APPENDIX

FOR FARM MECHANIZATION PLANNING

Table A-211. Standard value of work rate: part 1

Kind of work	Implement			Tractor horse power	Work rate & others								
	Name	Dimension	Width		Operation width	Speed of Travel	Field Efficiency	Effective Field Capacity	Work capacity	Worker	Fuel	Fuel Consumption	
Symbol					W	V	FE	EFC	WC	Nw		FRh	FRa
Unit	-	-	m	PS	m	km/h	%	ha/h	h/ha	-	-	L/h	L/ha
Manure Spreader	Manure loader	bucket 0.1m3	75kg	11-24				0.18	5.6	1	L	3.5	19.5
		0.35m3	270kg	25-				0.79	1.3	1	L	4.5	5.7
	Manure loader (self P.)	0.14m3	100kg	14				0.24	4.2	1	G	4.0	16.7
		0.31m3	240kg	30				0.57	1.8	1	G	8.0	14.0
	Manure Spreader	horizontal beater	1t	20-30	1.8	4.0	60	0.43	2.3	1	L	2.5	5.8
			2t	30-40	2.2	5.0	60	0.66	1.5	1	L	3.0	4.5
			3t	40-50	2.4	5.0	60	0.72	1.4	1	L	3.5	4.9
			5t	50-	3.0	6.0	60	1.08	0.9	1	L	4.0	3.7
		vertical beater	1t	30-40	8.0	4.0	60	1.92	0.5	1	L	3.5	1.8
			3t	50	10.0	4.0	60	2.40	0.4	1	L	4.0	1.7
Ferilizer, etc.	slurry injector	subsoiler: 1200L		35-45	1.2	3.0	60	0.180	5.6	1	L	8.0	44.4
		2000L		60-	2.4	3.0	50	0.36	2.8	1	L	11.0	30.6
		3000l		70-	2.4	4.0	50	0.48	2.1	1	L	12.5	26.0
		rotary: 1100L		40-	2.4	2.5	50	0.300	3.3	1	L	8.0	26.7
	vacuum car	500L		-20	2.1	4.0	60	0.50	2.0	1	L	3.5	6.9
		1200L		30-40	2.4	4.0	60	0.58	1.7	1	L	12.5	21.7
	Slurry spreader	2000L		50-	2.6	6.0	60	0.94	1.1	1	L	10.0	10.7
		3000L		70	2.7	6.0	60	0.97	1.0	1	L	12.5	12.9
	for tiller	pull: 0.3m3		5-	1.2	4.0	60	0.240	4.2	1	G	1.5	6.3
	Lime sower	0.3m3		15-20	1.4	5.5	50	0.39	2.6	2	L	2.0	5.2
		0.4m3		20-30	1.8	5.5	50	0.50	2.0	2	L	2.5	5.1
		0.5m3		30-40	2.4	5.5	50	0.66	1.5	2	L	3.0	4.5
		0.6m3		50-	2.7	5.5	50	0.74	1.3	2	L	3.5	4.7
	Broadcaster	Centrifugal	100L	15-20	5.0	4.0	55	1.10	0.9	2	L	1.5	1.4
			200L	20-30	6.0	5.0	55	1.65	0.6	2	L	2.0	1.2
			300L	30-	6.0	6.0	55	1.98	0.5	2	L	2.5	1.3
		Reciprocating	200L	25-	8.0	4.0	55	1.76	0.6	2	L	2.0	1.1
			400L	40-	10.0	6.0	55	3.30	0.3	2	L	3.0	0.9
		Pulling	10000L	30-	8.0	4.0	55	1.76	0.6	2	L	2.5	1.4
Pan-breaker, trencher	Subsoiler	depth 40cm	1row	30-40	3.0	2.5	80	0.60	1.7	1	L	6.5	10.8
					1.5	2.5	80	0.30	3.3	1	L	6.5	21.7
		30cm	2row	40-50	4.0	2.5	80	0.80	1.3	1	L	8.0	10.0
					3.0	2.5	80	0.60	1.7	1	L	8.0	13.3
		50cm	2row	60-	4.0	3.0	80	0.96	1.0	1	L	11.0	11.5
					3.0	3.0	80	0.72	1.4	1	L	11.0	15.3
	Oscillating subsoiler	30-40cm	1row	15-20	3.0	0.8	80	0.19	5.2	1	L	3.0	15.6
					1.5	0.8	80	0.10	10.4	1	L	3.0	31.3
		30-40cm	2row	35-	4.0	0.8	80	0.26	3.9	1	L	6.5	25.4
					3.0	0.8	80	0.19	5.2	1	L	6.5	33.9
	Chain trencher (self p.)	Depth 100cm	10cm	5-	1.0	0.2	85	0.02	58.8	1	G	2.0	117.6
			15cm	10-	1.0	0.4	85	0.03	29.4	1	L	4.0	117.6
			18cm	15-	1.0	0.5	85	0.04	23.5	1	L	5.0	117.6
	Chain trencher	Depth 120cm	1row	20-40	1.0	0.3	85	0.02	47.1	1	L	4.5	211.8
			2row	40-60	2.0	0.3	85	0.04	23.5	1	L	5.0	117.6
	Rotary trencher	Depth 30cm	40cm	25-	5.0	1.0	80	0.40	2.5	1	L	4.5	11.3
Tillage	Japanese plow for tractor	10 x 2	0.50	15-20	0.5	5.0	75	0.19	5.3	1	L	3.0	16.0
		10 x 3	0.75	20-30	0.8	5.0	75	0.28	3.6	1	L	3.5	12.4
		10 x 4	1.00	30-50	1.0	5.0	75	0.38	2.7	1	L	5.0	13.3

from fm-211.xls

Table A-211. Standard value of work rate: part 2

Kind of work	Implement			Tractor horse power	Work rate & others								
	Name	Dimension	Width		Operation width	Speed of Travel	Field Efficiency	Effective Field Capacity	Work capacity	Worker	Fuel	Fuel Consumption	
Symbol			Wt		W	V	FE	EFC	WC	Nw		FRh	FRa
Unit	-	-	m	PS	m	km/h	%	ha/h	h/ha	-	-	L/h	L/ha
Tillage	Bottom plow	14 x 1	0.35	20-30	0.4	5.0	70	0.12	8.2	1	L	3.5	28.6
		16 x 1	0.40	30-40	0.4	5.0	70	0.14	7.1	1	L	5.0	35.7
		18 x 1	0.45	40-50	0.5	5.0	70	0.16	6.3	1	L	6.5	41.3
		20 x 1	0.50	50-60	0.5	5.0	70	0.18	5.7	1	L	7.5	42.9
		22 x 1	0.55	60-	0.6	5.0	70	0.19	5.2	1	L	9.0	46.8
		14 x 2	0.70	30-40	0.7	5.0	70	0.25	4.1	1	L	5.0	20.4
		16 x 2	0.80	40-50	0.8	5.0	70	0.28	3.6	1	L	6.5	23.2
		18 x 2	0.90	60-	0.9	5.0	70	0.32	3.2	1	L	9.0	28.6
		14 x 3	1.05	50-60	1.1	5.0	70	0.37	2.7	1	L	7.5	20.4
		16 x 3	1.20	60-80	1.2	5.0	70	0.42	2.4	1	L	10.0	23.8
		16 x 5	2.00	90-	2.0	5.0	70	0.70	1.4	1	L	12.0	17.1
	Drive disk	One way	5row	20-30	1.3	3.0	70	0.27	3.7	1	L	1.5	5.5
			7row	30-40	1.6	3.0	70	0.34	3.0	1	L	2.0	6.0
			8row	40-	2.0	3.0	70	0.42	2.4	1	L	2.5	6.0
		Two way	4row	20-25	1.4	1.8	80	0.20	5.0	1	L	3.0	14.9
			6row	25-30	1.9	1.8	80	0.27	3.7	1	L	4.0	14.6
			8row	30-40	2.3	1.8	80	0.33	3.0	1	L	4.5	13.6
Harrow, leveller	Disk harrow	18x24		25-30	1.7	5.0	80	0.68	1.5	1	L	3.5	5.1
		18x20		30-40	1.8	5.0	80	0.72	1.4	1	L	5.0	6.9
		18x24		50-60	2.1	5.0	80	0.84	1.2	1	L	7.5	8.9
		20x26		60-	2.3	5.0	80	0.92	1.1	1	L	9.0	9.8
	Tooth harrow	30x2		15-25	2.3	6.0	70	0.97	1.0	1	L	3.0	3.1
		30x3		30-40	3.4	6.0	70	1.43	0.7	1	L	5.0	3.5
		30x4		40-	4.5	6.0	70	1.89	0.5	1	L	6.5	3.4
	Culti-packer	1.8m		20-30	1.8	4.0	70	0.50	2.0	1	L	2.0	4.0
		2.4m		40-50	2.4	4.0	70	0.67	1.5	1	L	3.0	4.5
		2.7m		60-	2.7	4.0	70	0.76	1.3	1	L	4.0	5.3
Rotary tillage	Rotary harrow			15-20	1.0	3.0	80	0.24	4.2	1	L	3.0	12.5
				25-30	1.4	3.0	80	0.34	3.0	1	L	4.0	11.9
				40-50	1.8	3.0	80	0.43	2.3	1	L	6.5	15.0
				50-60	2.0	3.0	80	0.48	2.1	1	L	7.5	15.6
				60-	2.4	3.0	80	0.58	1.7	1	L	9.0	15.6
	Rotary tiller			-8	0.5	1.4	85	0.05	18.7	1	G	1.5	28.0
				8-12	0.6	1.4	85	0.07	14.0	1	L	3.0	42.0
	Rotary (upland)		0.8m	-15	0.8	2.5	80	0.16	6.3	1	L	3.0	18.8
			1m	15-20	1.0	2.5	80	0.20	5.0	1	L	3.5	17.5
			1.2m	20-25	1.2	2.5	80	0.24	4.2	1	L	4.0	16.7
			1.4m	25-30	1.4	2.5	80	0.28	3.6	1	L	4.5	16.1
			1.6m	30-40	1.6	2.5	80	0.32	3.1	1	L	6.5	20.3
			1.8m	40-50	1.8	2.5	80	0.36	2.8	1	L	8.0	22.2
			2m	50-60	2.0	2.5	80	0.40	2.5	1	L	10.0	25.0
			2.3m	70-	2.3	2.5	80	0.46	2.2	1	L	12.5	27.2

Table A-211. Standard value of work rate: part 3

Kind of work	Implement			Tractor horse power	Work rate & others								
	Name	Dimension	Width		Operation width	Speed of Travel	Field Efficiency	Effective Field Capacity	Work capacity	Worker	Fuel	Fuel Consumption	
Symbol			Wt		W	V	FE	EFC	WC	Nw		FRh	FRa
Unit	-	-	m	PS	m	km/h	%	ha/h	h/ha	-	-	L/h	L/ha
Rotary tillage	Rotary (paddy field)		0.8m	-15	0.8	1.4	75	0.08	11.9	1	L	3.5	41.7
			1m	15-20	1.0	1.4	75	0.11	9.5	1	L	4.0	38.1
			1.2m	20-25	1.2	1.4	75	0.13	7.9	1	L	4.5	35.7
			1.4m	25-30	1.4	1.4	75	0.15	6.8	1	L	5.0	34.0
			1.6m	30-40	1.6	1.9	70	0.21	4.7	1	L	6.5	30.5
			1.8m	40-50	1.8	1.9	70	0.24	4.2	1	L	8.0	33.4
			2m	50-60	2.0	2.0	70	0.28	3.6	1	L	10.0	35.7
			2.4m	60-	2.4	2.0	70	0.34	3.0	1	L	11.0	32.7
	Rotary deep type	Depth 40cm		40-50	1.5	0.5	80	0.06	16.7	1	L	8.0	133.3
		60cm		70-100	1.6	0.5	80	0.06	15.6	1	L	14.5	226.6
Fertilizer, seeder	Fertilizer, seeder by tiller			3-6	0.6	1.5	75	0.068	14.81	1	G	1.0	14.8
				8-12	1.2	1.5	65	0.117	8.55	1	L	2.0	17.1
	Drill seeder	Mount type	7row	20-30	1.4	3.5	55	0.270	3.71	2	L	2.5	9.3
			13row	30-40	2.0	3.5	55	0.385	2.60	2	L	3.5	9.1
			17row	50-	2.6	3.5	55	0.501	2.00	2	L	4.5	9.0
		Drawing type	18row	40-	2.7	4.0	60	0.648	1.54	2	L	4.5	6.9
			24row	60-	3.6	4.0	60	0.864	1.16	2	L	6.9	8.0
	Rotary seeder	Mount type	6row	40-	1.8	2.3	60	0.248	4.03	2	L	6.5	26.2
			10row	60-	2.4	2.3	60	0.331	3.02	2	L	9.8	29.6
	Pneumatic seeder	2row		30-40	1.2	5.4	55	0.356	2.81	2	L	5.0	14.0
		4row		40-	2.4	5.4	55	0.713	1.40	2	L	6.5	9.1
	Corn planter	Mount type	2row	20-30	1.2	2.0	55	0.132	7.58	2	L	3.0	22.7
			2row	20-30	1.4	2.0	55	0.154	6.49	2	L	3.0	19.5
			3row	30-	1.8	2.0	55	0.198	5.05	2	L	4.0	20.2
			3row	30-	2.1	2.0	55	0.231	4.33	2	L	4.0	17.3
			4row	40-	2.4	2.0	55	0.264	3.79	2	L	5.5	20.8
			4row	40-	2.8	2.0	55	0.308	3.25	2	L	5.5	17.9
Transplanter	Transplanter	by tiller	1row	6-8	0.6	0.5	80	0.022	46.30	2	G	1.0	46.3
	Transplanter		2row	30-	1.2	1.2	60	0.086	11.57	3	L	2.5	28.9
			4row	50-	2.4	1.2	60	0.173	5.79	5	L	3.5	20.3
Cultivating	Ridger	2row		20-30	1.2	3.5	70	0.294	3.40	1	L	3.0	10.2
		3row		30-	1.8	3.5	70	0.441	2.27	1	L	4.0	9.1
	Cultivator	2row		15-25	1.2	3.5	75	0.315	3.17	1	L	2.5	7.9
		3row		25-	1.8	3.5	75	0.473	2.12	1	L	3.0	6.3
		4row		30	2.4	3.5	75	0.630	1.59	1	L	4.0	6.3
	Rotary cultivator	2row		20-	1.2	3.5	75	0.315	3.17	1	L	3.0	9.5
		3row		25-	1.8	3.5	75	0.473	2.12	1	L	3.5	7.4
		4row		35-	2.4	3.5	75	0.630	1.59	1	L	5.0	7.9
Puddling	Paddy Harrow	1.8m		13-20	1.8	3.2	85	0.490	2.04	1	L	3.0	6.1
		2m		20-25	2.0	3.2	85	0.544	1.84	1	L	3.5	6.4
		2.4m		25-30	2.4	3.2	85	0.653	1.53	1	L	4.0	6.1
		2.8m		25035	2.8	3.2	85	0.762	1.31	1	L	5.0	6.6
		3.3m		40-	3.3	3.2	85	0.898	1.11	1	L	6.5	7.2
		3.3m		40-	3.3	4.0	85	1.122	0.89	1	L	6.5	5.8
	Rotary +Plank	2.4m	1m	5-6	1.0	2.9	80	0.232	4.31	1	G	3.0	12.9
		3.5m	1.2m	8-12	1.2	3.0	80	0.288	3.47	1	L	3.0	10.4

Table A-211. Standard value of work rate: part 4

Kind of work	Implement			Tractor horse power	Work rate & others								
	Name	Dimension	Width		Operation width	Speed of Travel	Field Efficiency	Effective Field Capacity	Work capacity	Worker	Fuel	Fuel Consumption	
Symbol			Wt		W	V	FE	EFC	WC	Nw		FRh	FRa
Unit	-	-	m	PS	m	km/h	%	ha/h	h/ha	-	-	L/h	L/ha
Rice-transplant	Rice transplanter	Walking type	2row	2.2	0.6	1.5	65	0.059	17.09	2	G	1.0	17.1
			3row	2.7	0.9	1.5	65	0.088	11.40	2	G	1.0	11.4
			4row	3.0	1.2	1.5	65	0.117	8.55	2	G	1.2	10.3
			6row	3.1	1.8	1.5	65	0.176	5.70	2	G	1.2	6.8
		Riding type	4row	3.7	1.2	2.0	60	0.144	6.94	2	G	1.5	10.4
			5row	4.5	1.5	2.0	60	0.180	5.56	2	G	1.8	10.0
			6row	5.0	1.8	2.0	60	0.216	4.63	2	G	2.0	9.3
		high speed type	4row	5.8	1.2	2.5	60	0.180	5.56	2	G	2.5	13.9
			5row	5.8	1.5	2.5	60	0.225	4.44	2	G	2.5	11.1
			6row	7.7	1.8	2.5	60	0.270	3.70	2	G	3.1	11.5
			8row	7.7	2.4	2.5	60	0.360	2.78	2	G	3.3	9.2
Chemical application	Knap-sack power sprayer	Duster			6.0	1.2	65	0.468	2.14	1	M	0.8	1.7
		Granular			10.0	1.2	65	0.780	1.28	1	M	0.8	1.0
		Mist			6.0	1.2	65	0.468	2.14	1	M	0.8	1.7
		Long hose duster			30.0	1.2	45	1.620	0.62	2	M	0.8	0.5
					40.0	1.2	45	2.160	0.46	2	M	0.8	0.4
	Boom sprayer	200L		15-25	4.5	2.5	65	0.731	1.37	2	L	2.0	2.7
		300L		25-35	6.5	2.5	65	1.056	0.95	2	L	3.0	2.8
		400L		40-	8.0	2.5	65	1.300	0.77	2	L	3.5	2.7
					8.0	3.5	65	1.820	0.55	2	L	3.5	1.9
	Mount type sprayer	Long hose duster		40-	100.0	3.0	65	19.500	0.05	2	L	4.0	0.2
		Levy sprayer		30-40	10.0	3.0	65	1.950	0.51	2	L	2.5	1.3
				40-	30.0	3.0	65	5.850	0.17	2	L	3.0	0.5
					30.0	3.5	65	6.825	0.15	2	L	3.0	0.4
	Sprayer	20L/min			3.0	2.0	65	0.390	2.56	2	G	1.0	2.6
Harvest	Binder	1row		1.8	0.3	2.0	75	0.045	22.22	1	G	0.8	17.8
		2row		3.0	0.6	2.0	75	0.090	11.11	1	G	1.5	16.7
	Self-feeding Combine (for wheat x 2)	bag type	2row	6-10	0.6	1.3	70	0.055	18.32	2	L	1.8	33.0
			2row	12-14	0.6	2.2	70	0.092	10.82	2	L	2.5	27.1
			3row	18-22	0.9	2.6	70	0.164	6.11	2	L	3.5	21.4
			4row	29-32	1.2	3.0	70	0.252	3.97	2	L	5.0	19.8
			5row	46	1.5	3.0	70	0.315	3.17	2	L	6.5	20.6
		tank type	5row	46	1.5	3.0	65	0.293	3.42	1	L	6.5	22.2
	Combine (for wheat x 2)	tank type	2m	60-	2.0	3.0	65	0.390	2.56	2	L	10.0	25.6
			2m	60-	2.0	3.6	65	0.468	2.14	2	L	10.0	21.4
			3m	107-	3.0	3.0	65	0.585	1.71	2	L	19.0	32.5
	Bean harvester	Walking type	1row	1.8	0.7	3.2	65	0.146	6.87	1	G	1.0	6.9
	Soybean harvester		2row	15	1.4	2.5	65	0.228	4.40	2	L	3.5	15.4
	Thresher			6				0.200	5.00	2	L	2.0	10.0
	Soybean sheller			5				0.190	5.26	3	G	3.0	15.8
	Husker	Roll width	6.4 cm					0.100	10.00	2	E	1.5kW	
			7.6 cm					0.200	5.00	2	E	1.9kW	
			10.2cm					0.250	4.00	2	E	1.9kW	
			12.7cm					0.333	3.00	2	E	3.7kW	

Table A-212. Standard value of work rate (for Vegetable and Fruit)

Vegetable

Kind of work	Implement			Tractor horse power	Work rate & others								
	Name	Dimension	Width		Operation width	Speed of Travel	Field Efficiency	Effective Field Capacity	Work capacity	Worker	Fuel	Fuel Consumption	
Symbol			Wt		W	V	FE	EFC	WC	Nw		FRh	FRa
Unit	-	-	m	PS	m	km/h	%	ha/h	h/ha	-	-	L/h	L/ha
Ridging	Ridge	Walking type	1row	4-6	0.6	3	75	0.135	7.41	1	G	1.0	7.4
			2row	8-12	1.2	3	75	0.270	3.70	1	G	1.5	5.6
Mulch	Mulcher	Walking type		6-8	0.6	1.4	75	0.063	15.87	1	L	1.0	15.9
				6-8	0.9	1.4	75	0.095	10.58	1	L	1.0	10.6
				15-	0.9	1.6	75	0.108	9.26	1	L	2.0	18.5
				15-	1.35	1.6	75	0.162	6.17	1	L	2.5	15.4
				20-	1.8	1.6	75	0.216	4.63	1	L	2.5	11.6
Trans-plant	Transplanter	1 row disk		6-8	0.6	0.45	80	0.022	46.30	2	G	1.5	69.4
		2 row disk		30-	1.2	1.2	60	0.086	11.57	3	L	3.5	40.5
		4 row disk		30-	2.4	1.2	60	0.173	5.79	3	L	4.0	23.1
	Potato planter	Semi-auto		25-	1.2	2	60	0.144	6.94	3	L	3.0	20.8
		Full-auto		25-	1.2	2.5	60	0.180	5.56	2	L	3.5	19.4
Soil disinfection	Soil disinfector	1 row			0.3	3.5	70	0.074	13.61	1	G	1.0	13.6
		2 row		4-6	0.6	3.5	75	0.158	6.35	1	G	1.0	6.3
		4 row		15-	1.2	3.5	75	0.315	3.17	2	L	2.5	7.9
		6 row		20-	1.8	3.5	75	0.473	2.12	2	L	3.0	6.3
Cultivation	Ridge	1row		4-6	0.6	2.5	75	0.113	8.89	1	G	1.0	8.9
		1row		8-12	0.6	3.5	75	0.158	6.35	1	G	1.5	9.5
	Cultivator	1row		4-6	0.6	2.5	75	0.113	8.89	1	G	1.0	8.9
	Rotary culti	1row		4-6	0.6	1	75	0.045	22.22	1	G	1.0	22.2
				4-6	0.9	1.2	75	0.081	12.35	1	G	1.0	12.3
	Rotary plow			8-12	0.9	1.3	75	0.088	11.40	1	G	1.5	17.1

Fruit

Protection	Speed sprayer	50L/min		18	10	2.0	75	1.500	0.67	1	L	5.0	3.3
		90L/min		35	14	2.7	75	2.835	0.35	1	L	6.0	2.1
		160L/min		53	16	3.2	75	3.840	0.26	1	L	10.0	2.6
Cultivation	Mower	Shoulder		1.2-1.5	2.2	0.3	80	0.044	22.73	1	M	0.5	11.4
	Rotary mower			5-6	0.6	3.0	80	0.144	6.94	1	G	2.0	13.9
				6-7	0.75	3.0	80	0.180	5.56	1	G	2.0	11.1

Table A-213. Standard value of work rate (for Forage crop)

Kind of work	Implement			Tractor horse power	Work rate & others								
	Name	Dimension	Width		Operation width	Speed of Travel	Field Efficiency	Effective Field Capacity	Work capacity	Worker	Fuel	Fuel Consumption	
Symbol			Wt		W	V	FE	EFC	WC	Nw		FRh	FRa
Unit	-	-	m	PS	m	km/h	%	ha/h	h/ha	-	-	L/h	L/ha
Processing	Trencher	Chain type		6-10	1.0	0.1	70	0.01	119.0	1	G	1.5	178.6
	Mower	Walking type	Rotary	3-6	0.7	3.0	60	0.13	7.9	1	G	1.0	7.9
			Recipro.	3-6	0.9	3.0	60	0.16	6.2	1	G	1.0	6.2
		Riding type	Recipro.	25-	1.5	6.5	65	0.63	1.6	1	L	3.5	5.5
				40-	1.8	6.5	65	0.76	1.3	1	L	6.5	8.5
				40-	2.1	6.5	65	0.89	1.1	1	L	6.5	7.3
			Disk x 4	40-	1.6	8.0	70	0.90	1.1	1	L	8.0	8.9
			Disk x 6	50-	2.4	8.0	70	1.34	0.7	1	L	10.0	7.4
			Drum x 2	40-	1.6	8.0	70	0.90	1.1	1	L	8.0	8.9
		Self p.		15-	1.5	5.0	70	0.53	1.9	1	G	2.0	3.8
				35-	2.0	5.0	70	0.70	1.4	1	G	3.0	4.3
	Conditioner	Pull type		50-	2.1	6.5	60	0.82	1.2	1	L	10.0	12.2
	Forage harvestor	Flail type		25-	1.0	3.0	75	0.23	4.4	1	L	4.5	20.0
				40-60	1.5	4.5	75	0.51	2.0	1	L	10.0	19.8
		Cutter head		50-	1.8	4.5	75	0.61	1.6	1	L	10.0	16.5
		Cutter head		50-	3.0	3.5	75	0.79	1.3	1	L	10.0	12.7
		Low crop	1row	50-	0.8	4.5	75	0.25	4.0	1	L	10.0	39.5
		Low crop	2row	80-	1.5	4.0	75	0.45	2.2	1	L	14.5	32.2
	Corn harvester	Fly-wheel cylinder	1row	40-	0.8	4.0	70	0.21	4.8	1	L	8.0	38.1
			2row	80-	1.5	4.0	75	0.45	2.2	1	L	14.5	32.2
	Hay tedder	Vertical	1-2	20-	1.8	7.0	80	1.01	1.0	1	L	2.5	2.5
			4-6shaft	25-	3.6	7.0	80	2.02	0.5	1	L	3.5	1.7
		Drum		25-	2.4	5.5	80	1.06	0.9	1	L	3.5	3.3
			straight	25-	2.4	5.5	80	1.06	0.9	1	L	3.5	3.3
	Hay rake	Chain belt		25-	1.8	5.5	80	0.79	1.3	1	L	3.5	4.4
		Revolution wheel		20-	2.1	6.5	80	1.09	0.9	1	L	3.0	2.7
				30-	2.5	6.5	80	1.30	0.8	1	L	3.5	2.7
		Drum		25-	2.4	6.0	80	1.15	0.9	1	L	3.5	3.0
		Chain		25-	1.8	5.5	80	0.79	1.3	1	L	3.5	4.4
	Hay baler	Tight	1.2m	35-	3.0	4.0	60	0.72	1.4	1	L	5.0	6.9
			1.5m	40-	3.0	4.5	60	0.81	1.2	1	L	6.5	8.0
		Roll	straw	3.5-6	1.5	1.8	50	0.14	7.4	1	L	1.5	11.1
	Roll baler	Mount	0.45x0.85	15-	1.5	3.6	75	0.41	2.5	1	L	3.0	7.4
		Pull type	0.9x1	25-	3.0	4.0	75	0.90	1.1	1	L	6.5	7.2
			1.2x1.2	40-	3.0	6.0	75	1.35	0.7	1	L	8.0	5.9
	Load wagon	1 t	1.4m	25-	2.4	3.0	65	0.47	2.1	1	L	3.0	6.4
		2 t	1.6m	35-	2.4	3.5	65	0.55	1.8	1	L	5.0	9.2
		3 t	1.8m	50-	2.4	4.0	65	0.62	1.6	1	L	6.5	10.4

Source: Zennoh, Kikaika-keikaku-no-tebiki, 1990