Sardine Projections based on constant catch scenarios

SWG-PEL Meeting

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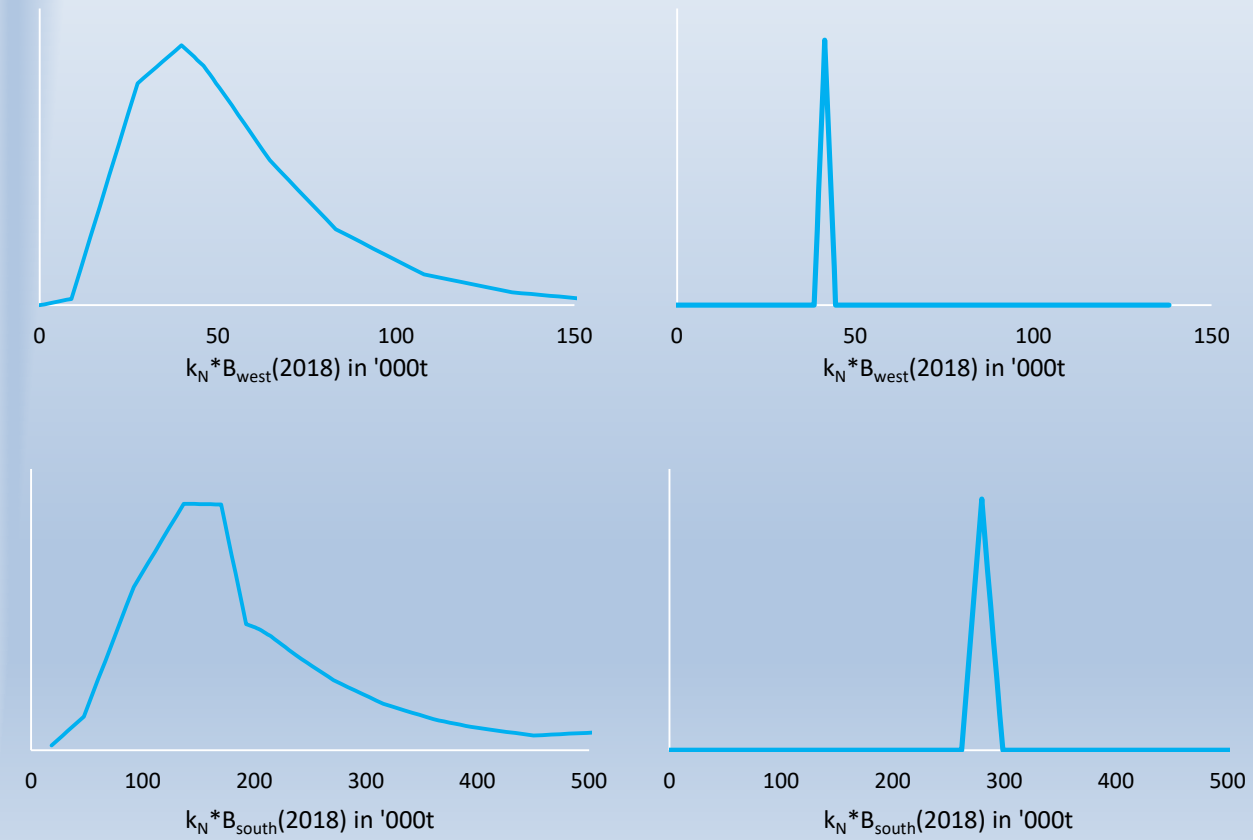
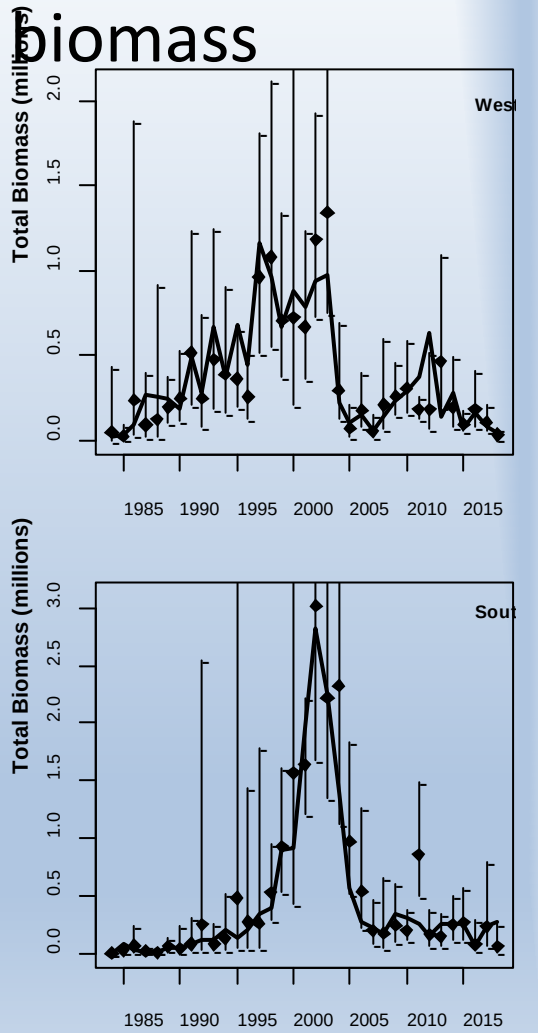
What's changed?

- Likelihood profile over November 2018 biomass (applied proportionately to numbers)





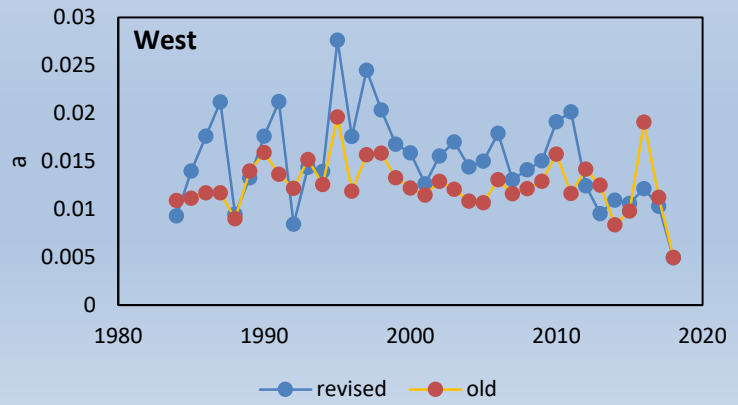
What's changed?

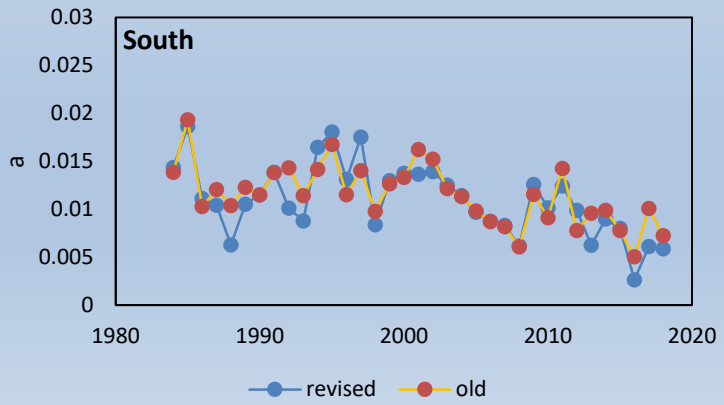
- Sardine weight-at-length

  - Nov 2018 was lower than normal (on west coast), i.e. skinny fish

  - impacts catch during 2019 (fatter fish mean fewer numbers get caught for the same biomass than if fish are skinny and weight less on average)

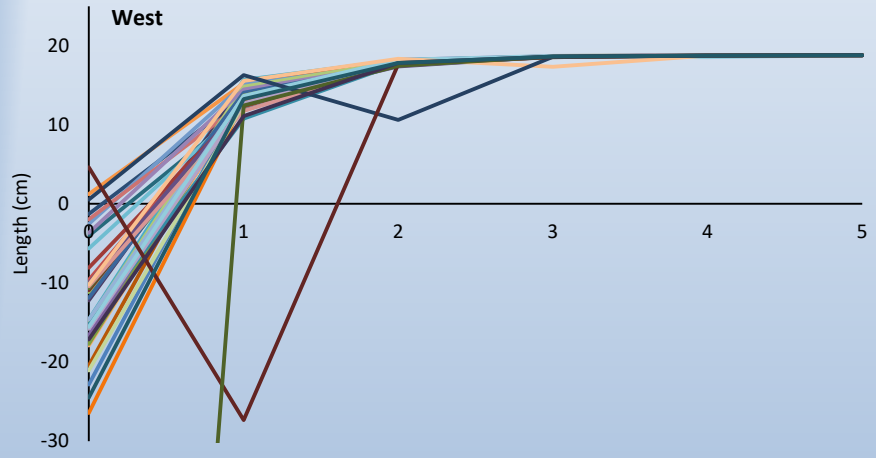
  - $w_y = a_y * l^b$ fit to weight-at-length

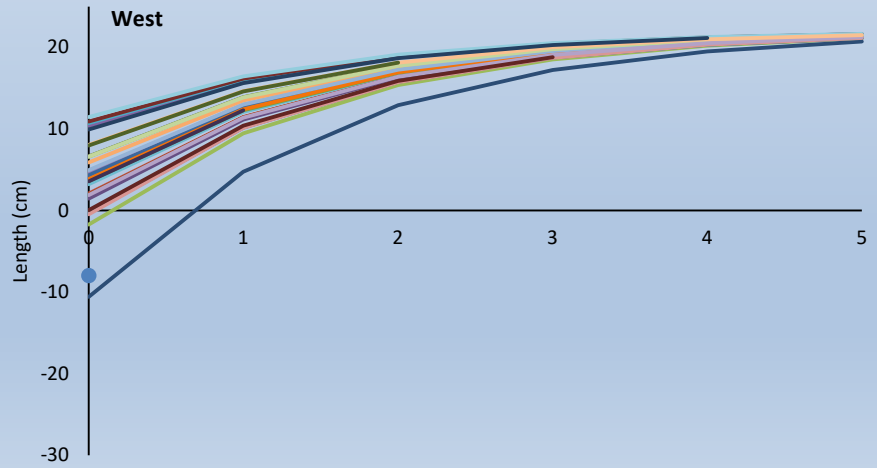




What's changed?

- Revised model so that growth curve applies to each cohort of fish and not to different ages of fish at a particular point in time





Variability

- Simulations i=1 to 100 therefore differ in 3 primary ways:

- Nov 2018 numbers-at-age & effSSB
- Future recruitment (differs by year too)
- Future weight-at-length (differs by year too)

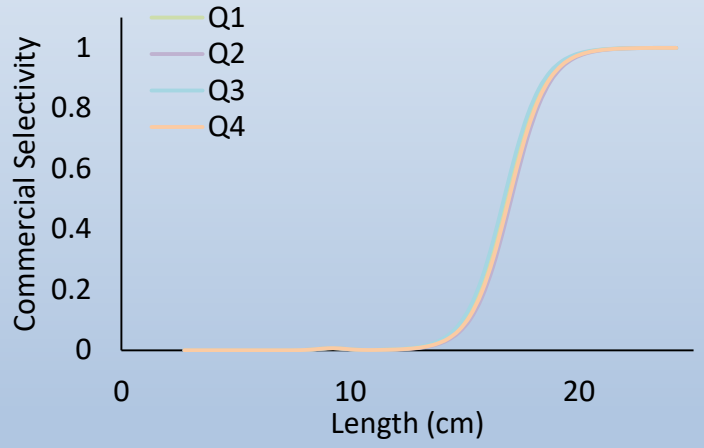
New runs

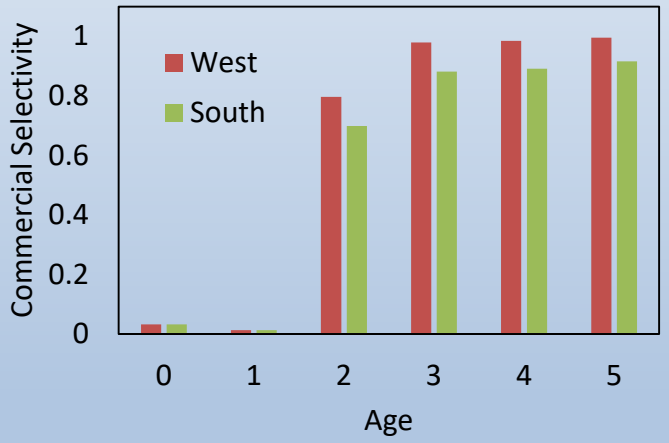
- Changed max F from <0.999 to <0.95
- Added additional catch scenarios (and removed others)

Directed	West	South	Bycatch with Anchovy
0	0	0	0
5	3.5	1.5	5
10	7	3	5
20	14	6	5
15	**9**	**6**	**10**
30	21	9	5
30	**14**	**16**	**5**

New runs

- Allowed selectivity to be ‘modified’ to try to spread out the catch in cases where the catch cannot be fully realised given the selectivity-at-length (since 2002) and ‘average’ future growth curves



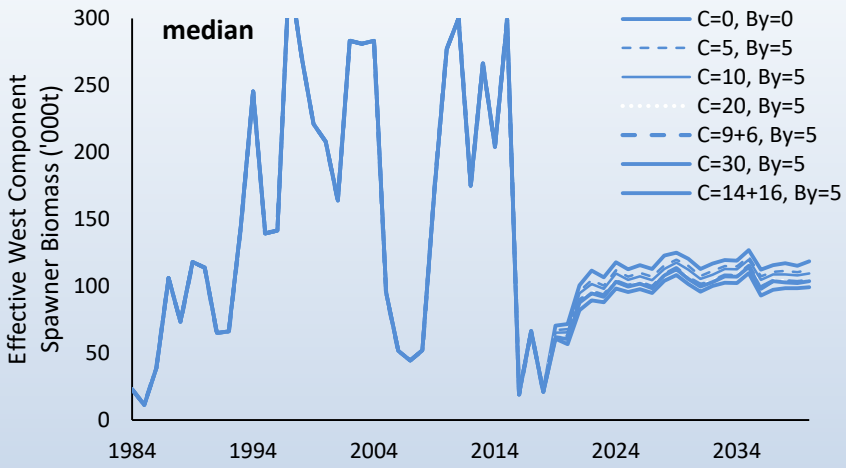


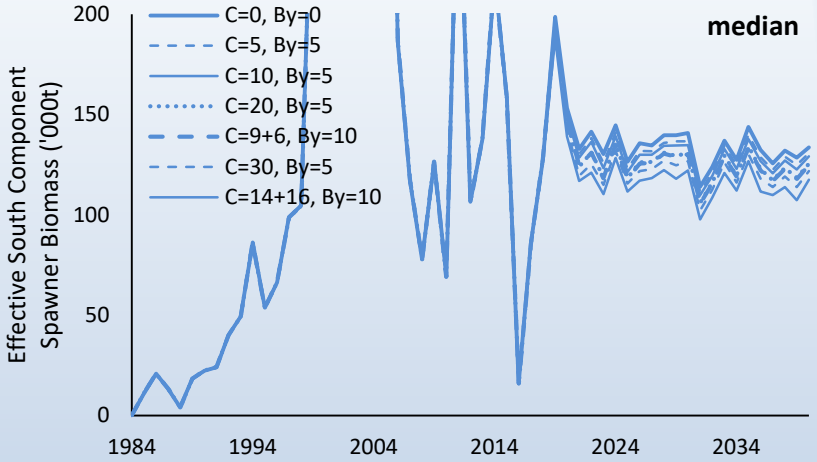
- 95% of age 5, then age 4, then age 3, then age 2

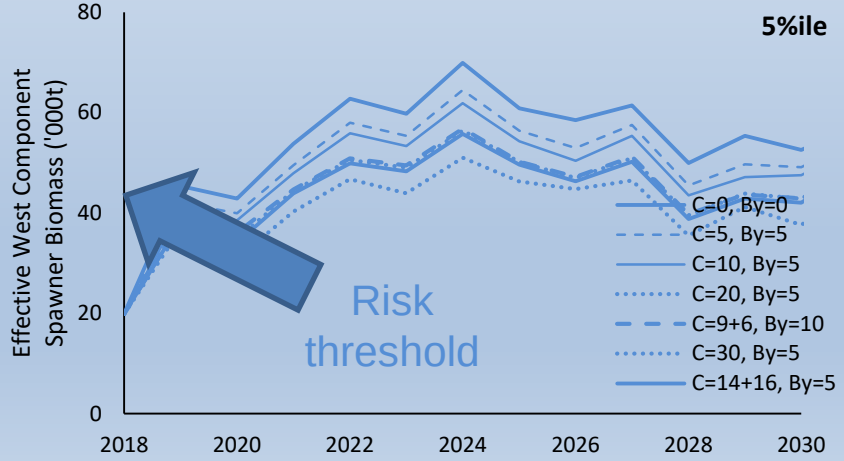
Baseline Results

					West component				South component				20% west difference
Model	Dir	West	South	Bycatch	5%ile	20%ile	30%ile	50%ile	5%ile	20%ile	30%ile	50%ile	
Baseline	0	0	0	0	2.20	2.67	2.95	3.40	0.45	1.05	1.05	1.55	
	5	3.5	1.5	5	2.04	2.51	2.78	3.24	0.45	1.04	1.04	1.54	0.91
	10	7	3	5	1.95	2.43	2.69	3.16	0.45	1.03	1.03	1.53	0.86
	20	14	6	5	1.84	2.33	2.59	3.02	0.44	1.01	1.02	1.51	0.80
	15	9	6	10	1.83	2.32	2.57	3.03	0.44	1.01	1.02	1.51	0.79
	30	21	9	5	1.77	2.23	2.49	2.93	0.43	1.00	1.01	1.49	0.73
	30	14	16	5	1.83	2.30	2.56	3.00	0.92	1.00	1.61	2.07	0.78

Baseline Results







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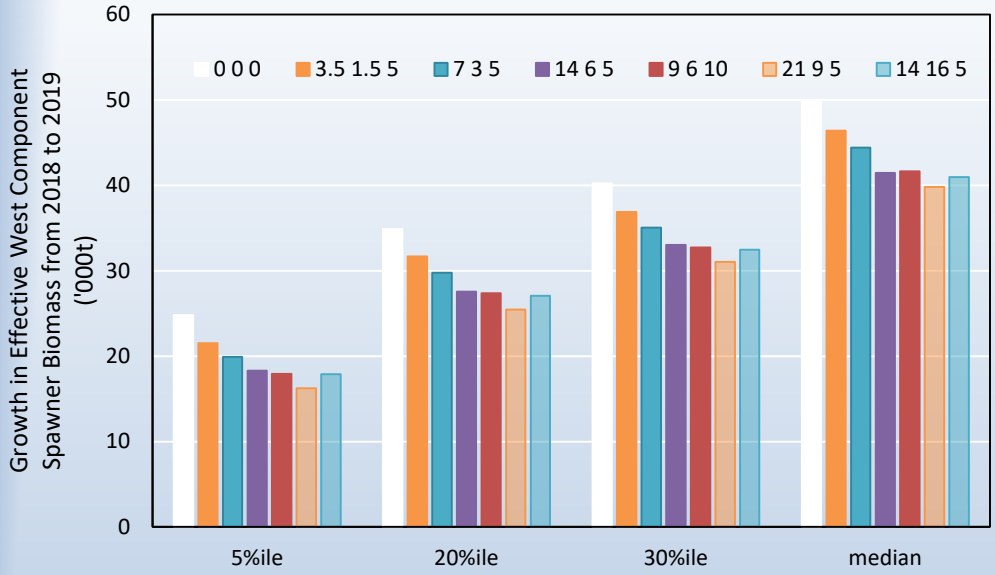

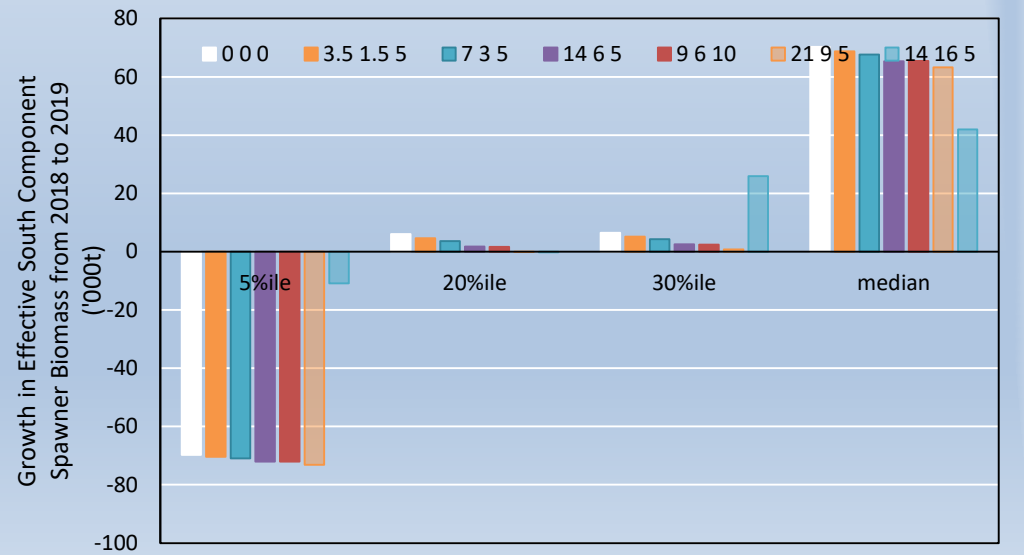

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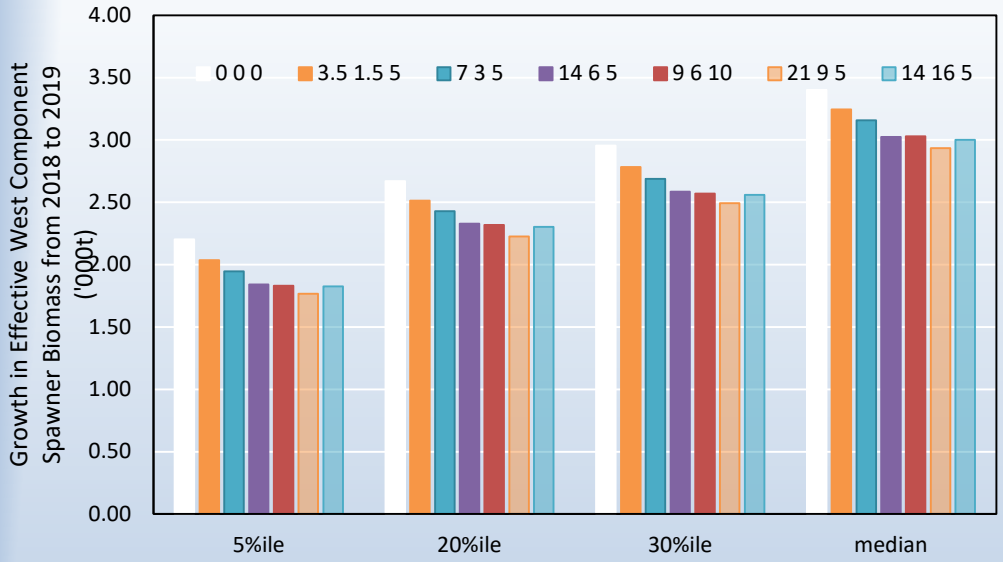

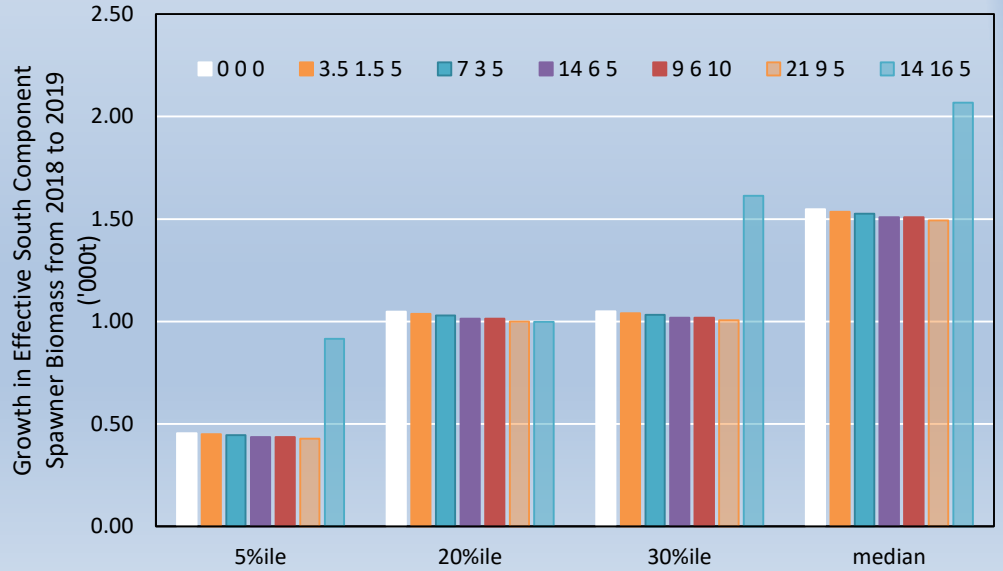
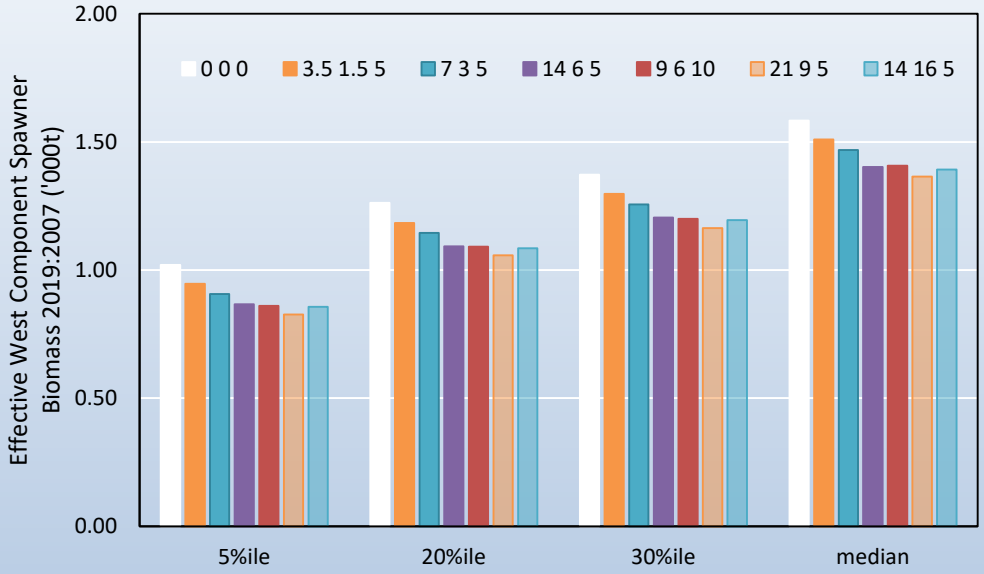
Baseline Results