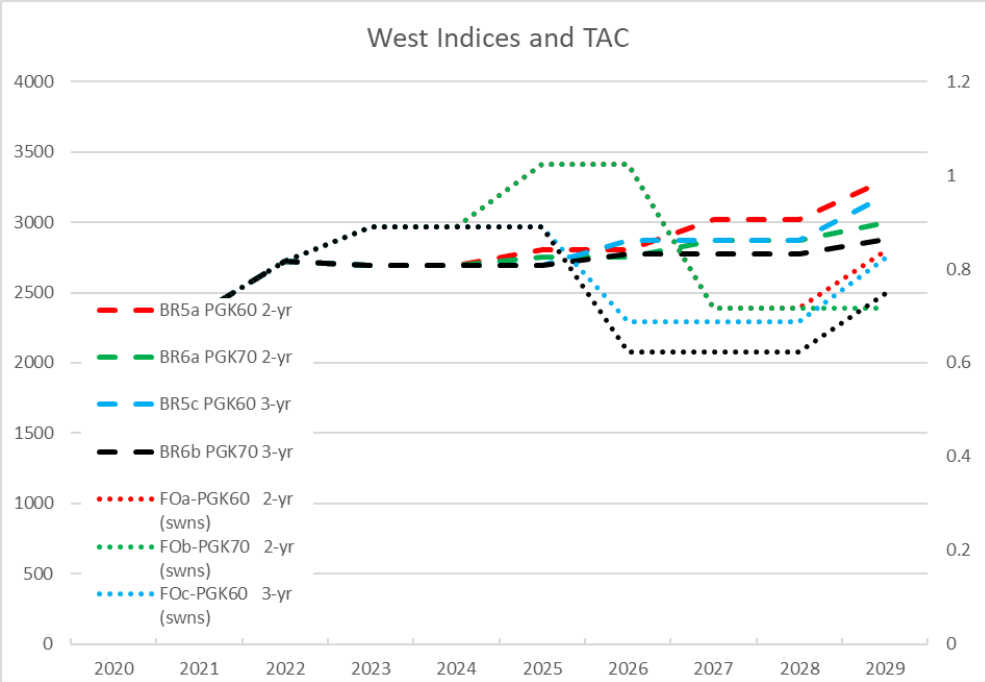
Decreasing indices – 10% decrease each year



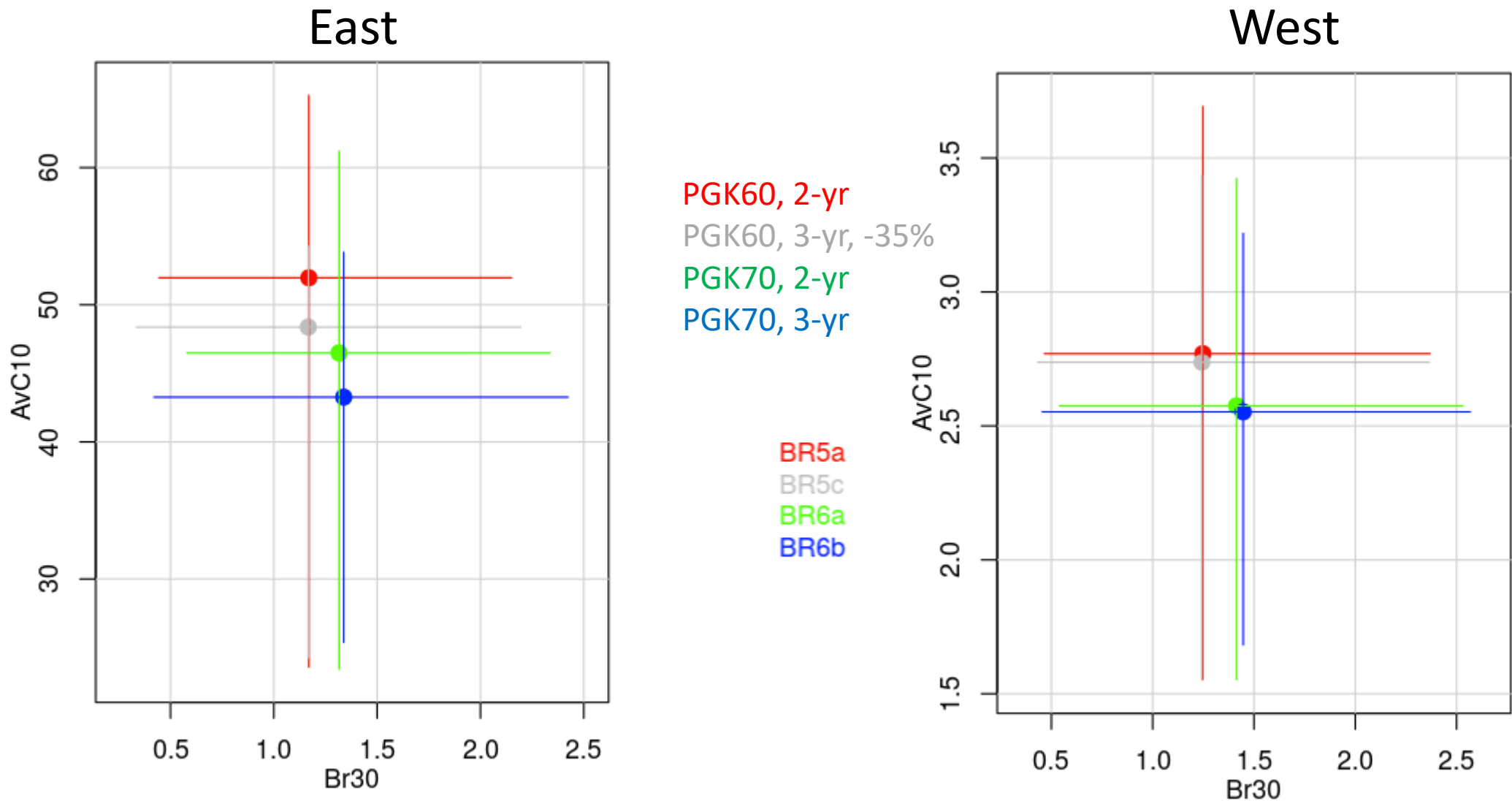
Decreasing indices – 20% decrease each year



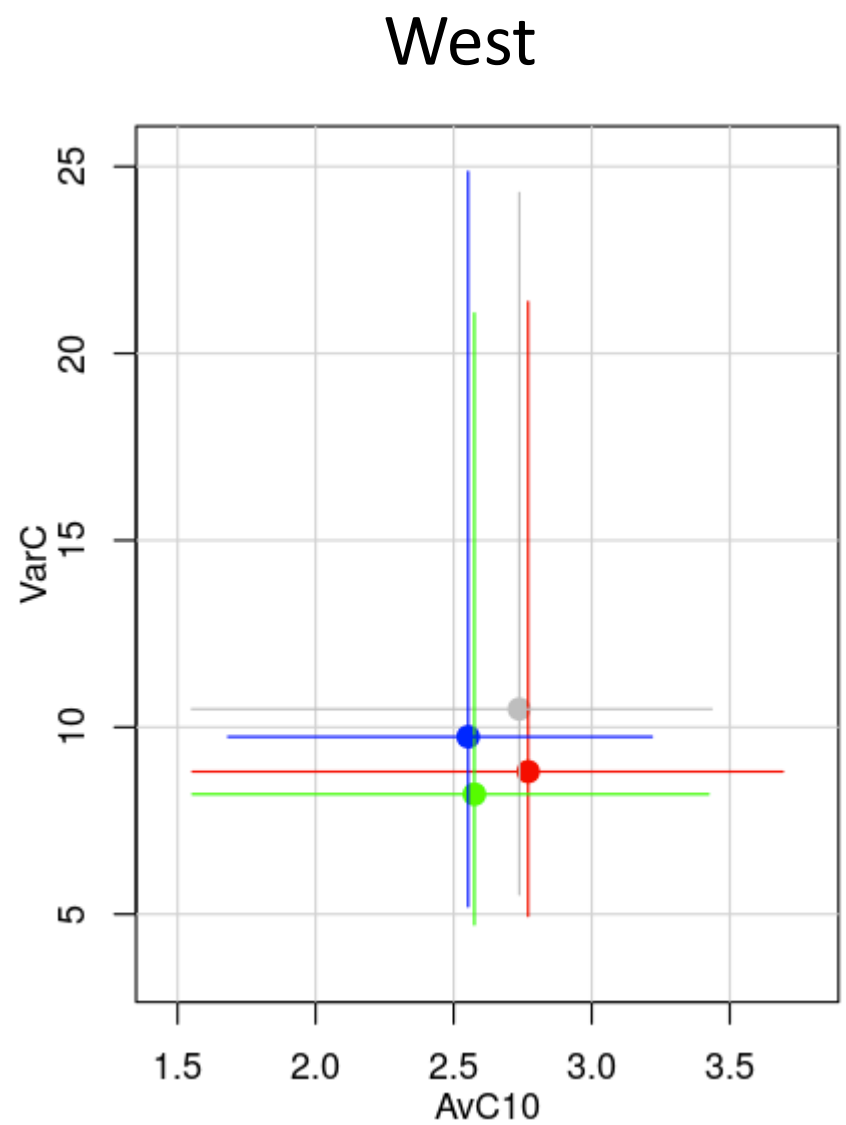
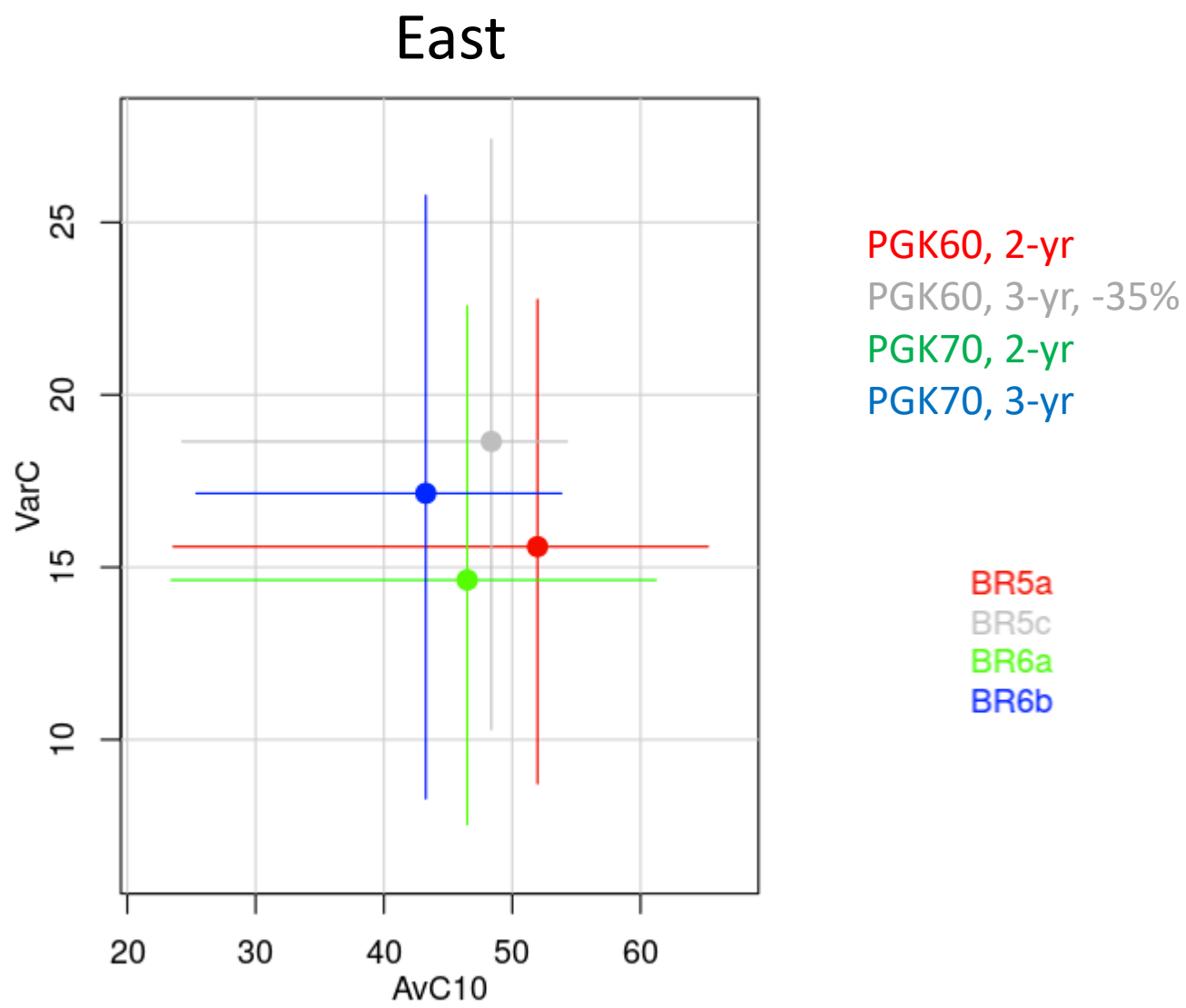
Decreasing indices – 10% increase each year



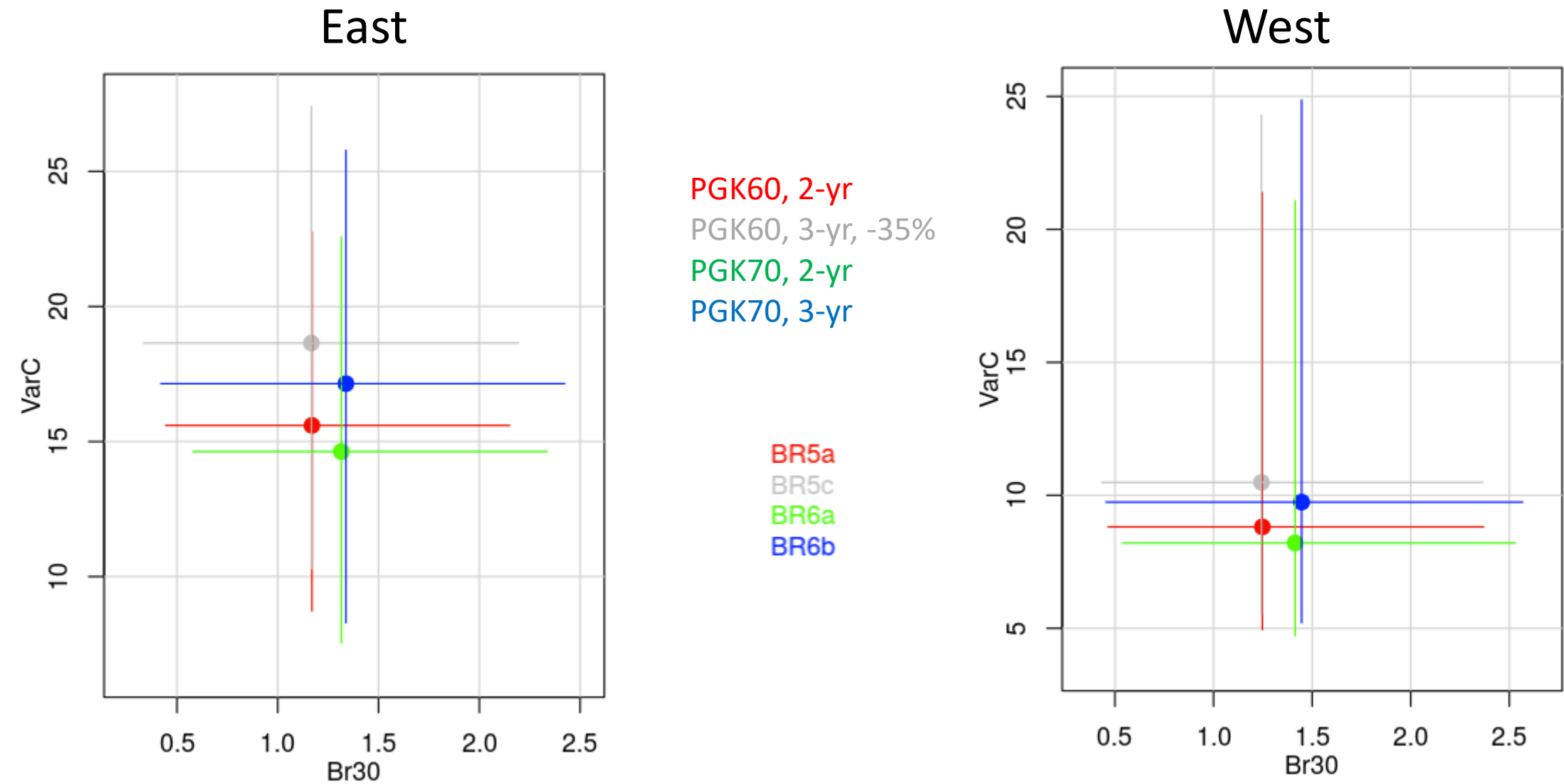
Compensación de factores de Br30 vs. AvC10 para el CMP BR



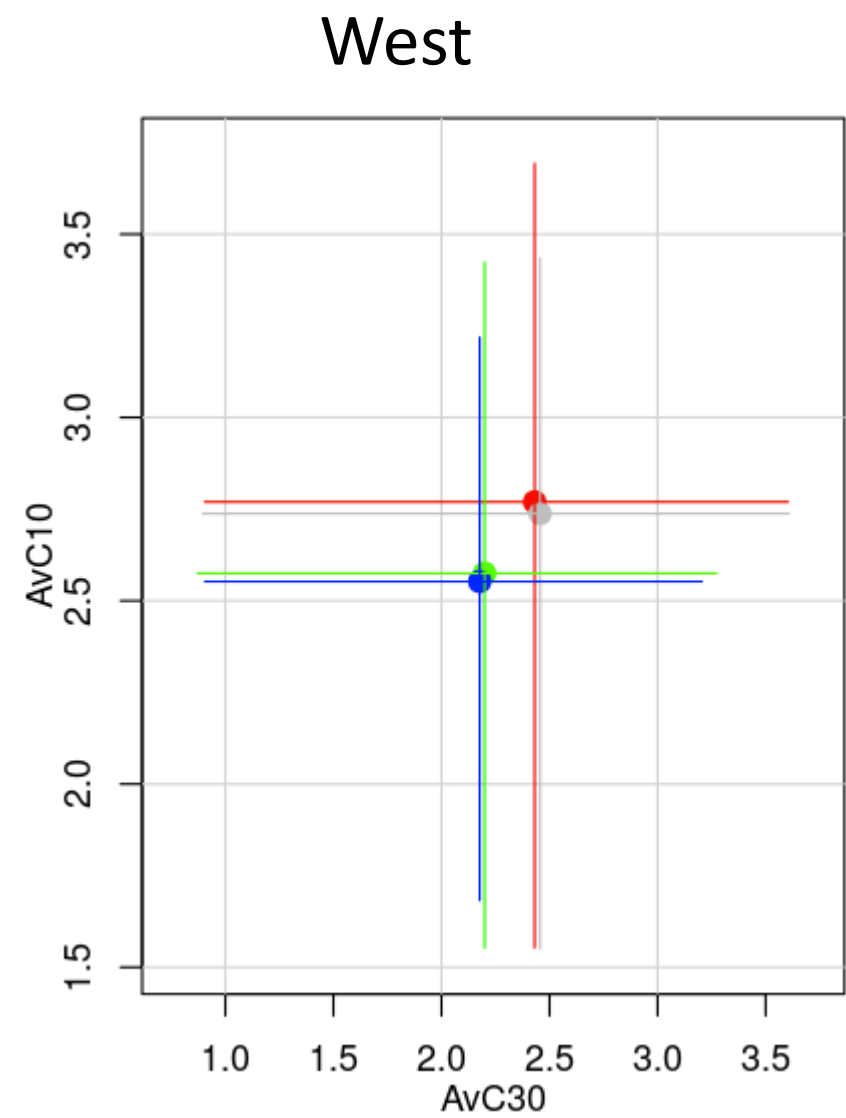
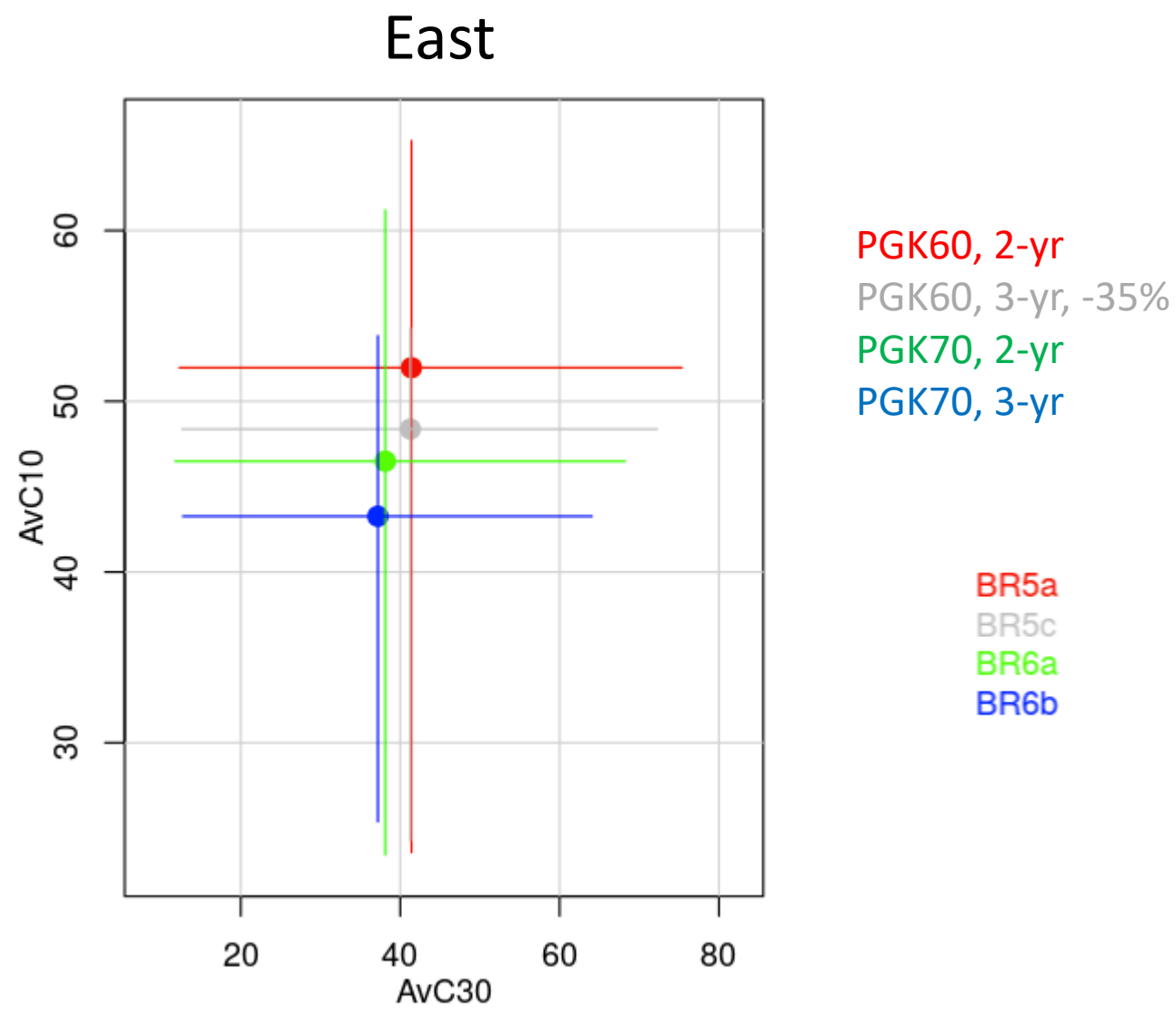
Compensación de factores de AvC10 vs. VarC para el CMP BR



Compensación de factores de Br30 vs. VarC para el CMP BR

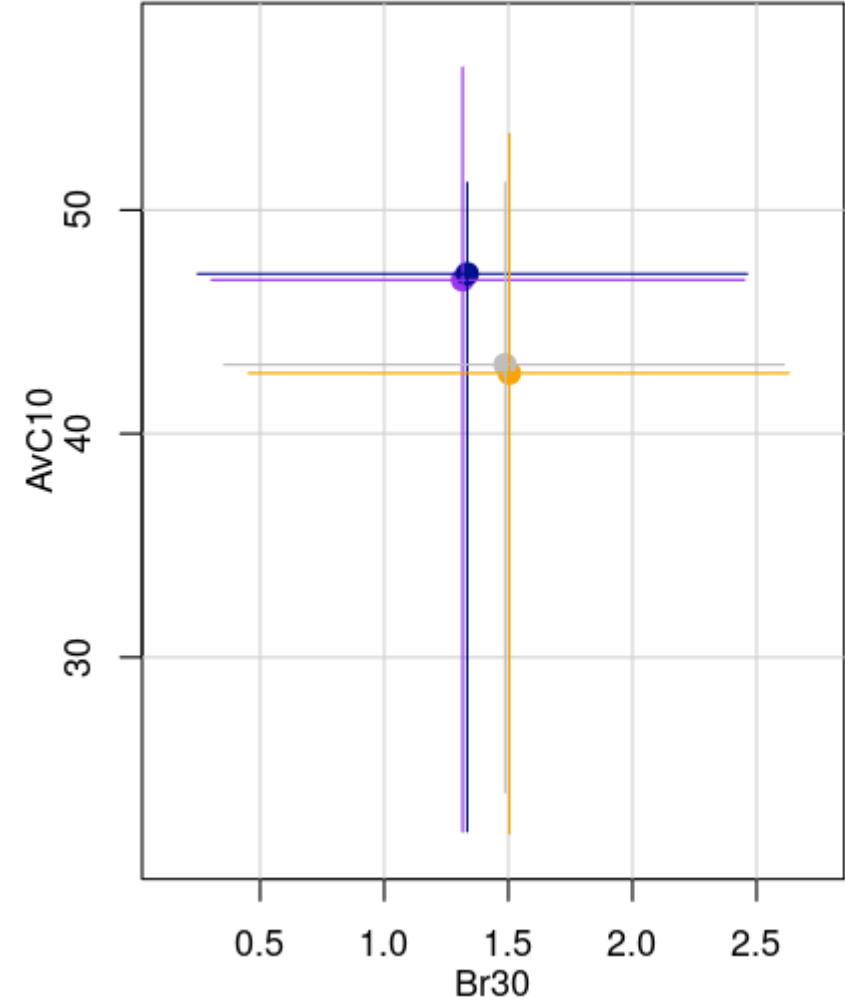


Compensación de factores de AvC30 vs. AvC10 para el CMP BR



Compensación de factores de Br30 vs. AvC10 para el CMP FO

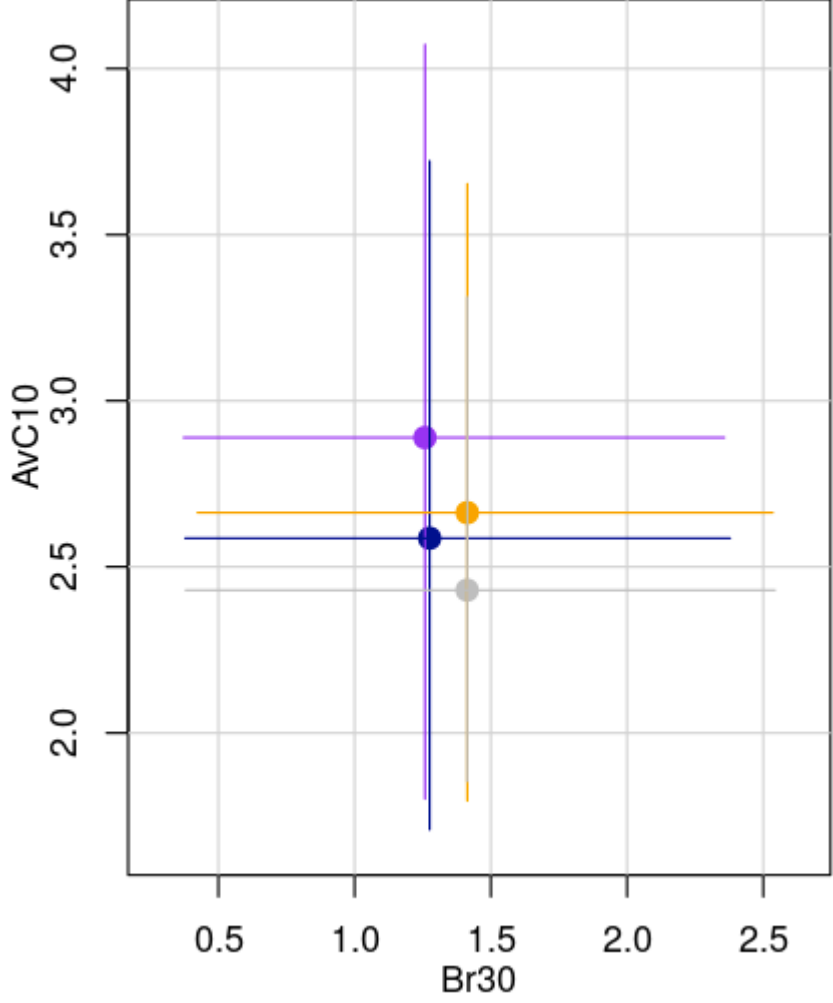
East



PGK60, 2-yr
PGK60, 3-yr, -35%
PGK70, 2-yr
PGK70, 3-yr

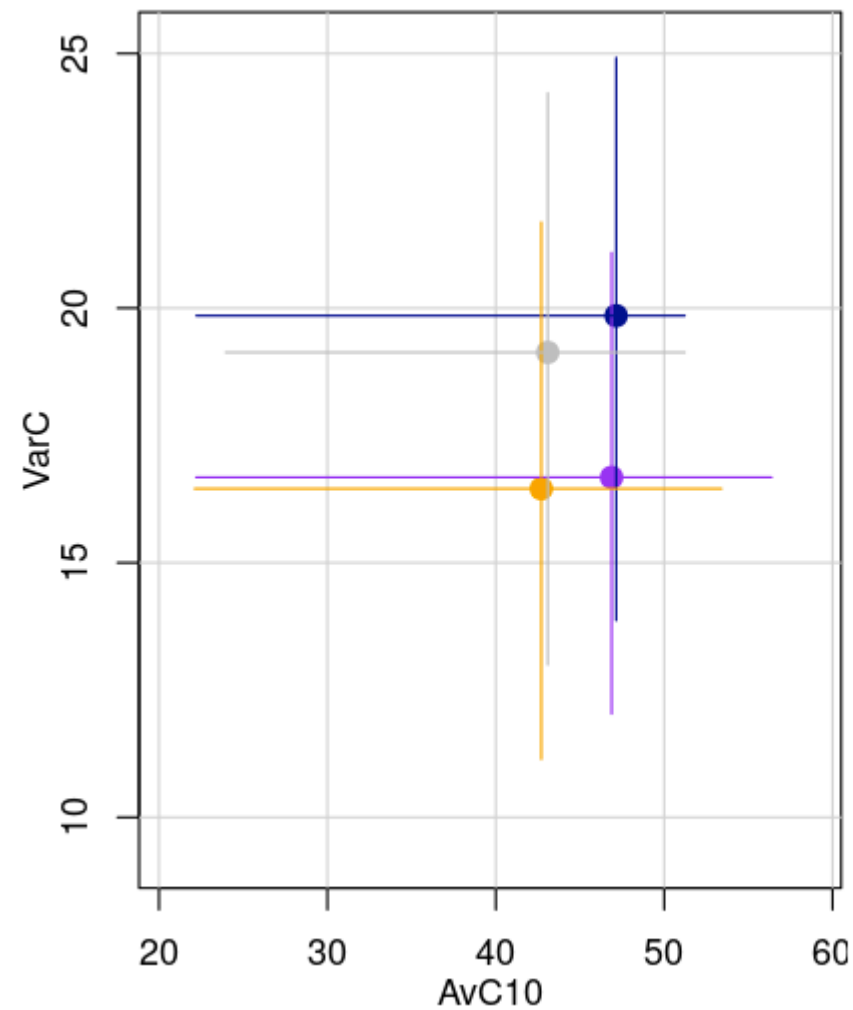
FO5a
FO5c
FO6a
FO6b

West



Compensación de factores de AvC10 vs. VarC para el CMP FO

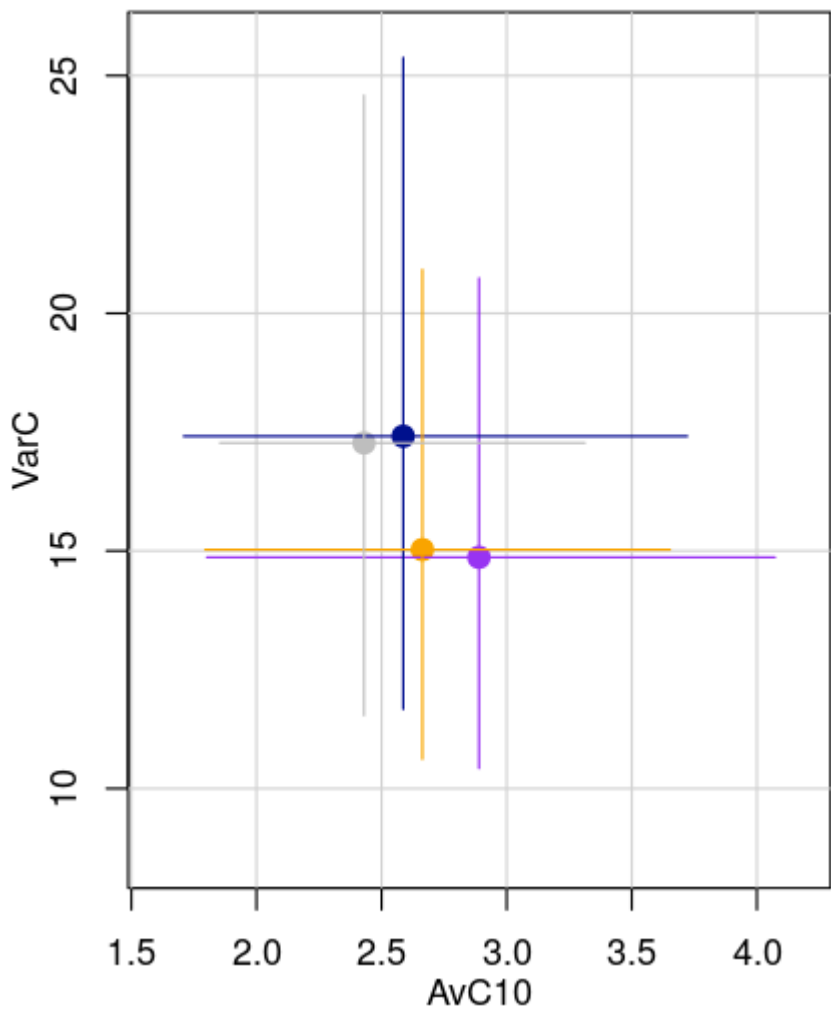
East



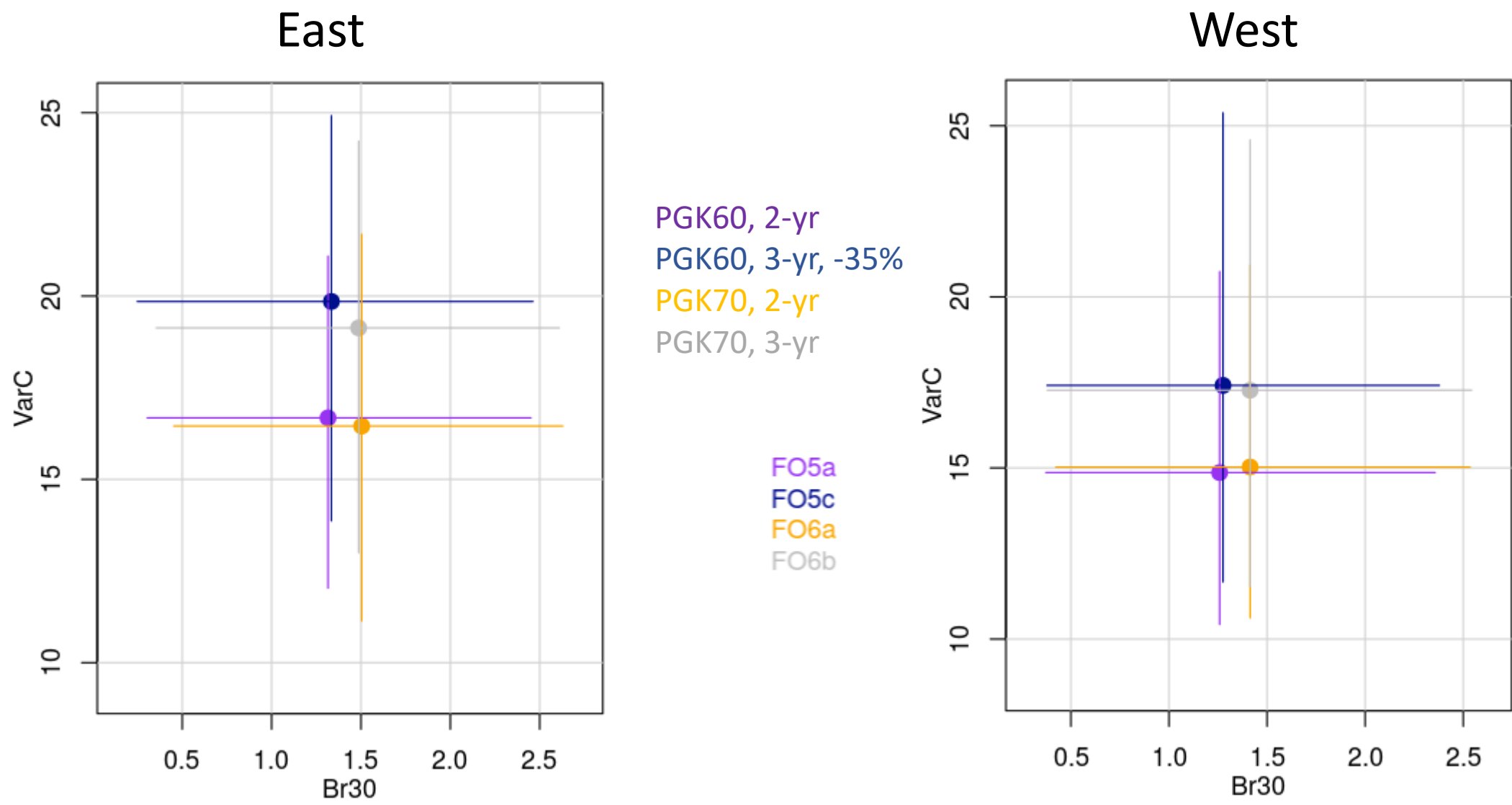
PGK60, 2-yr
PGK60, 3-yr, -35%
PGK70, 2-yr
PGK70, 3-yr

FO5a
FO5c
FO6a
FO6b

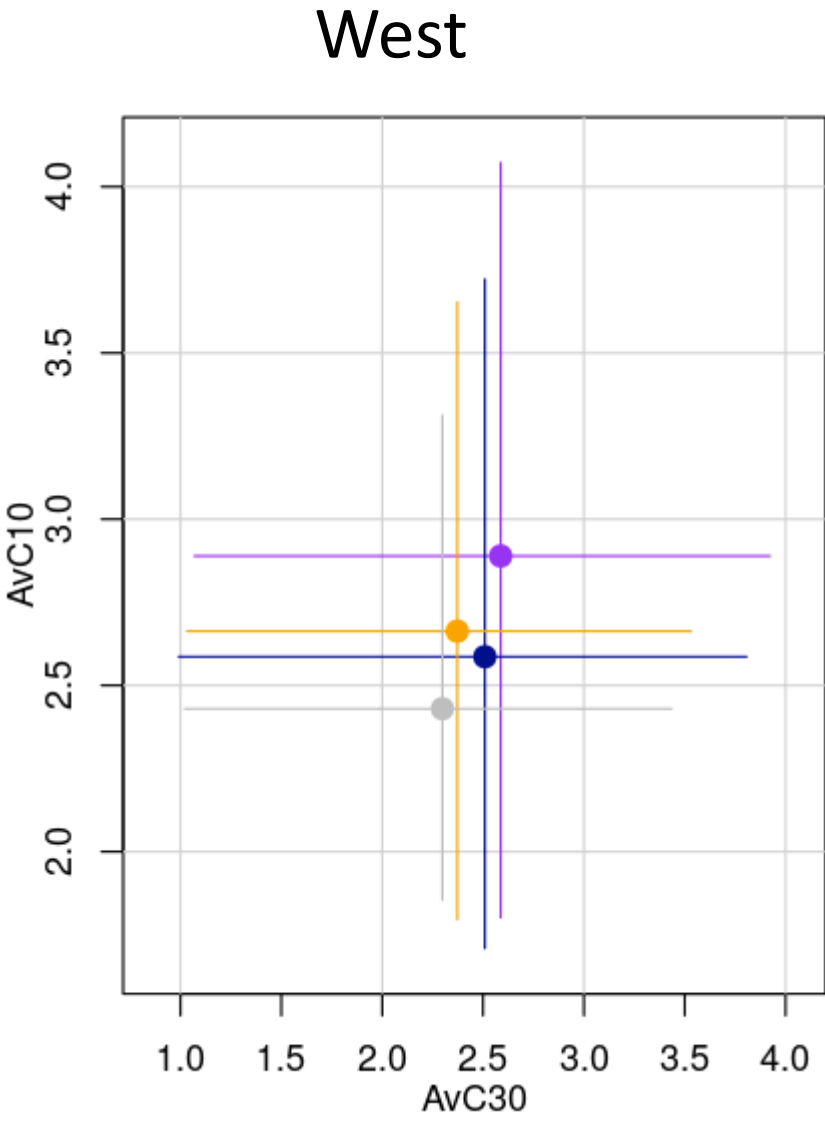
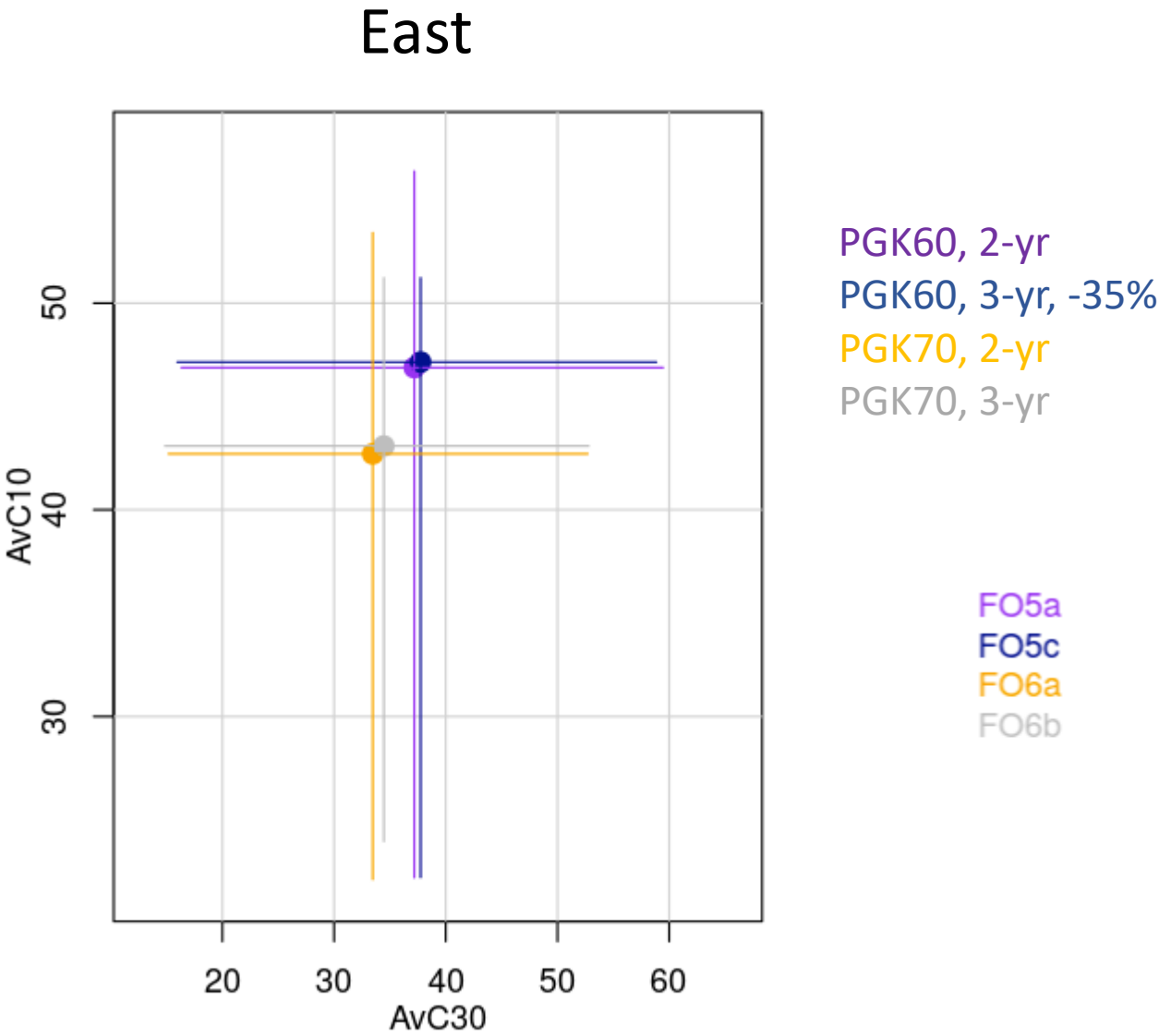
West



Compensación de factores de Br30 vs. VarC para el CMP FO

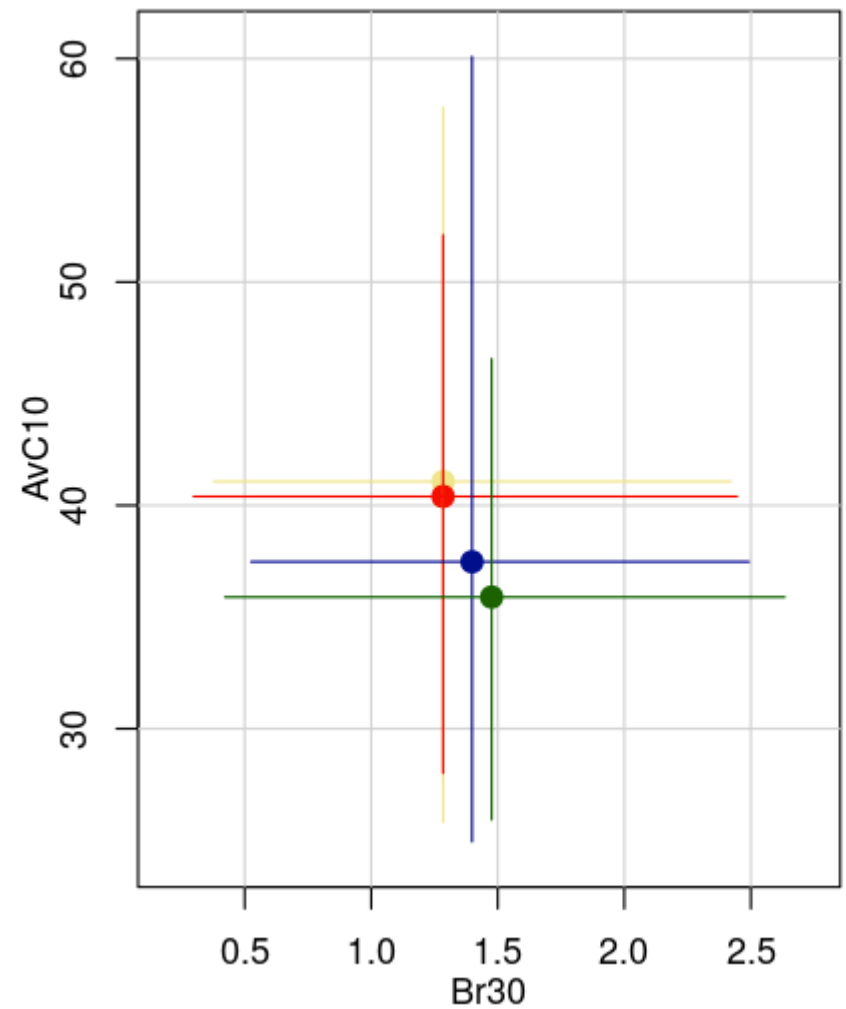


Compensación de factores de AvC30 vs. AvC10 para el CMP FO



Compensación de factores de Br30 vs. AvC10 para el CMP TC

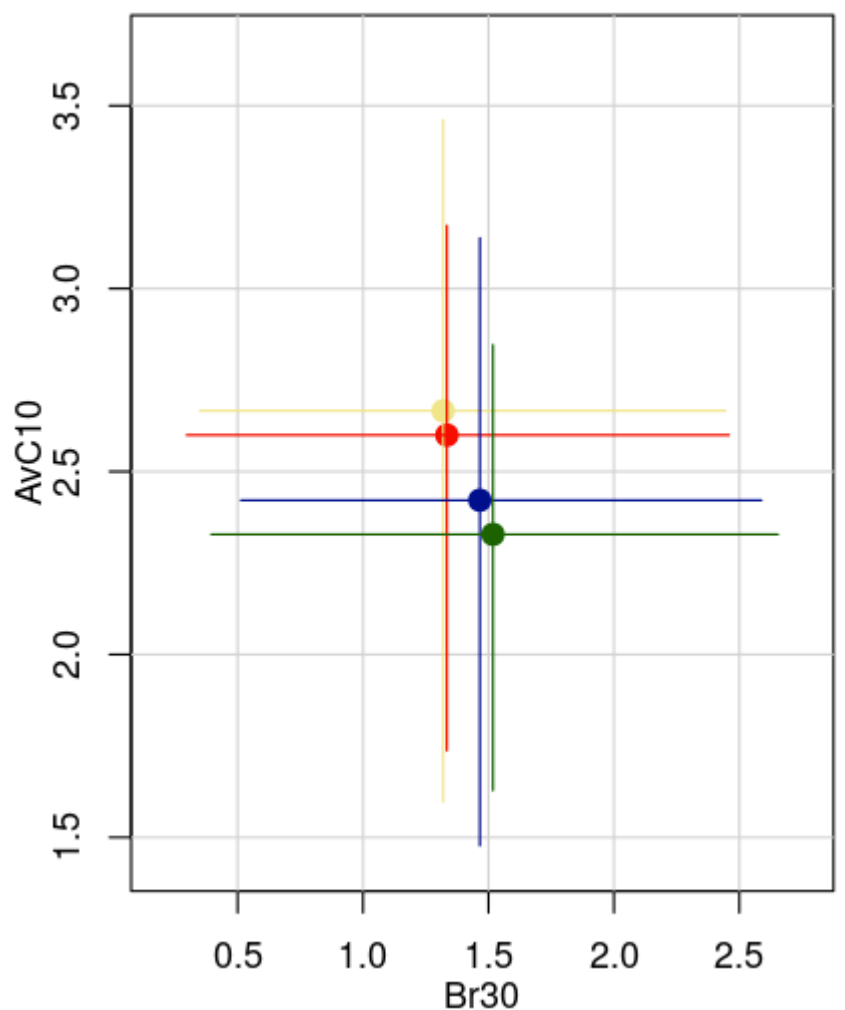
East



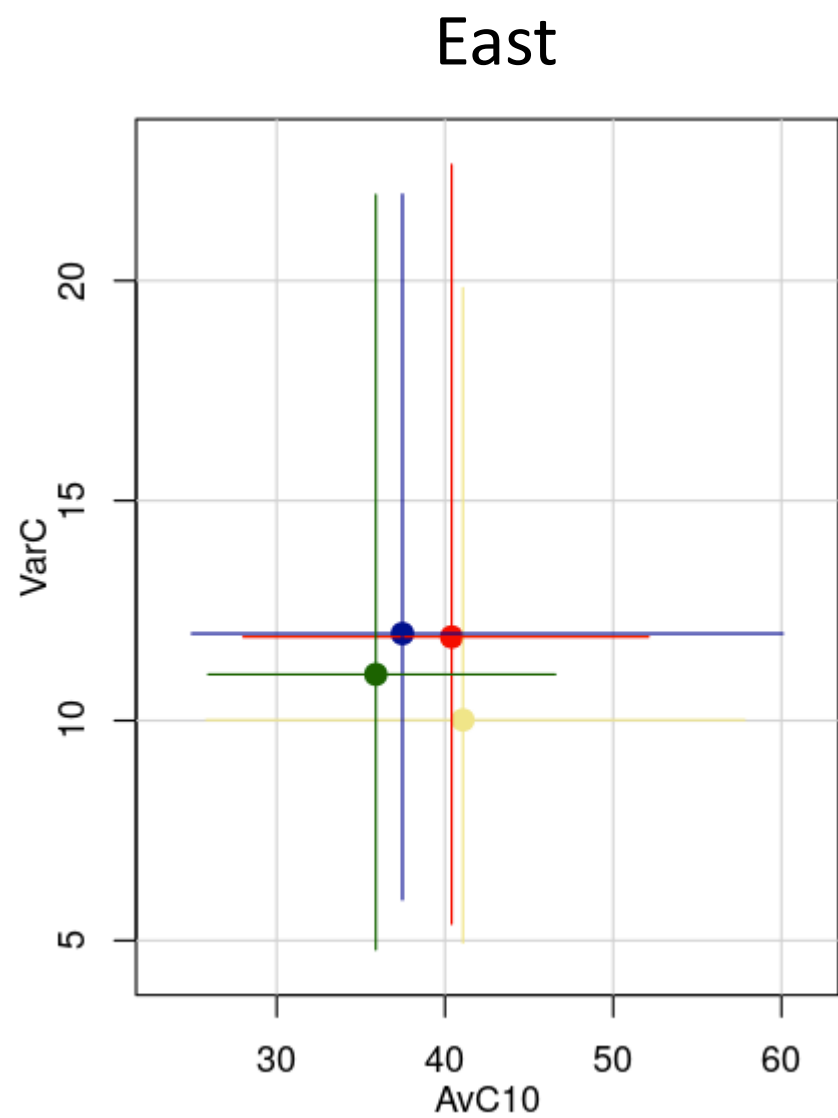
PGK60, 2-yr
PGK60, 3-yr, -35%
PGK70, 2-yr
PGK70, 3-yr

TC5a
TC5c
TK6a
TC6b

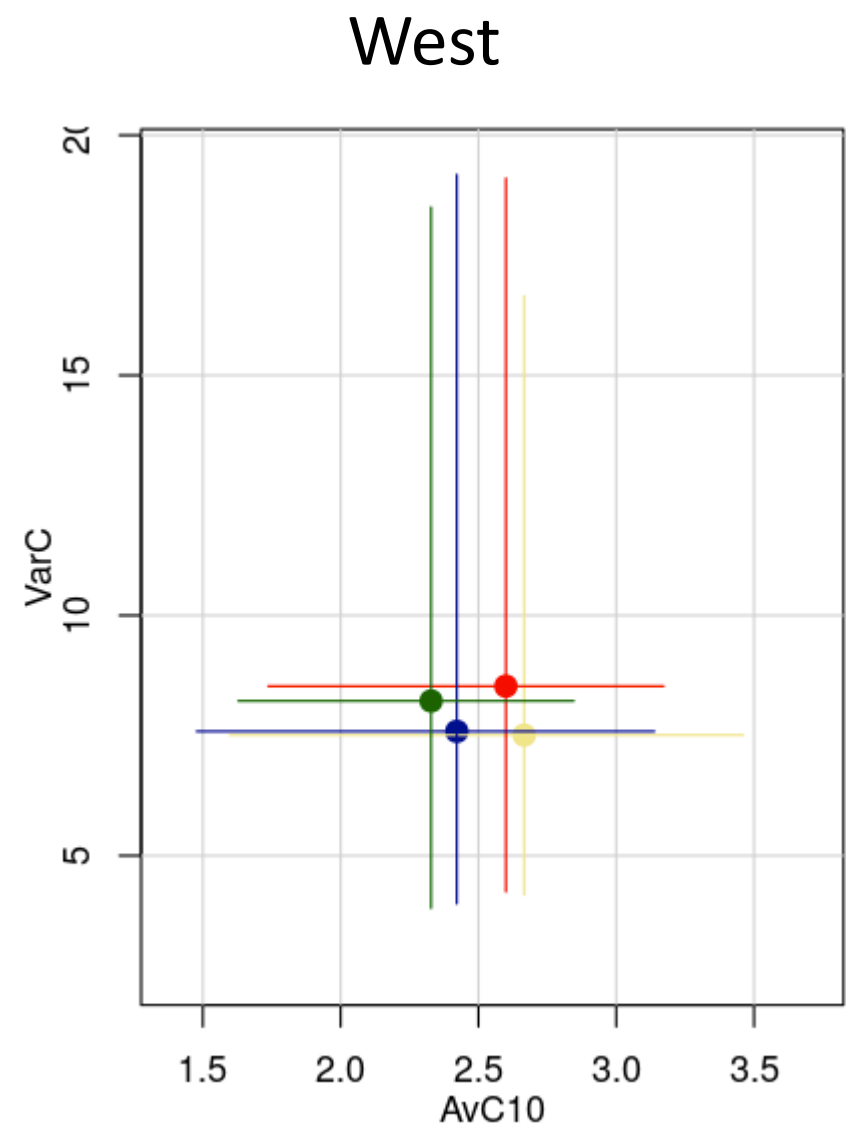
West



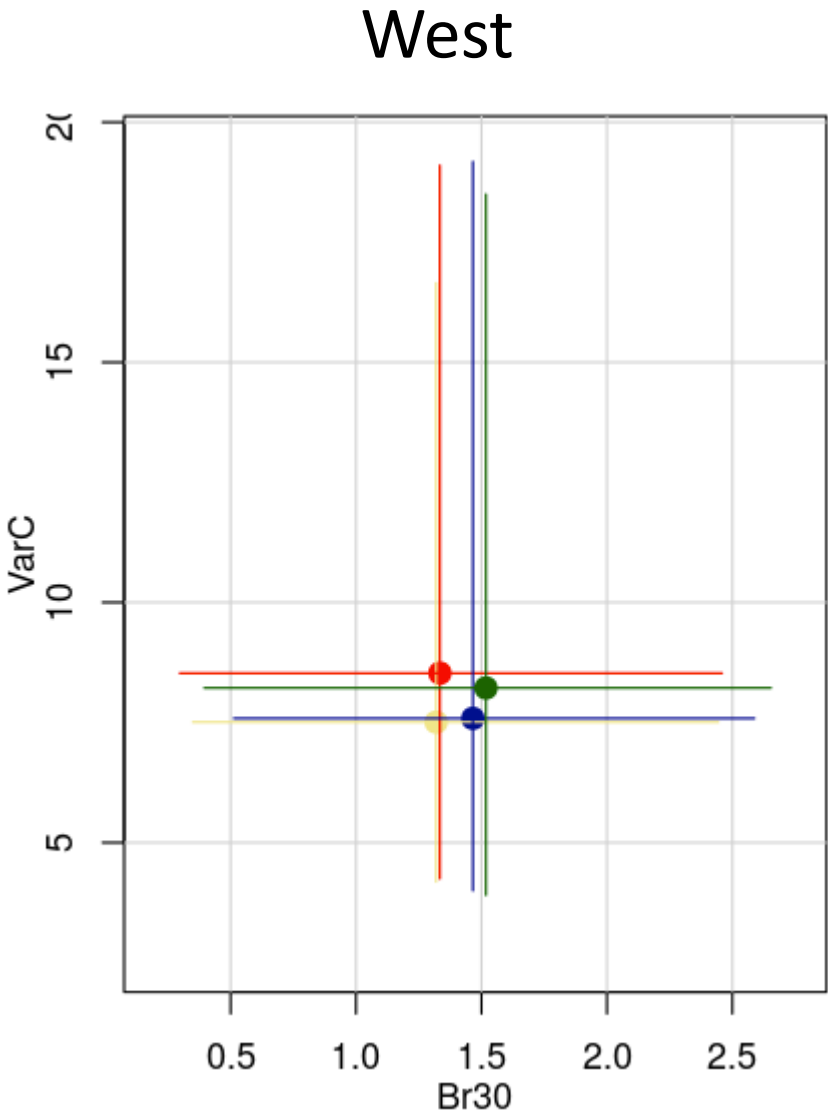
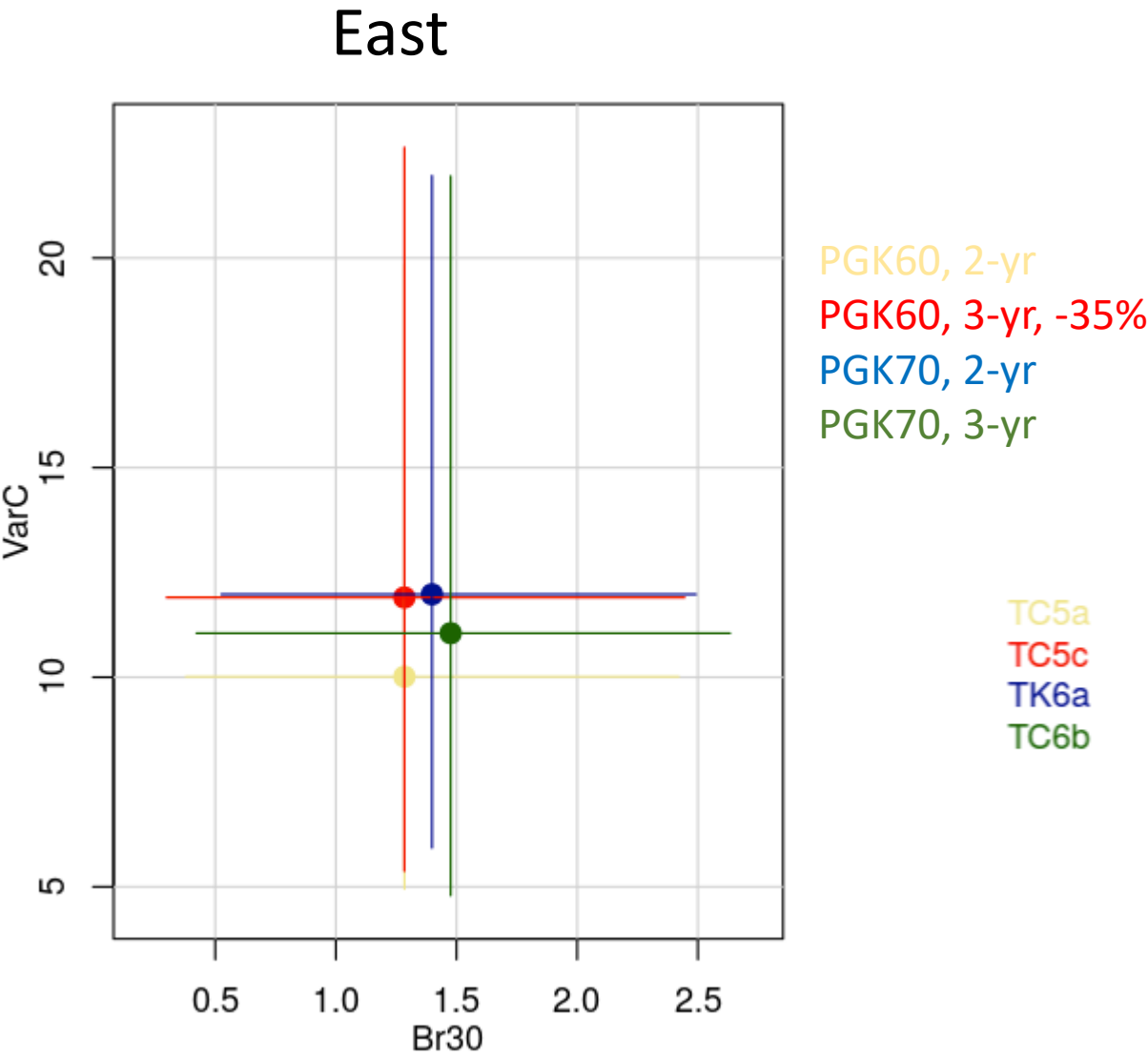
Compensación de factores de AvC10 vs. VarC para el CMP TC



PGK60, 2-yr
PGK60, 3-yr, -35%
PGK70, 2-yr
PGK70, 3-yr



Compensación de factores de Br30 vs. VarC para el CMP TC



Compensación de factores de AvC30 vs. AvC10 para el CMP TC

