Correlations for CPO & Total Planted Area (Combined)

Correlations

		Annual Average Prices of Oil Palm Products(CPO-local delivered)	Principal Statistics of Oil Palm Estates (harvested hectareage)	Principal Statistics of Oil Palm Estates (production of fresh fruit bunches)	Principal Statistics of Oil Palm Estates (yeild per hactare)	Principal Statistics of Oil Palm Estates (local delivered average price)	Principal Statistics of Oil Palm Estates (total number of worker employed)	Fresh Fruit Bunches (FFB) Yield Tonnes/ Hectare (P. Malaysia)	Fresh Fruit Bunches (FFB) Yield Tonnes/ Hectare (Sabah)	Fresh Fruit Bunches (FFB) Yield Tonnes/ Hectare (Sarawak)	Fresh Fruit Bunches (FFB) Yield Tonnes/ Hectare (Malaysia)	Total Planted Hectareage of Oil Palm (Total Area)	Agricultural land (% of land area)	Arable land (% of land area)	Employment in agriculture (% of total employment)	Fertilizer consumption (kilograms per hectare of arable land)	Forest area (sq. km)	Terrestrial protected areas (% of total surface area)	Area Und Oil Palm (Mature Immature) - Malaysia	Area Ur Oil Pal (Matur Immatu Saba
Annual Average Prices of Oil Palm Products(CPO-local delivered)	Pearson Correlation	1	.692**	.700**	.419**	.560**	.691**	.740**	.763**	.717**	.745**	.684**	.505**	.561**	.468**	.599**	.579**	.753**	.183**	
	Sig. (2-tailed)		.000	.000	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Principal Statistics of Oil Palm Estates (harvested hectareage)	Pearson Correlation	.692**	1	.995**	.640**	.765**	.958**	.801**	.830**	.771**	.811**	.989**	.789**	.825**	.372**	.643**	.759**	.807**	108**	
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.007	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Principal Statistics of Oil Palm Estates (production of fresh fruit bunches)	Pearson Correlation	.700**	.995**	1	.636**	.776**	.971**	.788**	.820**	.762**	.799**	.980**	.771**	.805**	.361**	.672**	.720**	.792**	101**	
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.009	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Principal Statistics of Oil Palm Estates (yeild per hactare)	Pearson Correlation	.419**	.640**	.636**	1	.598**	.658**	.403**	.401**	.399**	.406**	.719**	.664**	.664**	.634**	.199	.440**	.400**	133**	
	Sig. (2-tailed)	.002	.000	.000		.000	.000	.003	.004	.004	.003	.000	.000	.000	.000	.161	.001	.004	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Principal Statistics of Oil Palm Estates (local delivered average price)	Pearson Correlation	.560**	.765**	.776**	.598**	1	.846**	.435**	.468**	.407**	.447**	.771**	.570**	.561**	.238	.532**	.391**	.451**	191**	
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.001	.001	.003	.001	.000	.000	.000	.093	.000	.005	.001	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Principal Statistics of Oil Palm Estates (total number of worker	Pearson Correlation	.691**	.958**	.971**	.658**	.846**	1	.690**	.736**	.662**	.705**	.956**	.717**	.733**	.345*	.724**	.612**	.698**	146**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.013	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (P.	Pearson Correlation	.740**	.801**	.788**	.403**	.435**	.690**	1	.993**	.988**	.999**	.765**	.670**	.742**	.217	.504**	.910**	.998**	149**	
	Sig. (2-tailed)	.000	.000	.000	.003	.001	.000		.000	.000	.000	.000	.000	.000	.126	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sabah)	Pearson Correlation	.763**	.830**	.820**	.401**	.468**	.736**	.993**	1	.978**	.996**	.793**	.664**	.733**	.209	.585**	.897**	.994**	160**	
	Sig. (2-tailed)	.000	.000	.000	.004	.001	.000	.000		.000	.000	.000	.000	.000	.141	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare	Pearson Correlation	.717**	.771**	.762**	.399**	.407**	.662**	.988**	.978**	1	.988**	.731**	.652**	.729**	.224	.490**	.901**	.984**	129**	
	Sig. (2-tailed)	.000	.000	.000	.004	.003	.000	.000	.000		.000	.000	.000	.000	.115	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare	Pearson Correlation	.745**	.811**	.799**	.406**	.447**	.705**	.999**	.996**	.988**	1	.775**	.671**	.742**	.216	.526**	.910**	.998**	152**	
	Sig. (2-tailed)	.000	.000	.000	.003	.001	.000	.000	.000	.000		.000	.000	.000	.128	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Total Planted Hectareage of Oil Palm (Total Area)	Pearson Correlation	.684**	.989**	.980**	.719**	.771**	.956**	.765**	.793**	.731**	.775**	1	.806**	.834**	.450**	.608**	.741**	.772**	120**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.001	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Agricultural land (% of land area)	Pearson Correlation	.505**	.788**	.771**	.664**	.570**	.717**	.670**	.664**	.652**	.806**	1	.991**	.493**	.435**	.602**	.665**	198**		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.001	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Arable land (% of land area)	Pearson Correlation	.561**	.825**	.805**	.664**	.561**	.733**	.742**	.733**	.729**	.742**	.834**	.991**	1	.509**	.442**	.674**	.737**	157**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.001	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Employment in agriculture (% of total employment)	Pearson Correlation	.468**	.372**	.361**	.634**	.238	.345*	.217	.209	.224	.216	.450**	.493**	.509**	1	.054	.221	.213	144**	
	Sig. (2-tailed)	.001	.007	.009	.000	.093	.013	.126	.141	.115	.128	.001	.000	.000		.706	.120	.133	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Fertilizer consumption (kilograms per hectare of arable land)	Pearson Correlation	.599**	.643**	.672**	.199	.532**	.724**	.504**	.585**	.490**	.526**	.608**	.435**	.442**	.054	1	.288*	.515**	140**	
	Sig. (2-tailed)	.000	.000	.000	.161	.000	.000	.000	.000	.000	.000	.000	.001	.001	.706		.041	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Forest area (sq. km)	Pearson Correlation	.579**	.759**	.720**	.440**	.391**	.612**	.910**	.897**	.901**	.910**	.741**	.602**	.674**	.221	.288*	1	.918**	146**	
	Sig. (2-tailed)	.000	.000	.000	.001	.005	.000	.000	.000	.000	.000	.000	.000	.000	.120	.041		.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Terrestrial protected areas (% of total surface area)	Pearson Correlation	.753**	.807**	.792**	.400**	.451**	.698**	.998**	.994**	.984**	.998**	.772**	.665**	.737**	.213	.515**	.918**	1	153**	
	Sig. (2-tailed)	.000	.000	.000	.004	.001	.000	.000	.000	.000	.000	.000	.000	.000	.133	.000	.000		100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Area Under Oil Palm (Mature & Immature)-P. Malaysia	Pearson Correlation	.883**	.808**	.801**	.633**	.491**	.746**	.849**	.860**	.829**	.852**	.820**	.696**	.757**	.544**	.540**	.746**	.853**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Area Under Oil Palm (Mature & Immature)-Sabah	Pearson Correlation	.860**	.781**	.782**	.332*	.483**	.755**	.843**	.884**	.791**	.852**	.754**	.531**	.584**	.189	.741**	.686**	.855**	167**	
	Sig. (2-tailed)	.000	.000	.000	.017	.000	.000	.000	.000	.000	.000	.000	.000	.000	.183	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Area Under Oil Palm (Mature & Immature)-Sarawak	Pearson Correlation	.825**	.596**	.615**	.142	.353*	.617**	.710**	.764**	.677**	.722**	.554**	.317*	.369**	.062	.789**	.496**	.722**	148**	
	Sig. (2-tailed)	.000	.000	.000	.319	.011	.000	.000	.000	.000	.000	.000	.023	.008	.664	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Area Under Oil Palm (Mature & Immature)-Malaysia	Pearson Correlation	.892**	.760**	.766**	.478**	.470**	.726**	.835**	.858**	.810**	.840**	.751**	.588**	.648**	.385**	.612**	.684**	.838**	136**	
	Sig. (2-tailed)	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.005	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Principal Statistics of Oil Palm Estates (number of estate)	Pearson Correlation	.669**	.979**	.965**	.726**	.745**	.928**	.779**	.800**	.751**	.787**	.990**	.826**	.858**	.467**	.557**	.773**	.787**	122**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
Principal Statistics of Oil Palm Estates (planted hectareage)	Pearson Correlation	.672**	.996**	.985**	.655**	.740**	.940**	.804**	.829**	.768**	.813**	.990**	.802**	.837**	.385**	.603**	.780**	.811**	111**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.000	.000	.000	100	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations for CPO (Sepa

BIVARIATE ANALYSIS FOR ALL THE VARIABLES AGAINST CPO AND TOTAL PLANTED AREA
(Table has been downsized to fit the page)

Correlations

		Annual Average Prices of Oil Palm Products(CPO-local delivered)	Principal Statistics of Oil Palm Estates (harvested hectareage)	Principal Statistics of Oil Palm Estates (production of fresh fruit bunches)	Principal Statistics of Oil Palm Estates (yeild per hactare)	Principal Statistics of Oil Palm Estates (local delivered average price)	Principal Statistics of Oil Palm Estates (total number of worker employed)	Fresh Fruit Bunches (FFB) Yield Tonnes/ Hectare (P. Malaysia)	Fresh Fruit Bunches (FFB) Yield Tonnes/ Hectare (Sabah)	Fresh Fruit Bunches (FFB) Yield Tonnes/ Hectare (Sarawak)	Fresh Fruit Bunches (FFB) Yield Tonnes/ Hectare (Malaysia)
Annual Average Prices of Oil Palm Products(CPO-local delivered)	Pearson Correlation	1	.692**	.700**	.419**	.560**	.691**	.740**	.763**	.717**	.745**
	Sig. (2-tailed)		.000	.000	.002	.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51
Principal Statistics of Oil Palm Estates (harvested hectareage)	Pearson Correlation	.692**	1	.995**	.640**	.765**	.958**	.801**	.830**	.771**	.811**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51
Principal Statistics of Oil Palm Estates (production of fresh fruit bunches)	Pearson Correlation	.700**	.995**	1	.636**	.776**	.971**	.788**	.820**	.762**	.799**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51
Principal Statistics of Oil Palm Estates (yeild per hactare)	Pearson Correlation	.419**	.640**	.636**	1	.598**	.658**	.403**	.401**	.399**	.406**
	Sig. (2-tailed)	.002	.000	.000		.000	.000	.003	.004	.004	.003
	N	51	51	51	51	51	51	51	51	51	51
Principal Statistics of Oil Palm Estates (local delivered average price)	Pearson Correlation	.560**	.765**	.776**	.598**	1	.846**	.435**	.468**	.407**	.447**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.001	.001	.003	.001
	N	51	51	51	51	51	51	51	51	51	51
Principal Statistics of Oil Palm Estates (total number of worker employed)	Pearson Correlation	.691**	.958**	.971**	.658**	.846**	1	.690**	.736**	.662**	.705**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (P. Malaysia)	Pearson Correlation	.740**	.801**	.788**	.403**	.435**	.690**	1	.993**	.988**	.999**
	Sig. (2-tailed)	.000	.000	.000	.003	.001	.000		.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sabah)	Pearson Correlation	.763**	.830**	.820**	.401**	.468**	.736**	.993**	1	.978**	.996**
	Sig. (2-tailed)	.000	.000	.000	.004	.001	.000	.000		.000	.000
	N	51	51	51	51	51	51	51	51	51	51
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sarawak)	Pearson Correlation	.717**	.771**	.762**	.399**	.407**	.662**	.988**	.978**	1	.988**
	Sig. (2-tailed)	.000	.000	.000	.004	.003	.000	.000	.000		.000
	N	51	51	51	51	51	51	51	51	51	51
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Malaysia)	Pearson Correlation	.745**	.811**	.799**	.406**	.447**	.705**	.999**	.996**	.988**	1
	Sig. (2-tailed)	.000	.000	.000	.003	.001	.000	.000	.000	.000	
	N	51	51	51	51	51	51	51	51	51	51

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations for Total Planted Area (Separately)

Correlations

		Total Planted Hectareage of Oil Palm (Total Area)	Agricultural land (% of land area)	Arable land (% of land area)	Employment in agriculture (% of total employment)	Fertilizer consumption (kilograms per hectare of arable land)	Forest area (sq. km)	Terrestrial protected areas (% of total surface area)	Area Under Oil Palm (Mature & Immature)-P. Malaysia	Area Under Oil Palm (Mature & Immature)-Sabah	Area Under Oil Palm (Mature & Immature)-Sarawak	Area Under Oil Palm (Mature & Immature)-Malaysia	Principal Statistics of Oil Palm Estates (number of estate)	Principal Statistics of Oil Palm Estates (planted hectareage)
Total Planted Hectareage of Oil Palm (Total Area)	Pearson Correlation	1	.806**	.834**	.450**	.608**	.741**	.772**	.820**	.754**	.554**	.751**	.990**	.990**
	Sig. (2-tailed)		.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Agricultural land (% of land area)	Pearson Correlation	.806**	1	.991**	.493**	.435**	.602**	.665**	.696**	.531**	.317*	.588**	.826**	.802**
	Sig. (2-tailed)	.000		.000	.000	.001	.000	.000	.000	.000	.023	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Arable land (% of land area)	Pearson Correlation	.834**	.991**	1	.509**	.442**	.674**	.737**	.757**	.584**	.369**	.648**	.858**	.837**
	Sig. (2-tailed)	.000	.000		.000	.001	.000	.000	.000	.000	.008	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Employment in agriculture (% of total employment)	Pearson Correlation	.450**	.493**	.509**	1	.054	.221	.213	.544**	.189	.062	.385**	.467**	.385**
	Sig. (2-tailed)	.001	.000	.000		.706	.120	.133	.000	.183	.664	.005	.001	.005
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Fertilizer consumption (kilograms per hectare of arable land)	Pearson Correlation	.608**	.435**	.442**	.054	1	.288*	.515**	.540**	.741**	.789**	.612**	.557**	.603**
	Sig. (2-tailed)	.000	.001	.001	.706		.041	.000	.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Forest area (sq. km)	Pearson Correlation	.741**	.602**	.674**	.221	.288*	1	.918**	.746**	.686**	.496**	.684**	.773**	.780**
	Sig. (2-tailed)	.000	.000	.000	.120	.041		.000	.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Terrestrial protected areas (% of total surface area)	Pearson Correlation	.772**	.665**	.737**	.213	.515**	.918**	1	.853**	.855**	.722**	.838**	.787**	.811**
	Sig. (2-tailed)	.000	.000	.000	.133	.000	.000		.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Area Under Oil Palm (Mature & Immature)-P. Malaysia	Pearson Correlation	.820**	.696**	.757**	.544**	.540**	.746**	.853**	1	.867**	.748**	.936**	.822**	.811**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Area Under Oil Palm (Mature & Immature)-Sabah	Pearson Correlation	.754**	.531**	.584**	.189	.741**	.686**	.855**	.867**	1	.945**	.919**	.723**	.772**
	Sig. (2-tailed)	.000	.000	.000	.183	.000	.000	.000	.000		.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Area Under Oil Palm (Mature & Immature)-Sarawak	Pearson Correlation	.554**	.317*	.369**	.062	.789**	.496**	.722**	.748**	.945**	1	.853**	.509**	.570**
	Sig. (2-tailed)	.000	.023	.008	.664	.000	.000	.000	.000	.000		.000	.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Area Under Oil Palm (Mature & Immature)-Malaysia	Pearson Correlation	.751**	.588**	.648**	.385**	.612**	.684**	.838**	.936**	.919**	.853**	1	.735**	.753**
	Sig. (2-tailed)	.000	.000	.000	.005	.000	.000	.000	.000	.000	.000		.000	.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Principal Statistics of Oil Palm Estates (number of estate)	Pearson Correlation	.990**	.826**	.858**	.467**	.557**	.773**	.787**	.822**	.723**	.509**	.735**	1	.985**
	Sig. (2-tailed)	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000		.000
	N	51	51	51	51	51	51	51	51	51	51	51	51	51
Principal Statistics of Oil Palm Estates (planted hectareage)	Pearson Correlation	.990**	.802**	.837**	.385**	.603**	.780**	.811**	.811**	.772**	.570**	.753**	.985**	1
	Sig. (2-tailed)	.000	.000	.000	.005	.000	.000	.000	.000	.000	.000	.000	.000	
	N	51	51	51	51	51	51	51	51	51	51	51	51	51

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

List of Significant Variables for Palm Oil Price and Total Planted Area:

Palm Oil Price	Total Planted Area
Principal Statistics of Oil Palm Estates (harvested hectareage)	Agricultural land (% of land area)
Principal Statistics of Oil Palm Estates (production of fresh fruit bunches)	Arable land (% of land area)
Principal Statistics of Oil Palm Estates (local delivered average price)	Employment in agriculture (% of total employment)
Principal Statistics of Oil Palm Estates (total number of worker employed)	Fertilizer consumption (kilograms per hectare of arable land)
Principal Statistics of Oil Palm Estates (number of estate)	Forest area (sq. km)
Principal Statistics of Oil Palm Estates (yeild per hactare)	Terrestrial protected areas (% of total surface area)
Principal Statistics of Oil Palm Estates (planted hectareage)	Area Under Oil Palm (Mature & Immature)-P.Malaysia
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (P.Malaysia)	Area Under Oil Palm (Mature & Immature)-Sabah
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sabah)	Area Under Oil Palm (Mature & Immature)-Sarawak
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sarawak)	Area Under Oil Palm (Mature & Immature)-Malaysia
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Malaysia)	Principal Statistics of Oil Palm Estates (number of estate)
Total Planted Hectareage of Oil Palm (Total Area)	Principal Statistics of Oil Palm Estates (planted hectareage)
Agricultural land (% of land area)	Principal Statistics of Oil Palm Estates (harvested hectareage)
Arable land (% of land area)	Principal Statistics of Oil Palm Estates (production of fresh fruit bunches)
Employment in agriculture (% of total employment)	Principal Statistics of Oil Palm Estates (yeild per hactare)
Fertilizer consumption (kilograms per hectare of arable land)	Principal Statistics of Oil Palm Estates (local delivered average price)
Forest area (sq. km)	Principal Statistics of Oil Palm Estates (total number of worker employed)
Terrestrial protected areas (% of total surface area)	Annual Average Prices of Oil Palm Products(CPO-local delivered)
Area Under Oil Palm (Mature & Immature)-P.Malaysia	Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (P.Malaysia)
Area Under Oil Palm (Mature & Immature)-Sabah	Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sabah)
Area Under Oil Palm (Mature & Immature)-Sarawak	Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sarawak)
Area Under Oil Palm (Mature & Immature)-Malaysia	Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Malaysia)

Since all variables are significant at 0.01 and 0.05.

Regression

Data used to run the regression model for CPO:

Data used to run the regression for total planted area:

Palm Oil Price	Total Planted Area
Principal Statistics of Oil Palm Estates (harvested hectareage)	Agricultural land (% of land area)
Principal Statistics of Oil Palm Estates (production of fresh fruit bunches)	Arable land (% of land area)
Principal Statistics of Oil Palm Estates (total number of worker employed)	Employment in agriculture (% of total employment)
Principal Statistics of Oil Palm Estates (number of estate)	Fertilizer consumption (kilograms per hectare of arable land)
Principal Statistics of Oil Palm Estates (yeild per hactare)	Forest area (sq. km)
Principal Statistics of Oil Palm Estates (planted hectareage)	Terrestrial protected areas (% of total surface area)
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (P.Malaysia)	Area Under Oil Palm (Mature & Immature)-P.Malaysia
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sabah)	Area Under Oil Palm (Mature & Immature)-Sabah
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Sarawak)	Area Under Oil Palm (Mature & Immature)-Sarawak
Fresh Fruit Bunches (FFB) Yield Tonnes/Hectare (Malaysia)	Area Under Oil Palm (Mature & Immature)-Malaysia
	Principal Statistics of Oil Palm Estates (number of estate)
	Principal Statistics of Oil Palm Estates (planted hectareage)
	Principal Statistics of Oil Palm Estates (harvested hectareage)
	Principal Statistics of Oil Palm Estates (production of fresh fruit bunches)
	Principal Statistics of Oil Palm Estates (yeild per hactare)
	Principal Statistics of Oil Palm Estates (local delivered average price)
	Principal Statistics of Oil Palm Estates (total number of worker employed)

Total Planted Area : Enter Method

Variables Entered/Removed [b]

Model	Variables Entered	Variables Removed	Method
1	Principal Statistics of Oil Palm Estates (planted hectareage), Employment in agriculture (% of total employment), Area Under Oil Palm (Mature & Immature)-Sarawak, Forest area (sq. km), Agricultural land (% of land area), Fertilizer consumption (kilograms per hectare of arable land), Area Under Oil Palm (Mature & Immature)-Malaysia, Area Under Oil Palm (Mature & Immature)-P. Malaysia, Terrestrial protected areas (% of total surface area), Principal Statistics of Oil Palm Estates (number of estate), Area Under Oil Palm (Mature & Immature)-Sabah, Arable land (% of land area) [a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: Total Planted Hectareage of Oil Palm (Total Area)

Table has been downsized to fit the page.

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.997[a]	.995	.993	116794.906

a. Predictors: (Constant), Principal Statistics of Oil Palm Estates (planted hectareage), Employment in agriculture (% of total employment), Area Under Oil Palm (Mature & Immature)-Sarawak, Forest area (sq. km), Agricultural land (% of land area), Fertilizer consumption (kilograms per hectare of arable land), Area Under Oil Palm (Mature & Immature)-Malaysia, Area Under Oil Palm (Mature & Immature)-P.Malaysia, Terrestrial protected areas (% of total surface area), Principal Statistics of Oil Palm Estates (number of estate), Area Under Oil Palm (Mature & Immature)-Sabah, Arable land (% of land area)

b. Dependent Variable: Total Planted Hectareage of Oil Palm (Total Area)

99% or 100% of the variation in the Total Planted Hectareage of Oil Palm (Total Area) explained by the variation in the independent variables.

ANOVA [b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.9E+013	12	8.241E+012	604.096	.000[a]
	Residual	5.2E+011	38	1.364E+010		
	Total	9.9E+013	50			

a. Predictors: (Constant), Principal Statistics of Oil Palm Estates (planted hectareage), Employment in agriculture (% of total employment), Area Under Oil Palm (Mature & Immature)-Sarawak, Forest area (sq. km), Agricultural land (% of land area), Fertilizer consumption (kilograms per hectare of arable land), Area Under Oil Palm (Mature & Immature)-Malaysia, Area Under Oil Palm (Mature & Immature)-P.Malaysia, Terrestrial protected areas (% of total surface area), Principal Statistics of Oil Palm Estates (number of estate), Area Under Oil Palm (Mature & Immature)-Sabah, Arable land (% of land area)

b. Dependent Variable: Total Planted Hectareage of Oil Palm (Total Area)

Its shows that the Regression model above are significant.

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-56957.4	108129.2		-.527	.601
	Agricultural land (% of land area)	133760.0	40064.619	.545	3.339	.002
	Arable land (% of land area)	-649214	187774.5	-.682	-3.457	.001
	Employment in agriculture (% of total employment)	4214.180	2464.152	.038	1.710	.095
	Fertilizer consumption (kilograms per hectare of arable land)	291.051	184.829	.062	1.575	.124
	Forest area (sq. km)	-.305	.641	-.023	-.475	.637
	Terrestrial protected areas (% of total surface area)	4171.211	11709.687	.026	.356	.724
	Area Under Oil Palm (Mature & Immature)-P.Malaysia	.196	.106	.127	1.852	.072
	Area Under Oil Palm (Mature & Immature)-Sabah	-.058	.304	-.020	-.190	.850
	Area Under Oil Palm (Mature & Immature)-Sarawak	-.476	.669	-.083	-.711	.481
	Area Under Oil Palm (Mature & Immature)-Malaysia	.024	.042	.026	.561	.578
	Principal Statistics of Oil Palm Estates (number of estate)	316.092	104.140	.325	3.035	.004
	Principal Statistics of Oil Palm Estates (planted hectareage)	.732	.110	.688	6.671	.000

a. Dependent Variable: Total Planted Hectareage of Oil Palm (Total Area)

Since there are only four variables (Agricultural land (% of land area), Arable land (% of land area), Principal Statistics of Oil Palm Estates (number of estate), Principal Statistics of Oil Palm Estates (planted hectareage) out of the 17 of the independent variables are significant at 0.05 level, so we have to transform the data to normalize the weightage of the variables in the model to derived more significant variables into the model.

Using Transformation (Ln):Enter Method

Variables Entered/Removed [b]

Model	Variables Entered	Variables Removed	Method
1	lnplanted, lnfertilizer, lnareamsia, lnforestarea, lnagricultural, lnemployment, lnterrestrial, lnarable, lnnumberestate, lnareasrwk, lnareapm, lnareasabah [a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: lntotalarea

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000[a]	.999	.999	.09981

a. Predictors: (Constant), lnplanted, lnfertilizer, lnareamsia, lnforestarea, lnagricultural, lnemployment, lnterrestrial, lnarable, lnnumberestate, lnareasrwk, lnareapm, lnareasabah

b. Dependent Variable: lntotalarea

100% of the variation in the Total Planted Hectareage of Oil Palm (Total Area) explained by the variation in the independent variables.

ANOVA [b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	449.701	12	37.475	3761.525	.000[a]
	Residual	.379	38	.010		
	Total	450.080	50			

a. Predictors: (Constant), lnplanted, lnfertilizer, lnareamsia, lnforestarea, lnagricultural, lnemployment, lnterrestrial, lnarable, lnnumberestate, lnareasrwk, lnareapm, lnareasabah

b. Dependent Variable: lntotalarea

The regression model are still significant after transform.

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.288	.136		2.121	.041
	lnagricultural	.573	.124	.118	4.641	.000
	lnarable	-1.423	.291	-.195	-4.892	.000
	lnemployment	.016	.017	.008	.911	.368
	lnfertilizer	.025	.014	.021	1.739	.090
	lnforestarea	-.013	.009	-.026	-1.504	.141
	lnterrestrial	.081	.062	.039	1.311	.198
	lnareapm	.016	.083	.036	.197	.845
	lnareasabah	.179	.181	.354	.987	.330
	lnareasrwk	-.256	.152	-.462	-1.681	.101
	lnareamsia	.033	.064	.073	.512	.612
	lnnumberestate	.330	.055	.204	5.987	.000
	lnplanted	.837	.031	.828	27.138	.000

a. Dependent Variable: lntotalarea

After transformation, there are still four variables (Agricultural land (% of land area), Arable land (% of land area), Principal Statistics of Oil Palm Estates (number of estate), Principal Statistics of Oil Palm Estates (planted hectareage) out of the 17 of the independent variables are significant at 0.05 level,so its shows that this four independent variables are significantly affects the Total Planted Hectareage of Oil Palm (Total Area).

CPO REGRESSION RESULTS

Variables Entered/Removed [b]

Model	Variables Entered	Variables Removed	Method
1	LNPLANTE, LNFFBSRW, LNYIELD, LNLABOR, LNPRODUC, LNNUMBER, LNFFBSAB, LNFFBPM, LNHARVES [a]	.	Enter

a. Tolerance = .000 limits reached.

b. Dependent Variable: LNCPO

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.937[a]	.879	.852	1.35383

a. Predictors: (Constant), LNPLANTE, LNFFBSRW, LNYIELD, LNLABOR, LNPRODUC, LNNUMBER, LNFFBSAB, LNFFBPM, LNHARVES

b. Dependent Variable: LNCPO

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	544.709	9	60.523	33.021	.000[a]
	Residual	75.147	41	1.833		
	Total	619.857	50			

a. Predictors: (Constant), LNPLANTE, LNFFBSRW, LNYIELD, LNLABOR, LNPRODUC, LNNUMBER, LNFFBSAB, LNFFBPM, LNHARVES

b. Dependent Variable: LNCPO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.324	1.120		7.434	.000
	LNHARVES	16.484	2.450	13.923	6.729	.000
	LNPRODUC	-.132	.108	-.287	-1.226	.227
	LNYIELD	7.040E-02	.523	.027	.135	.894
	LNLABOR	-.279	.104	-.392	-2.674	.011
	LNFFBPM	7.716	4.245	3.179	1.818	.076
	LNFFBSAB	-4.896	3.300	-2.079	-1.483	.146
	LNFFBSRW	-3.087	2.434	-1.178	-1.268	.212
	LNNUMBER	5.008	.877	2.636	5.710	.000
	LNPLANTE	-18.727	2.485	-15.774	-7.536	.000

a. Dependent Variable: LNCPO

Excluded Variables[b]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance
1	LNFFBMSI	-9.887[a]	-.475	.638	-.075	6.943E-06

a. Predictors in the Model: (Constant), LNPLANTE, LNFFBSRW, LNYIELD, LNLABOR, LNPRODUC, LNNUMBER, LNFFBSAB, LNFFBPM, LNHARVES

b. Dependent Variable: LNCPO