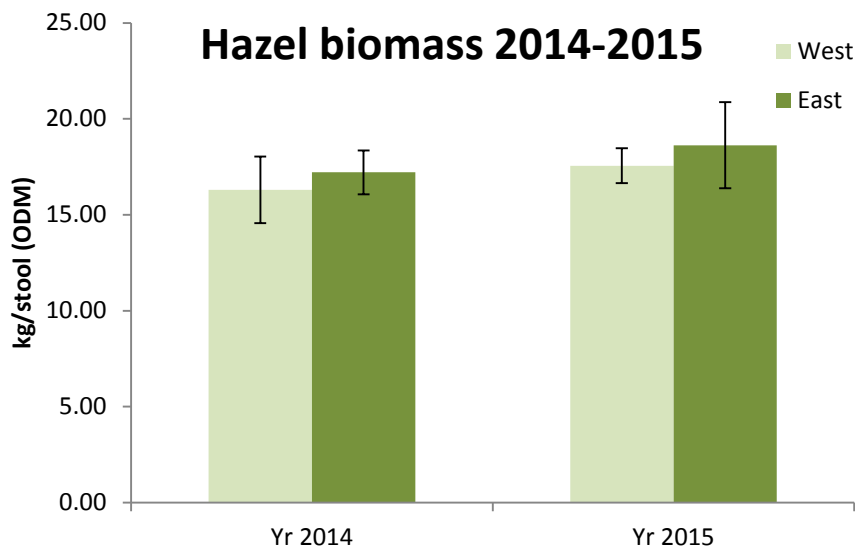
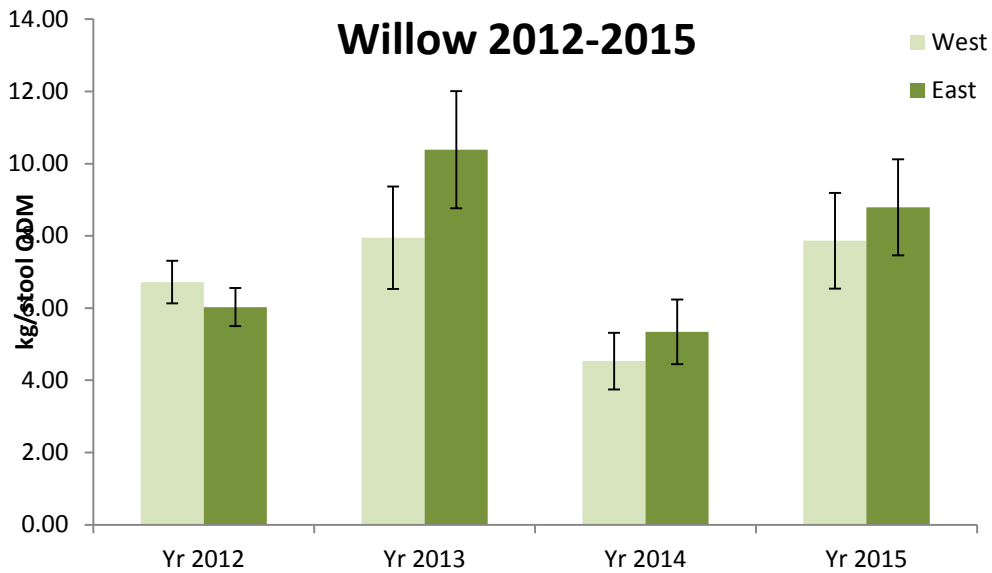


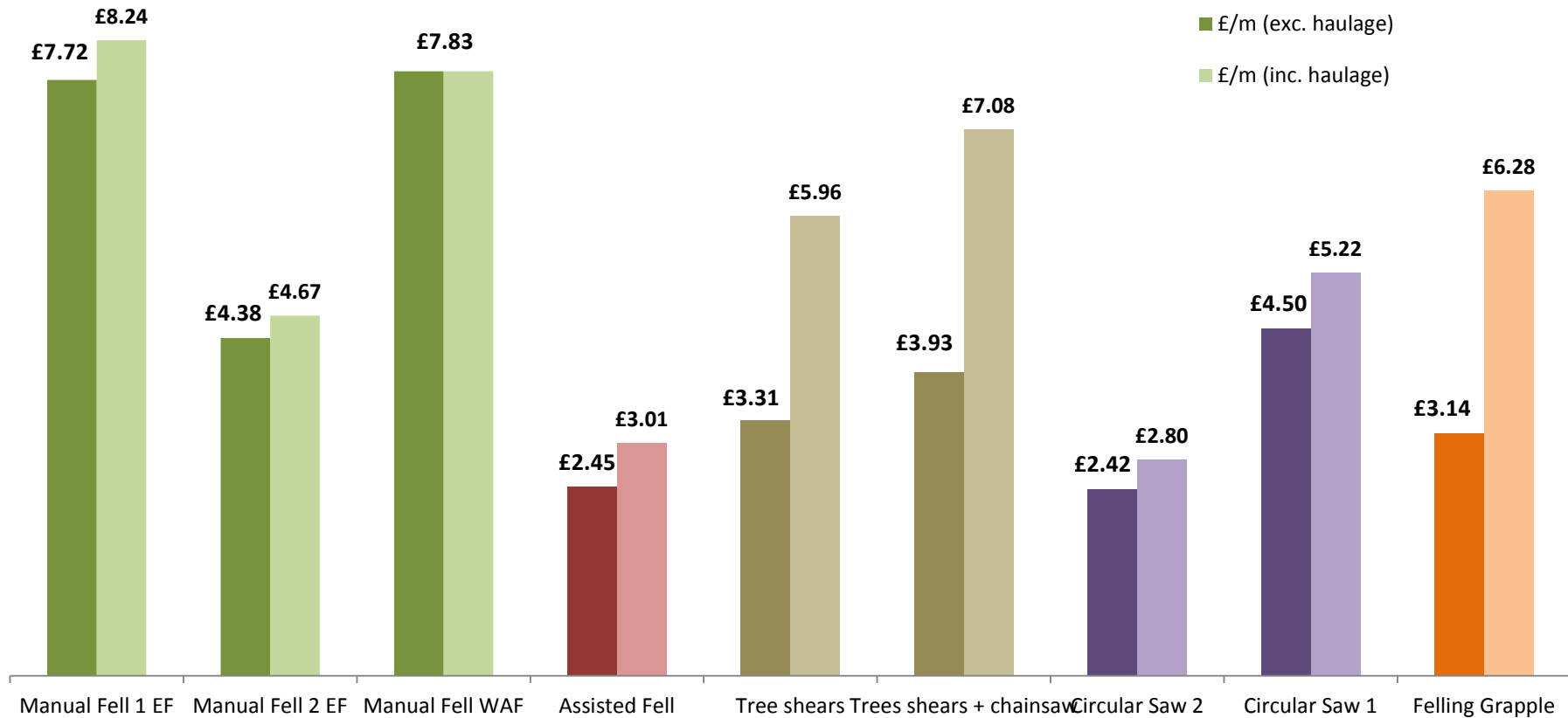
Biomass production from Short Rotation Coppice Agroforestry



	No. stools/ 100m	kg/stool (ODM)	kg/stool (@30%mc)	t/100m (@30%mc)	Annual production t/100m	Annual production t/ha AF
Willow 2 year regrowth	165	7.2*	9.36	1.54	0.77	6.18
Hazel 5 year regrowth	133	17.42*	22.65	3.01	0.60	4.82

*ODM calculated as 50% fresh weight

Cost (£) per meter of hedge harvested



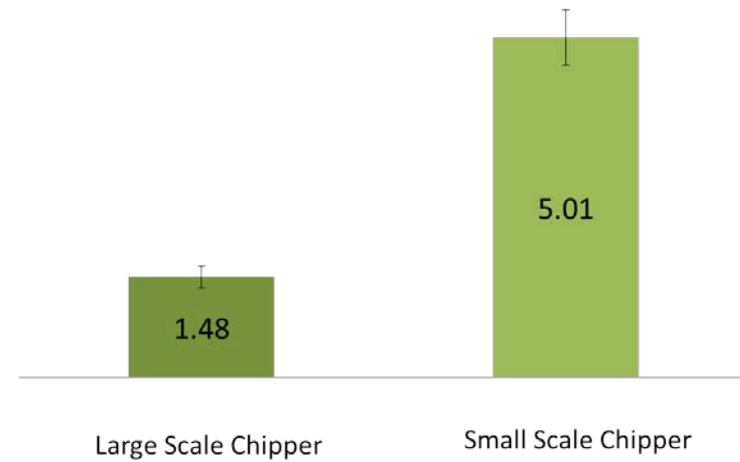
Notes: Here we can see the cost per meter of hedge cut based on an 8 hour day with 1 hour break time. These costs do not include VAT. You can see with the larger machines that haulage can increase the cost substantially. The availability & cost of specialist machinery will also affect the price - the more specialist it is, the more rare/less available it is & generally the greater the transport costs to get it to site, which means the amount of hedge coppicing work has to be large enough to make the increased costs worthwhile.

Cost (£) of chipping per m of hedge material

Cost (£) per Metre of Hedge Material Chipped



Mean Minutes per Metre of Hedge Material Chipped



*These costs include haulage but do not include VAT and are based on an 8 hour working day accounting for 1 hour of break time

Using large scale Chipper							
Method	Hedge Type	Harvesting cost (£/m) Inc. haulage	Processing cost (£/m)	Woodchip production (m3/m)	Net Cost/Profit per m @ £14.39 per m3	Net Cost/Profit per m @ £14.39 per m3 + flailing savings @ £13	Net Cost/Profit per m @ £14.39 per m3 + flailing savings @ £13 + coppicing grant @ £4 per m
Manual Fell 1 (EF)	Coppiced hazel	8.24	4.79	0.26	-9.43	3.57	7.57
Manual Fell 2 (EF)	Coppiced hazel	4.67	4.79	0.26	-5.86	7.14	11.14
Manual Fell (WAF)	Mature hedge	7.83	4.79	0.26	-9.02	3.98	7.98
Assisted Fell	Coppiced hazel	3.01	4.79	0.26	-4.20	8.80	12.80
Tree Shears	Coppiced hazel	5.96	4.79	0.26	-7.15	5.85	9.85
Tree Shears + Chainsaw	Coppiced hazel	7.08	4.79	0.26	-8.27	4.73	8.73
Circular Saw 2	Coppiced hazel	2.80	4.79	0.26	-4.00	9.00	13.00
Circular Saw 1	Mature hedge	5.22	4.79	0.26	-6.41	6.59	10.59
Felling Grapple	Mature hedge	6.28	4.79	0.26	-7.48	5.52	9.52

*Flailing saving - This accounts for an annual cost of flailing at £1 per meter resulting in £20 per meter on a 20 year rotation. If we side flail a hedge intended for woodfuel every 3 years and allow for 7 side flails over 20 years it would reduce this saving to £13 per meter.

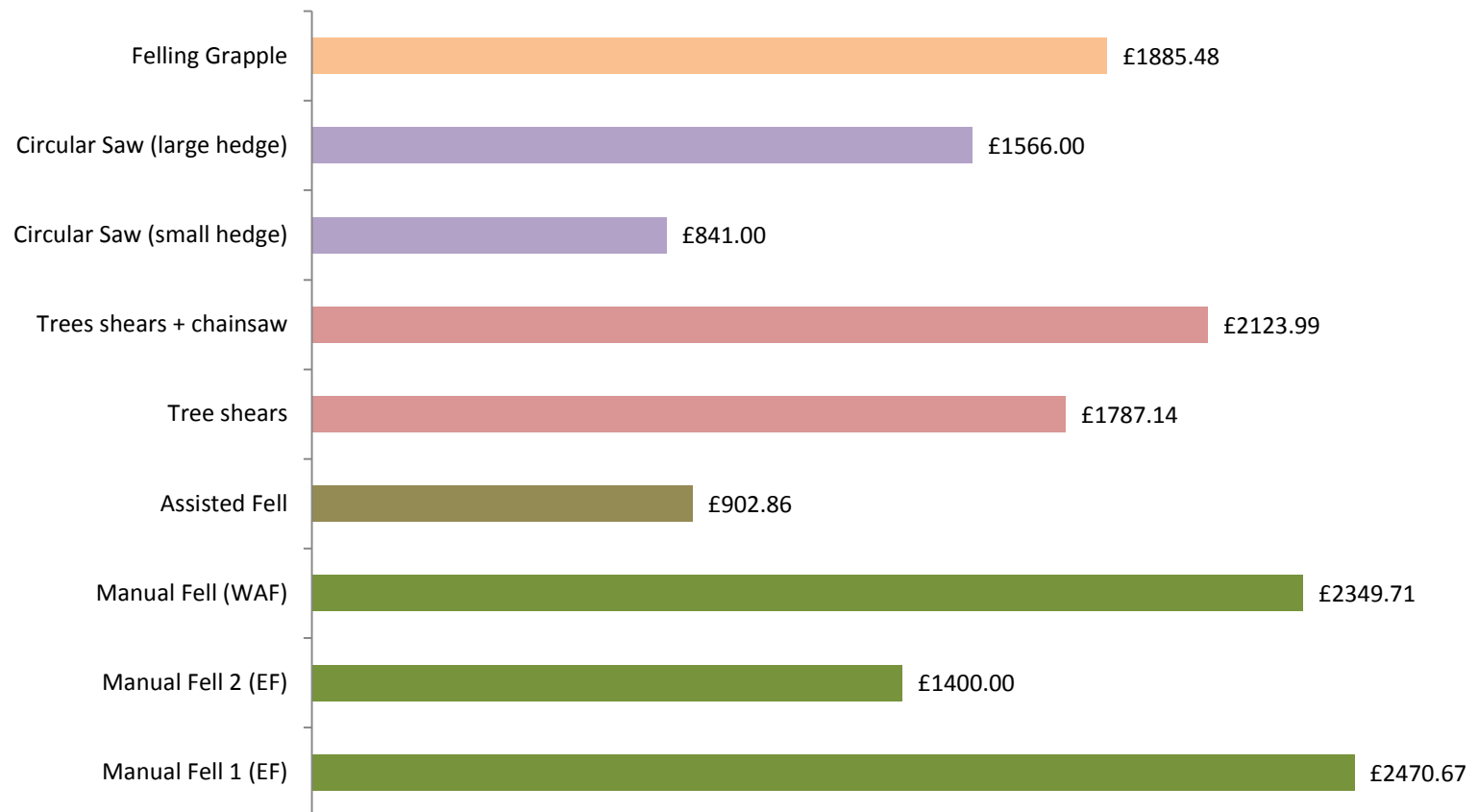
Using small scale chipper							
Method	Hedge Type	Harvesting cost (£/m)	Processing cost (£/m)	production (m3/m)	Net Cost/Profit per m @ £14.39 per m3	Net Cost/Profit per m @ £14.39 per m3 + savings from reduced flailing	Net Cost/Profit per m @ £14.39 per m3 + savings from reduced flailing + potential grant from countryside stewardship scheme
Manual Fell 1 (EF)	Coppiced hazel	8.24	9.78	0.26	-14.42	-1.42	2.58
Manual Fell 2 (EF)	Coppiced hazel	4.67	9.78	0.26	-10.85	2.15	6.15
Manual Fell (WAF)	Mature hedge	7.83	9.78	0.26	-14.01	-1.01	2.99
Assisted Fell	Coppiced hazel	3.01	9.78	0.26	-9.19	3.81	7.81
Tree Shears	Coppiced hazel	5.96	9.78	0.26	-12.14	0.86	4.86
Tree Shears + Chainsaw	Coppiced hazel	7.08	9.78	0.26	-13.26	-0.26	3.74
Circular Saw 1	Mature hedge	2.80	9.78	0.26	-8.99	4.01	8.01
Circular Saw 2	Coppiced hazel	5.22	9.78	0.26	-11.40	1.60	5.60
Felling Grapple	Mature hedge	6.28	9.78	0.26	-12.47	0.53	4.53

*Flailing saving - This accounts for an annual cost of flailing at £1 per meter resulting in £20 per meter on a 20 year rotation. If we side flail a hedge intended for woodfuel every 3 years and allow for 7 side flails over 20 years it would reduce this saving to £13 per meter.

300m Hedge Case Study

How much would it cost to coppice 300m of hedge using each method?

300m Hedge



Notes: