

Apéndice C

Resultados de precisión y rendimiento de las RNA en diferentes configuraciones topológicas

Nota: Con el fin de facilitar la indentificación de los mayores porcentajes de predicciones correctamente clasificadas, se decidió rellenar las casillas con color verde para aquellos valores entre 90 y 93%, y con color amarillo aquellos valores mayores a 93%.														90 a 93 %			
														>93%			
TIPO DE RED	FUNCIÓN DE ENTRENAMIENTO		N. DE CAPAS OCULTAS	NÚMERO DE NEURONAS EN CAPAS OCULTAS	FUNCIÓN DE TRANSFERENCIA	# RE-ENTRENA MIENTO	RENDIMIENTO-Entropía Cruzada		MATRIZ DE CONFUSIÓN DE ENTRENAMIENTO		MATRIZ DE CONFUSIÓN DE VALIDACIÓN		MATRIZ DE CONFUSIÓN DE PRUEBA		TODA LA MATRIZ DE CONFUSIÓN		TIEMP
									Correctamente clasificados (%)	Erróneamente clasificados (%)	Correctamente clasificados (%)	Erróneamente clasificados (%)	Correctamente clasificados (%)	Erróneamente clasificados (%)	Correctamente clasificados (%)	Erróneamente clasificados (%)	TIEMP (S)
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	3	15	SIGMOID	1	CROSSENTROPY	0,0421	91,0%	9,0%	90,3%	9,7%	89,2%	10,8%	90,6%	9,4%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	3	15	SIGMOID	2	CROSSENTROPY	0,0535	88,9%	11,1%	88,8%	11,2%	87,0%	13,0%	88,6%	11,4%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	3	20	SIGMOID	1	CROSSENTROPY	0,0387	93,1%	6,9%	88,8%	11,2%	91,0%	9,0%	92,1%	7,9%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	3	20	SIGMOID	2	CROSSENTROPY	0,0534	88,7%	11,3%	85,6%	14,4%	89,2%	10,8%	88,3%	11,7%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	3	25	SIGMOID	1	CROSSENTROPY	0,0403	92,1%	7,9%	86,6%	13,4%	88,4%	11,6%	90,7%	9,3%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	3	25	SIGMOID	2	CROSSENTROPY	0,0487	90,7%	9,3%	87,7%	12,3%	87,0%	13,0%	89,7%	10,3%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	3	30	SIGMOID	1	CROSSENTROPY	0,0585	88,0%	12,0%	87,7%	12,3%	85,9%	14,1%	87,6%	12,4%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	3	30	SIGMOID	2	CROSSENTROPY	0,0424	92,3%	7,7%	87,7%	12,3%	88,4%	11,6%	91,1%	8,9%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	5	15	SIGMOID	1	CROSSENTROPY	0,0593	88,6%	11,4%	88,4%	11,6%	84,8%	15,2%	88,0%	12,0%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	5	15	SIGMOID	2	CROSSENTROPY	0,0449	91,4%	8,6%	86,3%	13,7%	88,8%	11,2%	90,2%	9,8%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	5	20	SIGMOID	1	CROSSENTROPY	0,0417	92,6%	7,4%	88,4%	11,6%	87,0%	13,0%	91,2%	8,8%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	5	20	SIGMOID	2	CROSSENTROPY	0,0565	88,5%	11,5%	88,4%	11,6%	87,0%	13,0%	88,3%	11,7%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	5	25	SIGMOID	1	CROSSENTROPY	0,045	91,0%	9,0%	88,8%	11,2%	88,4%	11,6%	90,3%	9,7%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	5	25	SIGMOID	2	CROSSENTROPY	0,0415	93,0%	7,0%	88,8%	11,2%	89,9%	10,1%	91,9%	8,1%	1

Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	5	30	SIGMOID	1	CROSSENTROPY	0,0495	91,4%	8,6%	88,1%	11,9%	87,4%	12,6%	90,3%	9,7%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	5	30	SIGMOID	2	CROSSENTROPY	0,0441	91,6%	8,4%	90,6%	9,4%	87,4%	12,6%	90,8%	9,2%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	7	15	SIGMOID	1	CROSSENTROPY	0,115	75,2%	24,8%	75,5%	24,5%	71,5%	28,5%	74,7%	25,3%	0
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	7	15	SIGMOID	2	CROSSENTROPY	0,1086	75,0%	25,0%	75,1%	24,9%	75,8%	24,2%	75,1%	24,9%	0
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	7	20	SIGMOID	1	CROSSENTROPY	0,0636	88,5%	11,5%	83,4%	16,6%	83,0%	17,0%	86,9%	13,1%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	7	20	SIGMOID	2	CROSSENTROPY	0,1214	74,7%	25,3%	69,7%	30,3%	73,6%	26,4%	73,8%	26,2%	0
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	7	25	SIGMOID	1	CROSSENTROPY	0,0427	92,0%	8,0%	91,3%	8,7%	86,6%	13,4%	91,1%	8,9%	2
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	7	25	SIGMOID	2	CROSSENTROPY	0,0502	90,5%	9,5%	88,8%	11,2%	87,7%	12,3%	89,8%	10,2%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	7	30	SIGMOID	1	CROSSENTROPY	0,0732	86,5%	13,5%	82,7%	17,3%	85,2%	14,8%	85,8%	14,2%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	7	30	SIGMOID	2	CROSSENTROPY	0,0385	93,4%	6,6%	86,3%	13,7%	90,3%	9,7%	91,9%	8,1%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	10	15	SIGMOID	1	CROSSENTROPY	0,0882	83,4%	16,6%	85,2%	14,8%	83,0%	17,0%	83,6%	16,4%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	10	15	SIGMOID	2	CROSSENTROPY	0,1096	77,6%	22,4%	76,9%	23,1%	73,3%	26,7%	76,8%	23,2%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	10	20	SIGMOID	1	CROSSENTROPY	0,0457	92,4%	7,6%	89,9%	10,1%	86,3%	13,7%	91,1%	8,9%	2
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	10	20	SIGMOID	2	CROSSENTROPY	0,0587	88,3%	11,7%	89,5%	10,5%	85,2%	14,8%	88,0%	12,0%	2
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	10	25	SIGMOID	1	CROSSENTROPY	0,109	78,1%	21,9%	77,6%	22,4%	73,3%	26,7%	77,3%	22,7%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	10	25	SIGMOID	2	CROSSENTROPY	0,0556	89,6%	10,4%	88,1%	11,9%	87,4%	12,6%	89,1%	10,9%	2
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	10	30	SIGMOID	1	CROSSENTROPY	0,0576	88,0%	12,0%	88,1%	11,9%	88,8%	11,2%	88,1%	11,9%	2

Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	10	30	SIGMOID	2	CROSSENTROPY	0,0491	89,8%	10,2%	87,4%	12,6%	87,0%	13,0%	89,8%	10,2%	2
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	15	15	SIGMOID	1	CROSSENTROPY	0,1304	67,3%	32,7%	71,5%	28,5%	66,4%	33,6%	67,8%	32,2%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	15	15	SIGMOID	2	CROSSENTROPY	0,1776	59,4%	40,6%	62,5%	37,5%	58,5%	41,5%	59,7%	40,3%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	15	20	SIGMOID	1	CROSSENTROPY	0,1571	64,9%	35,1%	63,2%	36,8%	59,2%	40,8%	63,8%	36,2%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	15	20	SIGMOID	2	CROSSENTROPY	0,1231	73,6%	26,4%	76,2%	23,8%	74,7%	25,3%	74,2%	25,8%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	15	25	SIGMOID	1	CROSSENTROPY	0,1026	76,7%	23,3%	79,1%	20,9%	78,3%	21,7%	77,3%	22,7%	2
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	15	25	SIGMOID	2	CROSSENTROPY	0,0934	83,0%	17,0%	77,3%	22,7%	76,2%	23,8%	81,1%	18,9%	1
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	15	30	SIGMOID	1	CROSSENTROPY	0,0565	90,2%	9,8%	85,2%	14,8%	87,0%	13,0%	89,0%	11,0%	3
Feed-Forward backpropagation	TRAINSCG	Scaled Conjugate Gradient	15	30	SIGMOID	2	CROSSENTROPY	0,068	86,6%	13,4%	82,3%	17,7%	85,9%	14,1%	85,9%	14,1%	5
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	3	15	SIGMOID	1	CROSSENTROPY	0,0369	92,7%	7,3%	87,0%	13,0%	91,7%	8,3%	91,7%	8,3%	5
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	3	15	SIGMOID	2	CROSSENTROPY	0,0552	90,6%	9,4%	85,9%	14,1%	83,8%	16,2%	88,9%	11,1%	2
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	3	20	SIGMOID	1	CROSSENTROPY	0,0622	87,8%	12,2%	84,5%	15,5%	86,6%	13,4%	87,1%	12,9%	9
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	3	20	SIGMOID	2	CROSSENTROPY	0,05	90,1%	9,9%	88,1%	11,9%	89,5%	10,5%	89,7%	10,3%	7
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	3	25	SIGMOID	1	CROSSENTROPY	0,0434	92,5%	7,5%	88,8%	11,2%	88,1%	11,9%	91,3%	8,7%	22
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	3	25	SIGMOID	2	CROSSENTROPY	0,0501	90,7%	9,3%	85,2%	14,8%	84,1%	15,9%	88,9%	11,1%	24
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	3	30	SIGMOID	1	CROSSENTROPY	0,031	94,8%	5,2%	92,1%	7,9%	90,6%	9,4%	93,8%	6,2%	94
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	3	30	SIGMOID	2	CROSSENTROPY	0,0387	91,9%	8,1%	91,0%	9,0%	88,1%	11,9%	91,2%	8,8%	86

Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	5	15	SIGMOID	1	CROSSENTROPY	0,0498	89,5%	10,5%	87,4%	12,6%	89,2%	10,8%	89,1%	10,9%	13
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	5	15	SIGMOID	2	CROSSENTROPY	0,0475	92,3%	7,7%	84,5%	15,5%	84,5%	15,5%	89,9%	10,1%	13
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	5	20	SIGMOID	1	CROSSENTROPY	0,044	92,5%	7,5%	86,6%	13,4%	89,2%	10,8%	91,1%	8,9%	47
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	5	20	SIGMOID	2	CROSSENTROPY	0,0319	94,7%	5,3%	91,3%	8,7%	91,3%	8,7%	93,7%	6,3%	60
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	5	25	SIGMOID	1	CROSSENTROPY	0,0286	95,2%	4,8%	92,1%	7,9%	90,6%	9,4%	94,0%	6,0%	155
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	5	25	SIGMOID	2	CROSSENTROPY	0,0327	94,5%	5,5%	91,0%	9,0%	90,6%	9,4%	93,4%	6,6%	121
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	5	30	SIGMOID	1	CROSSENTROPY	0,0226	94,0%	6,0%	93,9%	6,1%	85,9%	14,1%	92,7%	7,3%	228
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	5	30	SIGMOID	2	CROSSENTROPY	0,0324	94,5%	5,5%	90,6%	9,4%	88,4%	11,6%	93,0%	7,0%	261
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	7	15	SIGMOID	1	CROSSENTROPY	0,0547	89,2%	10,8%	82,7%	17,3%	82,7%	17,3%	87,2%	12,8%	27
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	7	15	SIGMOID	2	CROSSENTROPY	0,0564	90,3%	9,7%	84,5%	15,5%	88,1%	11,9%	89,1%	10,9%	21
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	7	20	SIGMOID	1	CROSSENTROPY	0,0321	94,5%	5,5%	92,4%	7,6%	91,3%	8,7%	93,7%	6,3%	130
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	7	20	SIGMOID	2	CROSSENTROPY	0,033	92,6%	7,4%	91,3%	8,7%	89,9%	10,1%	92,0%	8,0%	132
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	7	25	SIGMOID	1	CROSSENTROPY	0,0422	92,5%	7,5%	91,3%	8,7%	88,4%	11,6%	91,7%	8,3%	359
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	7	25	SIGMOID	2	CROSSENTROPY	0,0272	93,7%	6,3%	89,2%	10,8%	90,3%	9,7%	92,5%	7,5%	279
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	7	30	SIGMOID	1	CROSSENTROPY	0,0401	91,5%	8,5%	91,7%	8,3%	85,9%	14,1%	90,7%	9,3%	483
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	7	30	SIGMOID	2	CROSSENTROPY	0,0395	93,5%	6,5%	89,2%	10,8%	88,8%	11,2%	92,1%	7,9%	546
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi- Newton	10	15	SIGMOID	1	CROSSENTROPY	0,0735	84,8%	15,2%	78,7%	21,3%	85,9%	14,1%	84,0%	16,0%	110

Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	10	15	SIGMOID	2	CROSSENTROPY	0,0614	86,5%	13,5%	84,1%	15,9%	83,8%	16,2%	85,7%	14,3%	91
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	10	20	SIGMOID	1	CROSSENTROPY	0,0677	88,4%	11,6%	83,8%	16,2%	81,9%	18,1%	86,7%	13,3%	260
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	10	20	SIGMOID	2	CROSSENTROPY	0,0624	88,2%	11,8%	81,6%	18,4%	85,6%	14,4%	86,8%	13,2%	344
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	10	25	SIGMOID	1	CROSSENTROPY	0,0347	94,9%	5,1%	90,3%	9,7%	90,3%	9,7%	93,5%	6,5%	671
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	10	25	SIGMOID	2	CROSSENTROPY	0,0546	90,0%	10,0%	86,6%	13,4%	87,0%	13,0%	89,1%	10,9%	609
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	10	30	SIGMOID	1	CROSSENTROPY	0,0334	95,1%	4,9%	91,3%	8,7%	89,2%	10,8%	93,7%	6,3%	1490
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	10	30	SIGMOID	2	CROSSENTROPY	0,0311	95,4%	4,6%	91,7%	8,3%	91,0%	9,0%	94,2%	5,8%	2013
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	15	15	SIGMOID	1	CROSSENTROPY	0,1776	53,1%	46,9%	50,5%	49,5%	55,6%	44,4%	53,1%	46,9%	136
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	15	15	SIGMOID	2	CROSSENTROPY	0,073	87,2%	12,8%	80,9%	19,1%	81,9%	18,1%	85,5%	14,5%	205
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	15	20	SIGMOID	1	CROSSENTROPY	0,0913	82,7%	17,3%	80,9%	19,1%	82,3%	17,7%	82,4%	17,6%	656
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	15	20	SIGMOID	2	CROSSENTROPY	0,1255	72,6%	27,4%	72,6%	27,4%	72,6%	27,4%	72,6%	27,4%	610
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	15	25	SIGMOID	1	CROSSENTROPY	0,0435	92,4%	7,6%	87,0%	13,0%	88,4%	11,6%	91,0%	9,0%	3251
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	15	25	SIGMOID	2	CROSSENTROPY	0,0837	83,7%	16,3%	80,9%	19,1%	80,1%	19,9%	82,8%	17,2%	1572
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	15	30	SIGMOID	1	CROSSENTROPY	0,0353	94,1%	5,9%	90,6%	9,4%	88,8%	11,2%	92,8%	7,2%	4937
Feed-Forward backpropagation	TRAINBFG	BFGS Quasi-Newton	15	30	SIGMOID	2	CROSSENTROPY	0,072	86,5%	13,5%	83,0%	17,0%	82,3%	17,7%	85,4%	14,6%	4504
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	3	15	SIGMOID	1	CROSSENTROPY	0,0502	89,2%	10,8%	87,7%	12,3%	88,8%	11,2%	88,9%	11,1%	1
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	3	15	SIGMOID	2	CROSSENTROPY	0,0449	91,7%	8,3%	87,4%	12,6%	88,1%	11,9%	90,5%	9,5%	0

Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	3	20	SIGMOID	1	CROSSENTROPY	0,0429	92,9%	7,1%	86,6%	13,4%	89,9%	10,1%	91,5%	8,5%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	3	20	SIGMOID	2	CROSSENTROPY	0,0528	90,4%	9,6%	84,1%	15,9%	83,8%	16,2%	88,5%	11,5%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	3	25	SIGMOID	1	CROSSENTROPY	0,0448	91,6%	8,4%	86,6%	13,4%	88,4%	11,6%	90,4%	9,6%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	3	25	SIGMOID	2	CROSSENTROPY	0,0388	93,0%	7,0%	88,8%	11,2%	87,7%	12,3%	91,6%	8,4%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	3	30	SIGMOID	1	CROSSENTROPY	0,0409	93,0%	7,0%	86,6%	13,4%	89,2%	10,8%	91,5%	8,5%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	3	30	SIGMOID	2	CROSSENTROPY	0,0296	95,7%	4,3%	91,7%	8,3%	90,6%	9,4%	94,3%	5,7%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	5	15	SIGMOID	1	CROSSENTROPY	0,0482	89,5%	10,5%	89,2%	10,8%	87,4%	12,6%	89,1%	10,9%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	5	15	SIGMOID	2	CROSSENTROPY	0,0639	87,0%	13,0%	81,9%	18,1%	87,0%	13,0%	86,2%	13,8%	1
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	5	20	SIGMOID	1	CROSSENTROPY	0,0438	92,8%	7,2%	85,6%	14,4%	87,4%	12,6%	90,9%	9,1%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	5	20	SIGMOID	2	CROSSENTROPY	0,0488	91,0%	9,0%	84,5%	15,5%	85,6%	14,4%	89,2%	10,8%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	5	25	SIGMOID	1	CROSSENTROPY	0,0396	92,9%	7,1%	90,6%	9,4%	86,6%	13,4%	91,6%	8,4%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	5	25	SIGMOID	2	CROSSENTROPY	0,0611	87,9%	12,1%	80,9%	19,1%	83,0%	17,0%	86,1%	13,9%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	5	30	SIGMOID	1	CROSSENTROPY	0,0396	93,3%	6,7%	86,6%	13,4%	86,3%	13,7%	91,3%	8,7%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	5	30	SIGMOID	2	CROSSENTROPY	0,0386	92,3%	7,7%	87,7%	12,3%	89,2%	10,8%	91,2%	8,8%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	7	15	SIGMOID	1	CROSSENTROPY	0,0617	88,1%	11,9%	86,6%	13,4%	79,4%	20,6%	86,6%	13,4%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	7	15	SIGMOID	2	CROSSENTROPY	0,0716	86,8%	13,2%	83,4%	16,6%	80,1%	19,9%	85,3%	14,7%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	7	20	SIGMOID	1	CROSSENTROPY	0,077	86,0%	14,0%	80,5%	19,5%	78,3%	21,7%	84,0%	16,0%	0

Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	7	20	SIGMOID	2	CROSSENTROPY	0,1015	77,6%	22,4%	76,5%	23,5%	76,5%	23,5%	77,3%	22,7%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	7	25	SIGMOID	1	CROSSENTROPY	0,0637	89,0%	11,0%	83,8%	16,2%	81,2%	18,8%	87,1%	12,9%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	7	25	SIGMOID	2	CROSSENTROPY	0,057	90,7%	9,3%	83,0%	17,0%	83,0%	17,0%	88,4%	11,6%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	7	30	SIGMOID	1	CROSSENTROPY	0,0578	90,1%	9,9%	84,8%	15,2%	83,4%	16,6%	88,3%	11,7%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	7	30	SIGMOID	2	CROSSENTROPY	0,0627	88,8%	11,2%	87,0%	13,0%	83,0%	17,0%	87,6%	12,4%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	10	15	SIGMOID	1	CROSSENTROPY	0,1122	73,3%	26,7%	68,6%	31,4%	71,1%	28,9%	72,3%	27,7%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	10	15	SIGMOID	2	CROSSENTROPY	0,1098	77,3%	22,7%	79,1%	20,9%	74,4%	25,6%	77,1%	22,9%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	10	20	SIGMOID	1	CROSSENTROPY	0,0799	84,3%	15,7%	78,7%	21,3%	82,7%	17,3%	83,2%	16,8%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	10	20	SIGMOID	2	CROSSENTROPY	0,1059	79,6%	20,4%	74,7%	25,3%	73,6%	26,4%	78,0%	22,0%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	10	25	SIGMOID	1	CROSSENTROPY	0,0806	85,5%	14,5%	79,4%	20,6%	82,7%	17,3%	84,2%	15,8%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	10	25	SIGMOID	2	CROSSENTROPY	0,1031	80,4%	19,6%	76,5%	23,5%	75,5%	24,5%	79,1%	20,9%	0
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	10	30	SIGMOID	1	CROSSENTROPY	0,0974	79,3%	20,7%	74,7%	25,3%	79,4%	20,6%	78,6%	21,4%	1
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	10	30	SIGMOID	2	CROSSENTROPY	0,0985	82,0%	18,0%	72,9%	27,1%	72,6%	27,4%	79,2%	20,8%	1
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	15	15	SIGMOID	1	CROSSENTROPY	0,1294	74,9%	25,1%	72,2%	27,8%	67,9%	32,1%	73,5%	26,5%	1
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	15	15	SIGMOID	2	CROSSENTROPY	0,1105	78,0%	22,0%	73,6%	26,4%	69,7%	30,3%	76,1%	23,9%	1
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	15	20	SIGMOID	1	CROSSENTROPY	0,1299	68,4%	31,6%	65,3%	34,7%	65,7%	34,3%	67,6%	32,4%	1
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	15	20	SIGMOID	2	CROSSENTROPY	0,1269	73,3%	26,7%	71,8%	28,2%	70,4%	29,6%	72,6%	27,4%	1

Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	15	25	SIGMOID	1	CROSSENTROPY	0,143	62,9%	37,1%	58,5%	41,5%	61,0%	39,0%	62,0%	38,0%	1
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	15	25	SIGMOID	2	CROSSENTROPY	0,1042	80,2%	19,8%	72,9%	27,1%	75,5%	24,5%	78,4%	21,6%	2
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	15	30	SIGMOID	1	CROSSENTROPY	0,1258	74,1%	25,9%	70,8%	29,2%	67,1%	32,9%	72,5%	27,5%	2
Feed-Forward backpropagation	TRAINRP	Resilient Backpropagation	15	30	SIGMOID	2	CROSSENTROPY	0,088	83,4%	16,6%	75,8%	24,2%	84,5%	15,5%	82,4%	17,6%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	3	15	SIGMOID	1	CROSSENTROPY	0,0647	86,5%	13,5%	86,6%	13,4%	85,6%	14,4%	86,4%	13,6%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	3	15	SIGMOID	2	CROSSENTROPY	0,0413	91,6%	8,4%	88,4%	11,6%	87,7%	12,3%	90,6%	9,4%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	3	20	SIGMOID	1	CROSSENTROPY	0,0437	90,4%	9,6%	89,2%	10,8%	85,6%	14,4%	89,5%	10,5%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	3	20	SIGMOID	2	CROSSENTROPY	0,0554	88,5%	11,5%	87,7%	12,3%	87,4%	12,6%	88,2%	11,8%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	3	25	SIGMOID	1	CROSSENTROPY	0,0426	91,9%	8,1%	88,4%	11,6%	92,4%	7,6%	91,4%	8,6%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	3	25	SIGMOID	2	CROSSENTROPY	0,0472	90,6%	9,4%	86,6%	13,4%	90,6%	9,4%	90,0%	10,0%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	3	30	SIGMOID	1	CROSSENTROPY	0,0436	92,2%	7,8%	93,1%	6,9%	86,6%	13,4%	91,5%	8,5%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	3	30	SIGMOID	2	CROSSENTROPY	0,0437	91,3%	8,7%	88,4%	11,6%	86,6%	13,4%	90,2%	9,8%	2
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	5	15	SIGMOID	1	CROSSENTROPY	0,0636	86,1%	13,9%	84,1%	15,9%	87,4%	12,6%	86,0%	14,0%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	5	15	SIGMOID	2	CROSSENTROPY	0,0657	86,8%	13,2%	85,2%	14,8%	83,4%	16,6%	86,0%	14,0%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	5	20	SIGMOID	1	CROSSENTROPY	0,0397	93,0%	7,0%	88,8%	11,2%	85,2%	14,8%	91,2%	8,8%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	5	20	SIGMOID	2	CROSSENTROPY	0,0473	91,5%	8,5%	89,9%	10,1%	85,6%	14,4%	90,4%	9,6%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	5	25	SIGMOID	1	CROSSENTROPY	0,0505	88,7%	11,3%	90,6%	9,4%	88,1%	11,9%	88,9%	11,1%	1

Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	5	25	SIGMOID	2	CROSSENTROPY	0,0548	90,2%	9,8%	87,4%	12,6%	87,0%	13,0%	89,3%	10,7%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	5	30	SIGMOID	1	CROSSENTROPY	0,032	95,3%	4,7%	92,8%	7,2%	86,6%	13,4%	93,6%	6,4%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	5	30	SIGMOID	2	CROSSENTROPY	0,0495	90,4%	9,6%	87,4%	12,6%	88,4%	11,6%	89,7%	10,3%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	7	15	SIGMOID	1	CROSSENTROPY	0,1238	71,0%	29,0%	69,0%	31,0%	70,0%	30,0%	70,5%	29,5%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	7	15	SIGMOID	2	CROSSENTROPY	0,062	86,3%	13,7%	84,8%	15,2%	85,2%	14,8%	85,9%	14,1%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	7	20	SIGMOID	1	CROSSENTROPY	0,0707	86,9%	13,1%	86,6%	13,4%	84,5%	15,5%	86,5%	13,5%	1
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	7	20	SIGMOID	2	CROSSENTROPY	0,0612	89,0%	11,0%	83,8%	16,2%	84,1%	15,9%	87,5%	12,5%	2
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	7	25	SIGMOID	1	CROSSENTROPY	0,0611	88,5%	11,5%	83,4%	16,6%	83,4%	16,6%	87,0%	13,0%	4
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	7	25	SIGMOID	2	CROSSENTROPY	0,0428	92,1%	7,9%	89,9%	10,1%	92,1%	7,9%	91,8%	8,2%	4
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	7	30	SIGMOID	1	CROSSENTROPY	0,0498	90,3%	9,7%	88,4%	11,6%	90,6%	9,4%	90,1%	9,9%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	7	30	SIGMOID	2	CROSSENTROPY	0,0592	88,4%	11,6%	86,6%	13,4%	86,6%	13,4%	87,9%	12,1%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	10	15	SIGMOID	1	CROSSENTROPY	0,1349	71,4%	28,6%	76,9%	23,1%	70,0%	30,0%	72,0%	28,0%	2
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	10	15	SIGMOID	2	CROSSENTROPY	0,054	88,7%	11,3%	89,2%	10,8%	86,3%	13,7%	88,4%	11,6%	4
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	10	20	SIGMOID	1	CROSSENTROPY	0,0934	80,3%	19,7%	74,4%	25,6%	78,7%	21,3%	79,1%	20,9%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	10	20	SIGMOID	2	CROSSENTROPY	0,0646	85,7%	14,3%	87,0%	13,0%	84,8%	15,2%	85,8%	14,2%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	10	25	SIGMOID	1	CROSSENTROPY	0,0711	85,1%	14,9%	83,4%	16,6%	80,9%	19,1%	84,2%	15,8%	4
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	10	25	SIGMOID	2	CROSSENTROPY	0,0524	88,9%	11,1%	88,1%	11,9%	86,6%	13,4%	88,4%	11,6%	6

Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	10	30	SIGMOID	1	CROSSENTROPY	0,0592	88,5%	11,5%	86,3%	13,7%	88,8%	11,2%	88,2%	11,8%	4
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	10	30	SIGMOID	2	CROSSENTROPY	0,0597	87,5%	12,5%	87,0%	13,0%	86,3%	13,7%	87,3%	12,7%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	15	15	SIGMOID	1	CROSSENTROPY	0,1675	61,0%	39,0%	59,6%	40,4%	63,9%	36,1%	61,2%	38,8%	2
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	15	15	SIGMOID	2	CROSSENTROPY	0,1686	60,2%	39,8%	60,3%	39,7%	60,6%	39,4%	6,3%	93,7%	2
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	15	20	SIGMOID	1	CROSSENTROPY	0,1091	77,4%	22,6%	73,3%	26,7%	75,5%	24,5%	76,5%	23,5%	4
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	15	20	SIGMOID	2	CROSSENTROPY	0,0791	84,6%	15,4%	82,7%	17,3%	84,5%	15,5%	84,3%	15,7%	5
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	15	25	SIGMOID	1	CROSSENTROPY	0,1178	73,2%	26,8%	74,7%	25,3%	67,5%	32,5%	72,6%	27,4%	3
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	15	25	SIGMOID	2	CROSSENTROPY	0,075	85,0%	15,0%	84,8%	15,2%	86,3%	13,7%	85,2%	14,8%	6
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	15	30	SIGMOID	1	CROSSENTROPY	0,0637	88,9%	11,1%	84,1%	15,9%	83,0%	17,0%	87,3%	12,7%	7
Feed-Forward backpropagation	TRAINCGP	Polak Ribiere conjugate gradients	15	30	SIGMOID	2	CROSSENTROPY	0,145	65,9%	34,1%	65,7%	34,3%	60,6%	39,4%	65,1%	34,9%	4
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	3	15	SIGMOID	1	CROSSENTROPY	0,0402	93,0%	7,0%	90,3%	9,7%	88,4%	11,6%	91,9%	8,1%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	3	15	SIGMOID	2	CROSSENTROPY	0,0602	88,0%	12,0%	84,5%	15,5%	81,2%	18,8%	86,5%	13,5%	7
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	3	20	SIGMOID	1	CROSSENTROPY	0,0353	92,9%	7,1%	91,0%	9,0%	93,9%	6,1%	92,7%	7,3%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	3	20	SIGMOID	2	CROSSENTROPY	0,0375	93,1%	6,9%	89,5%	10,5%	85,9%	14,1%	91,5%	8,5%	2
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	3	25	SIGMOID	1	CROSSENTROPY	0,042	93,0%	7,0%	89,9%	10,1%	86,3%	13,7%	91,5%	8,5%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	3	25	SIGMOID	2	CROSSENTROPY	0,0459	90,9%	9,1%	86,6%	13,4%	89,2%	10,8%	90,0%	10,0%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	3	30	SIGMOID	1	CROSSENTROPY	0,0588	88,3%	11,7%	89,2%	10,8%	86,3%	13,7%	88,1%	11,9%	1

Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	3	30	SIGMOID	2	CROSSENTROPY	0,0438	90,9%	9,1%	87,7%	12,3%	89,9%	10,1%	90,2%	9,8%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	5	15	SIGMOID	1	CROSSENTROPY	0,0418	91,8%	8,2%	89,5%	10,5%	87,4%	12,6%	90,8%	9,2%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	5	15	SIGMOID	2	CROSSENTROPY	0,0455	91,6%	8,4%	89,2%	10,8%	86,3%	13,7%	90,5%	9,5%	2
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	5	20	SIGMOID	1	CROSSENTROPY	0,0529	87,8%	12,2%	88,1%	11,9%	85,9%	14,1%	87,5%	12,5%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	5	20	SIGMOID	2	CROSSENTROPY	0,0506	89,9%	10,1%	89,5%	10,5%	97,4%	2,6%	89,5%	10,5%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	5	25	SIGMOID	1	CROSSENTROPY	0,0626	86,9%	13,1%	85,2%	14,8%	86,3%	13,7%	86,6%	13,4%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	5	25	SIGMOID	2	CROSSENTROPY	0,0482	90,3%	9,7%	85,2%	14,8%	93,1%	6,9%	90,0%	10,0%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	5	30	SIGMOID	1	CROSSENTROPY	0,0419	91,1%	8,9%	92,1%	7,9%	89,5%	10,5%	91,0%	9,0%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	5	30	SIGMOID	2	CROSSENTROPY	0,0518	89,4%	10,6%	85,9%	14,1%	84,5%	15,5%	88,1%	11,9%	2
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	7	15	SIGMOID	1	CROSSENTROPY	0,1035	77,1%	22,9%	75,5%	24,5%	75,1%	24,9%	76,5%	23,5%	1
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	7	15	SIGMOID	2	CROSSENTROPY	0,062	87,2%	12,8%	83,4%	16,6%	83,0%	17,0%	86,0%	14,0%	2
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	7	20	SIGMOID	1	CROSSENTROPY	0,0423	91,6%	8,4%	93,1%	6,9%	88,4%	11,6%	91,3%	8,7%	3
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	7	20	SIGMOID	2	CROSSENTROPY	0,0702	86,2%	13,8%	82,3%	17,7%	85,9%	14,1%	85,6%	14,4%	2
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	7	25	SIGMOID	1	CROSSENTROPY	0,0449	92,5%	7,5%	87,4%	12,6%	91,7%	8,3%	91,6%	8,4%	3
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	7	25	SIGMOID	2	CROSSENTROPY	0,0867	81,7%	18,3%	83,4%	16,6%	81,9%	18,1%	82,0%	18,0%	2
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	7	30	SIGMOID	1	CROSSENTROPY	0,054	90,1%	9,9%	87,7%	12,3%	90,3%	9,7%	89,8%	10,2%	3
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	7	30	SIGMOID	2	CROSSENTROPY	0,0442	91,3%	8,7%	89,5%	10,5%	89,9%	10,1%	90,8%	9,2%	3

Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	10	15	SIGMOID	1	CROSSENTROPY	0,0995	81,3%	18,7%	79,4%	20,6%	78,0%	22,0%	80,5%	19,5%	2
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	10	15	SIGMOID	2	CROSSENTROPY	0,1348	71,3%	28,7%	69,0%	31,0%	65,3%	34,7%	70,0%	30,0%	4
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	10	20	SIGMOID	1	CROSSENTROPY	0,0949	80,3%	19,7%	79,8%	20,2%	75,5%	24,5%	79,5%	20,5%	2
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	10	20	SIGMOID	2	CROSSENTROPY	0,065	86,4%	13,6%	83,4%	16,6%	81,2%	18,8%	85,2%	14,8%	5
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	10	25	SIGMOID	1	CROSSENTROPY	0,0489	91,0%	9,0%	91,7%	8,3%	89,2%	10,8%	90,8%	9,2%	8
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	10	25	SIGMOID	2	CROSSENTROPY	0,0748	82,7%	17,3%	83,8%	16,2%	80,1%	19,9%	82,4%	17,6%	3
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	10	30	SIGMOID	1	CROSSENTROPY	0,0659	87,0%	13,0%	85,6%	14,4%	81,6%	18,4%	86,0%	14,0%	4
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	10	30	SIGMOID	2	CROSSENTROPY	0,046	90,9%	9,1%	87,4%	12,6%	87,7%	12,3%	89,9%	10,1%	4
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	15	15	SIGMOID	1	CROSSENTROPY	0,1649	57,4%	42,6%	49,5%	50,5%	56,0%	44,0%	56,0%	44,0%	3
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	15	15	SIGMOID	2	CROSSENTROPY	0,1871	54,9%	45,1%	53,8%	46,2%	53,4%	46,6%	54,5%	45,5%	6
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	15	20	SIGMOID	1	CROSSENTROPY	0,1602	59,8%	40,2%	56,7%	43,3%	63,5%	36,5%	59,9%	40,1%	3
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	15	20	SIGMOID	2	CROSSENTROPY	0,087	83,6%	16,4%	81,2%	18,8%	74,4%	25,6%	81,9%	18,1%	6
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	15	25	SIGMOID	1	CROSSENTROPY	0,0758	84,4%	15,6%	80,9%	19,1%	85,6%	14,4%	84,1%	15,9%	7
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	15	25	SIGMOID	2	CROSSENTROPY	0,1068	79,7%	20,3%	78,0%	22,0%	75,1%	24,9%	78,8%	21,2%	6
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	15	30	SIGMOID	1	CROSSENTROPY	0,1186	75,3%	24,7%	72,2%	27,8%	74,0%	26,0%	74,6%	25,4%	6
Feed-Forward backpropagation	TRAINCGB	Conjugate gradient with powell/beale restarts	15	30	SIGMOID	2	CROSSENTROPY	0,0824	83,1%	16,9%	82,3%	17,7%	80,9%	19,1%	82,7%	17,3%	6