

Comparisons

Assumptions

Replacement xp	70
mor dilution	0%
Replacement mor	70
xp dilution	50%
North hexes	5
North hexsides/hex avg	2
CV	=ToE/1000*mor*xp
Defence CV/CV	4

BEFORE

Manpower Total	523,000
Manpower Pool	280,000

Name	Divisions	ToE	Mor	XP	ToE%	Max ToE%	ToE	CV
Elite units	20	18,000	80	80	50%	50%	9,000	5.76
Workhorse units	5	18,000	70	70	50%	50%	9,000	4.41
Dregs units	5	18,000	65	65	20%	20%	3,600	1.52
Div Avg		18,000	77.04	77.04	45%	45%	8,100	5.20
Total								144.86

Maximise total mor/xp/cv regardless of unit distribution

Manpower Total	523,000
Manpower Pool	43,000

Name	Divisions	ToE	Mor	XP	ToE%	Max ToE%	ToE	CV	Defence CV	North units/ hex
Elite units	20	18,000	80	78	100%	100%	18,000	11.16	44.64	
Workhorse units	5	18,000	70	70	100%	100%	18,000	8.82	35.28	0.33
Dregs units	5	18,000	65	66	33%	33%	6,000	2.57	10.296	1
Div Avg		18,000	77.19	75.38	89%	89%	16,000	10.18	40.74	
Total								280.17		

	Units/H ex	Units	Total CV	Defence CV/Hex	CV/ Hexside	Men/ Hex
North	1.33	6.67	27.57	22.1	11.0	12,000
Rest		23.33	252.60			

Maintain a minimum unit ToE

Manpower Total	523,000
Manpower Pool	43,000

Name	Divisions	ToE	Mor	XP	ToE%	Max ToE%	ToE	CV	Defence CV	North units/ hex
Elite units	20	18,000	80	78	100%	100%	18,000	11.16	44.64	
Workhorse units	5	18,000	70	70	67%	67%	12,000	5.88	23.52	
Dregs units	5	18,000	65	67	67%	67%	12,000	5.21	20.826	1
Div Avg		18,000	76.88	75.22	89%	89%	16,000	9.76	39.02	
Total								278.63		

	Units/H ex	Units	Total CV	Defence CV/Hex	CV/ Hexside	Men/ Hex
North	1	5	26.0325	20.8	10.4	12,000
Rest		25	252.60			

There are three groups of units which I have called Elite, Workhorses and Dregs. There are 280k men in the pool and I have assumed we want to keep a buffer of 43k.

Two methods

i) We aim to maximise the morale/xp/cv regardless of unit distribution. So we start switching units with the best stats up to max 100% ToE lowering the threshold for them until all the pool will be used except the buffer we want to leave. First we set all the Elite units to a maximum of 100% ToE, but find there will still be many more replacements in the pool than we need. So we lower the threshold some more and next we move on to the workhorses. Now we find all Elite and Workhorses set at maximum 100% ToE exhaust all our manpower pool except the margin we want to keep and so we stop lowering the threshold. All units below (the Dregs) are turned down to 33%, just enough to prevent them from being unready.

ii) We aim to maintain a minimum ToE for all units. In this case giving every unit at least 67% maximum ToE will still leave enough to get all the Elite units to a maximum 100% ToE.

Let us assume that there is a "North" sector consisting of five hexes each facing the enemy on two hexsides. With the second method each hex could be defended by a Dreg unit of 12,000 men with a defensive CV of 10.4 per enemy hexside. In the first method you would need each hex to be defended by a Dreg unit plus at least a regiment from a Workhorse division to do as well. This would be exactly the same number of men, 12,000, but would have a slightly higher defensive cv per enemy hexside of 11.0

The first method does produce higher average morale, cv and experience per unit and higher total cv for the whole army overall. In our assumed North it would also have slightly higher cv for exactly the same number of men although using more units. The rest of the front would also have exactly the same number of men for roughly the same cv but they will be concentrated in fewer units. This is an illustrative example only. But slightly different numbers could mean the North would be defended by the same CV for a smaller manpower for example.

So essentially the debate is do you want to maximise total cv/morale/xp of your total manpower and feel you can split up and relocate units to do whatever is needed? Or are there some combinations of split up and relocated units that could not do that like was done in this example. Or is there something intrinsic about a division that cannot be replicated by some other combination with the same CV and manpower in the same hex? Or do you need to sacrifice some of the maximum possible potential of your manpower in favour of particular units? I think is a global view versus a local view and probably the answer is a bit of both but the judgement is to what degree of each.