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Indonesia

Grain and Feed

Annual

2004

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Report Highlights:
Wheat imports are forecast to grow only marginally in 2004 and 2005 as demand growth is expected to continue to be sluggish. Negatively affected by a drop in demand for compound feed, corn imports are forecast to fall to 1 million tons in 2003/04, but rise to 1.1 million tons in 2004/05 as the poultry sector rebounds from the impact of bird flu. With plentiful local supplies keeping a lid on prices, combined with the apparent strict enforcement of the import ban, 2004 rice imports are now forecast at 1.5 million tons. Rice imports for 2005 are forecast to return to 2 million tons.

Includes PSD Changes: Yes
Includes Trade Matrix: Yes
Annual Report
Jakarta [ID1]
[ID]

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Executive Summary

Wheat: Wheat imports are forecast to grow only marginally, reaching 4.2 million tons in 2004/05. High international prices and freight rates are expected to cause millers to gradually raise flour prices, inhibiting demand growth. In addition, increased competition among the 4 mills, combined with flour imports, will continue to squeeze margins, forcing importers to look for lowest cost supplies. As a result, mills are limiting purchases of premium-valued higher protein hard wheat, which is negatively impacting U.S. trade. Furthermore, plentiful supplies from Australia, combined with a huge freight advantage, will ensure that Australian wheat will gain market share and continue to dominate the import market. Due to relatively high U.S. prices and unprecedented freight rate costs, U.S. market share will suffer through the rest of 2004 and into the 2004/05 marketing year.

Corn: High landed costs, combined with the collapse in feed demand through the first quarter of 2004 due to the local outbreak of bird flu, sharply reduced import demand, and corn imports are forecast to fall to 1 million tons in 2003/04. With expectations of a recovery in the poultry sector as the bird flu is controlled, corn imports are forecast to rebound to 1.1 million tons in 2004/05. Opportunities for U.S. corn are expected to emerge in the latter part of the 2003/04 marketing year and beyond, as local supplies are diminished, and with expectations that supplies from China will continue to be unavailable. In addition, a local corn processor is expected to continue sporadic U.S. corn purchases.

Rice: Better than average precipitation leading into the planting season and since has resulted in an excellent main rice crop in 2004. As a result, local supplies are plentiful, and market prices are stable and below last year. With prices from traditional suppliers rising sharply in the first quarter of 2004, the incentive to import has been severely eroded. The local supply situation, plus the fact that the recently implemented import ban is being strictly enforced, has reduced import expectations, and 1.5 million tons are forecast to be imported in 2004. In the first half of 2004, import levels are expected to be less than one-third the level imported over that period in the previous marketing year. Imports are expected to accelerate from August 2004 onward, when local supplies diminish and following the removal of the import ban.

Policy: Local millers continue to complain about flour being “dumped” into the market, and have lobbied successfully to get a 5 percent duty on flour imports. The 5 percent import duty on flour from all origins will remain in place at least until the end of 2004. To further control flour imports, imports must also meet a national quality standard, which includes mineral fortification. Proposals continue to be floated to raise duties on corn imports, but no action on this is expected in 2004. While the increase in international rice prices in the face of stable domestic prices have played a role in reducing import demand, it is also is apparent that the rice import ban is being strictly enforced. In the first quarter of 2004, only about 200,000 tons were imported, well below traditional levels. After the ban is lifted in June 2004, all importers will have to be registered to be eligible to import. While applications have been presented, reportedly this application process has not been functioning smoothly. This raises the prospect that issuance of importer registrations may be used as a tool to control imports. Bulog is authorized to release rice onto the market should prices rise, but given local supply conditions, this is unlikely.

WHEAT

PSD Table

Country	Indonesia					
Commodity	Wheat				(1000 HA)	(1000 MT)
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [	Estimate [	DA Official [	Estimate [	DA Official [	Estimate [
Market Year Begin		07/2002		07/2003		07/2004
Area Harvested	0	0	0	0	0	0
Beginning Stocks	800	800	620	620	520	520
Production	0	0	0	0	0	0
TOTAL Mkt. Yr. Imports	4000	4000	4100	4100	0	4200
Jul-Jun Imports	4000	4000	4100	4100	0	4200
Jul-Jun Import U.S.	299	299	0	200	0	200
TOTAL SUPPLY	4800	4800	4720	4720	520	4720
TOTAL Mkt. Yr. Exports	73	73	50	50	0	50
Jul-Jun Exports	73	73	50	50	0	50
Feed Dom. Consumption	50	50	50	50	0	50
TOTAL Dom. Consumptic	4107	4107	4150	4150	0	4200
Ending Stocks	620	620	520	520	0	470
TOTAL DISTRIBUTION	4800	4800	4720	4720	0	4720

Note: Table includes data for unprocessed wheat and wheat flour - converted into grain equivalent.

Production

Due to expectations for sluggish consumption growth, wheat imports are forecast to grow only marginally to 4.2 million tons in 2004/05. While one mill continues to dominate with about 80 percent market share, competition among Indonesia's 4 mills is expected to continue to remain fierce. This will require the mills to continue to shrink margins in the face of high international wheat prices. Also, they will continue to look for lowest cost wheat supplies, primarily from Australia, but also from other less dominant suppliers. Mills are expected to purchase just enough high protein wheat to meat blending needs, and not try to increase protein levels for product development and innovation. As a result, U.S. market share is expected to suffer in 2004 and 2005 due to relatively high landed costs of U.S. wheat. Australia will be the main beneficiary. While local millers have complained about low cost flour imports from Australia (which is claimed to be "dumped" and/or under-invoiced), and have threatened to reduce purchases of Australian wheat as a result, this is largely thought to be an empty threat. The mills will still rely on Australian wheat for the lion's share of milling needs in 2004 and 2005.

The local milling sector is operating at about 60 to 70 percent of total capacity, so there is still plenty of room to respond to demand growth. Furthermore, ample opportunity continues to exist for product diversification. Production still basically consists of three flour types: high protein (with protein content >12%), medium protein (10%-12%), and low protein (8%-10%) flour.

Consumption

Local flour (produced by the four flourmills) accounts for about 90 percent of Indonesia's total flour market, with the balance from imported flour. With rising wheat and soaring freight rates, the mills are expected to gradually increase prices in 2004. Prices have already risen about 5 percent in 2004, and are expected to increase another 5 to 10 percent through the end of the year. The higher prices are expected to tamper demand growth, and only a modest increase in use is forecast for 2004/05. Mills generally hold just over one month's stock on hand.

The wet noodle industry and small medium enterprises (SME) consume approximately 32 percent of total flour supply; instant noodle 20 percent; bakeries 20 percent; biscuit and snack 10 percent; household 10 percent; and the dry noodle industry 8 percent. Approximately 75 percent of the Indonesia's domestic flour production is made up of high-protein flour (protein content >12%) that is used for instant noodle and bakery products, while the remainder consists of medium (10%-12%) and low protein flour (8%-9%) used for wet noodle and cake products.

In order to protect the local industry, imported flour must meet a national standard (SNI – Standard Nasional Indonesia), i.e., fortified with iron, zinc, folic acid, vitamin B-1 and vitamin B-2. Also a 5 percent duty applies. Besides Australia, the local millers have also accused other flour suppliers of dumping into the market, and continue to appeal for a higher duty.

Trade Matrices of Wheat and Flour

Import Trade Matrix

Country Indonesia

Commodity Wheat

Time Period	July-June	Units:	1,000 MT
Imports for:	2002/03		
U.S.	191		
Others			
Australia	1643		
India	640		
Canada	580		
Argentina	120		
China	112		
France	63		
Poland	34		
Russia	24		
American Samoa	22		
Japan	18		
South Korea	11		
Hong Kong	10		
New Zealand	5		
Total for Others	3282		
Others not Listed	0		
Grand Total	3473		

Source: Global Trade Statistics

Import Trade Matrix

Country	Indonesia		
Commodity	Wheat Flour		
Time Period	July-June	Units:	1,000 MT
Imports for:	2002/03		
U.S.	0		
Others			
China	84		
India	75		
Australia	60		
Belgium	51		
United Arab Emirates	44		
Malaysia	22		
Turkey	15		
Singapore	11		
Japan	6		
Germany	5		
Hong Kong	3		
South Korea	1		
France	1		
Total for Others	378		
Others not Listed	4		
Grand Total	382		
Grain Equivalent	516		

Source: Global Trade Statistics

CORN

PSD Table

Country	Indonesia					
Commodity	Corn				(1000 HA)	(1000 MT)
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [	Estimate [	DA Official [	Estimate [	DA Official [	Estimate [
Market Year Begin		10/2002		10/2003		10/2004
Area Harvested	3050	3050	3200	3200	0	3300
Beginning Stocks	370	433	550	540	750	740
Production	6100	6100	6800	6300	0	6400
TOTAL Mkt. Yr. Imports	1600	1275	1100	1000	0	1100
Oct-Sep Imports	1600	1275	1100	1000	0	1100
Oct-Sep Import U.S.	69	69	0	120	0	120
TOTAL SUPPLY	8070	7808	8450	7840	750	8240
TOTAL Mkt. Yr. Exports	20	18	0	100	0	200
Oct-Sep Exports	20	18	0	100	0	200
Feed Dom. Consumption	3900	3450	4100	3000	0	3200
TOTAL Dom. Consumptic	7500	7250	7700	7000	0	7300
Ending Stocks	550	540	750	740	0	740
TOTAL DISTRIBUTION	8070	7808	8450	7840	0	8240

Production

With better than average precipitation during the rainy season plus a slight expansion in area, 2003/04 corn production is estimated at 6.3 million tons. For 2004/05, relatively strong prices are expected to lead to further increases in area planted, plus efforts to increase hybrid seed planting are expected to continue. As a result, production in 2004/05 is forecast to increase slightly over the previous year.

Yields remain low as farmers use only 30 percent of certified seed and hybrid seed use continues to be low. Special credits for operating expenses are available from banks at 6 percent interest rates; however, accessibility to this facility is reportedly difficult. Lack of drying facilities also hinders corn marketing. To enhance quality, some large feed mills have developed contract arrangements with producers, where price commitments are made based on quality delivered.

Corn Production: Area & Production by Region
First Estimate Figures by the Government of Indonesia for 2004*)

Province	Harvest Area (Ha)	Production in Metric Ton (wet basis)	(dry basis)	Yield (100Kg/Ha)
North Sumatra	214,407	705,298	493,709	32.90
Lampung	344,559	1,151,688	806,182	33.42
Sub Total: Sumatra	**691,642**	**2,200,576**	**1,540,403**	**31.82**
West Java	125,748	535,479	374,835	42.58
Central Java	560,423	1,929,460	1,350,622	34.43
East Java	1,199,385	4,340,952	3,038,666	36.19
Sub Total: Java	**1,964,981**	**7,040,692**	**4,928,484**	**35.83**
East Nusa Tenggara	248,150	572,287	400,601	23.06
Sub Total: Bali & Nusa Tenggara	**317,997**	**753,284**	**527,299**	**23.69**
West Kalimantan	32,249	91,420	63,994	28.35
South Kalimantan	21,894	52,140	36,498	23.81
Sub Total Kalimantan	**66,302**	**166,035**	**116,225**	**25.04**
North Sulawesi	70,215	157,570	110,299	22.44
South Sulawesi	252,335	769,798	538,859	30.51
Sub Total Sulawesi	**429,070**	**1,178,327**	**824,829**	**27.46**
Other Provinces/Islands	12,353	20,135	14,095	16.30
TOTAL INDONESIA	**3,482,345**	**11,359,049**	**7,951,334**	**32.62**

Source: BPS - Statistics Indonesia

Consumption

Corn use is forecast to drop over 10 percent in 2003/04 due to the local Avian Influenza (AI) outbreak, which severely cut demand for compound feed in the first quarter of 2004. Total compound feed production is expected to be off as much as 15 percent in 2004 as a consequence of the AI problem. As of April 2004, poultry producers continued to limit placing new inventories (both layers and broilers) until the full impact of the AI has run its course, and demand and prices rebound. However, some indications suggest the spread of the disease has been checked, and the poultry sector is expected to begin fully rejuvenating during the last quarter of 2003/04. As a result, use is forecast to rebound in 2004/05.

Typically, the animal feed industry consumes approximately 50 percent of all Indonesian corn, but that proportion will be down this year due to the collapse in demand from the poultry sector. Approximately 80 percent of imported corn is used by the feed mill industry, primarily for poultry production. Indonesia's one and only corn processing plant is beginning to produce, but still must overcome many technical problems. Demand from this plant is expected to approach 20,000 tons per month, which will primarily be supplied through imports.

Typically, the feed sector relies on local supplies during the peak local harvest season (Feb-April) and then switches to imports. However, in 2003/04, because of the relatively good

local crop, plus the decline in local demand, local supplies are expected to be available for a longer period.

Trade

With the collapse in demand as a result of the AI outbreak, and relatively good local supply situation, corn imports are forecast to drop to 1 million tons in 2003/04, about 20 percent less than the previous year. However, with expectations that the AI outbreak will run its course towards the end of 2003/04, and a recovery of the poultry sector, imports are forecast to rebound to 1.1 million tons in 2004/05.

With the landed cost of imported corn topping $200/ton, and already struggling to remain profitable due to the AI outbreak, the local feed mill industry will rely almost exclusively on domestic supplies while available. Local procurement should continue until around the beginning of the final quarter of 2003/04, when imports will again be required. As supplies from China are not expected to be available, firm opportunities should exist for U.S. corn in Indonesia at that time. However, importers will still have to overcome the “sticker shock” that may be associated with U.S. corn prices at that time.

As stated above, Indonesia’s one and only corn processing plant relies almost exclusively on imported corn for its mill. After poor results with Chinese corn, the plant is expected to continue to purchase more U.S. corn.

The unusual market conditions (temporary local supply surplus in the midst of high international prices) led to some exports of corn during the first quarter of 2004. However, these conditions are not expected to persist, and exports for 2004/05 are expected to return to normal levels.

Prices

Farm gate prices of local corn in major producing areas (East Java, Lampung) ranged from Rp 1,400/kg (US$ 164.7/mt) to Rp. 1,600/kg (US$ 188.2), compared to landed import prices ranging from $210/mt CNF for U.S. corn to $185 from Thailand. Offers from China are no longer being made.

Trade Matrices

Import Trade Matrix

Country Indonesia

Commodit Corn

Time Period	Oct/Sep	Units:	1,000 MT
Imports for:	2001/2002		**2002/2003**
U.S.	102	U.S.	2
Others		Others	
China	852	China	1225
Thailand	53	Thailand	38
South Korea	18	South Korea	7
Cameroon	18	Myanmar	2
India	9		
Singapore	7		
Myanmar	3		
Total for Others	960		1272
Others not Liste	6		1
Grand Total	1068		1275

Source: Global Trade Statistics

Export Trade Matrix

Country Indonesia

Commodit Corn

Time Period	Oct/Sep	Units:	1,000 MT
Exports for:	2002		**2003**
U.S.	0	U.S.	0
Others		Others	
Malaysia	9	Malaysia	10
Japan	7	Japan	7
Total for Others	16		17
Others not Liste	1		1
Grand Total	17		18

Source: Global Trade Statistics

RICE, MILLED

PSD Table

Country	Indonesia					
Commodity	Rice, Milled				(1000 HA)(1000 MT)	
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [	Estimate [	DA Official [	Estimate [	DA Official [	Estimate [
Market Year Begin		01/2003		01/2004		01/2005
Area Harvested	11500	11500	11500	11700	0	11750
Beginning Stocks	4836	4683	4496	3993	4346	3193
Milled Production	33200	33411	33300	34250	0	34379
Rough Production	51473	51800	51628	53101	0	53301
MILLING RATE (.9999)	6450	6450	6450	6450	0	6450
TOTAL Imports	3250	2400	3500	1500	0	2000
Jan-Dec Imports	3250	2400	3500	1500	0	2000
Jan-Dec Import U.S.	0	100	0	100	0	0
TOTAL SUPPLY	41286	40494	41296	39743	4346	39572
TOTAL Exports	0	1	0	0	0	0
Jan-Dec Exports	0	1	0	0	0	0
TOTAL Dom. Consumptic	36790	36500	36950	36550	0	36600
Ending Stocks	4496	3993	4346	3193	0	2972
TOTAL DISTRIBUTION	41286	40494	41296	39743	0	39572

Production

The first and main season crop (harvested Feb/April) benefited from good precipitation and growing conditions. While initial reports suggested damage to some rice areas due to heavy rains, the impact on production was only minimal, being far outstripped by the overall good growing conditions. As a result, production in 2004 is forecast to be up about 3 percent compared to the previous year. For 2005, assuming a slight increase in area, production is expected to again grow marginally.

Continued growth in rice production for Indonesia will remain a challenge. Insufficient water management and irrigation infrastructure will remain a persistent problem. In addition, while rice production is becoming increasingly mechanized, increasing costs of production hamper further improvements in management practices. Furthermore, urbanization and industrialization continue to limit potential for area expansion. Irrigated rice yields approach 4.7 tons/HA, but output in non-irrigated areas is often can only bring around 2.5 MT/ha. The average yields (from irrigated and non-irrigated rice areas) remain low, approximately 4.5 MT/ha. Producers continue to expect government support through subsidizing fertilizer prices and price protection through import controls. However, the main problem with viability of rice production in Indonesia is not price levels or profitability (comparatively, prices and returns are high), but the small area held by each producer, which is less than ½ hectare per farmer. This is insufficient area, so alternative sources of income must be sought or crops with higher returns must be found.

Consumption

Rice consumption in Indonesia is relatively stable as more availability and familiarity of alternative staple foods (such as noodle/bakery, corn, cassava, and sago) curbs growth. The

GOI, through Bulog, maintains some stocks (around 5% of total consumption) for rice rations (military and civil servant in remote areas), assistance during natural disasters, and to conduct market operations for price stabilization (if needed). Bulog also continues to conduct a subsidized rice distribution program for needy families, who can buy 20 kg of rice per month at Rp. 1,000/kg. Bulog's domestic purchase of rice for 2004 is planned to be around 2.0 MMT of rice with purchasing price set at Rp. 2,790/kg.

Trade

The forecast for 2004 rice imports has been lowered from 2 to 1.5 million tons due to relatively abundant local supplies and stable local prices in the face of rising international prices and shorter export availability. As prices from key suppliers have risen, the risk of trying to bypass the import ban and bring rice in has become unattractive. Furthermore, by most accounts, the import ban is being strictly enforced. While some imports have trickled in during the first quarter (around 200,000 tons), import activity has been dramatically lower than in previous years. It is expected that local supplies will remain sufficient until at least August, when the lifting of the ban combined with drawing down of local stocks will result in an acceleration of imports. While the ban is still in effect through June of 2004, Bulog is authorized to import 50,000 tons of rice should prices rise 25 percent above average historical prices; but it is expected that this will not be necessary. Bulog is expected to import about 200,000 tons in 2004, but most of this will occur in the last quarter.

For 2005, imports are pegged at 2.0 million tons.

Stocks

While stocks were plentiful as of April, the heart of the main crop harvest season, carry-over stocks are forecast to be drawn down by the end of 2004. As of early April, Bulog stock was 1.6 million tons milled rice equivalent. Over the course of the year, Bulog is expected to purchase approximately 3.1 million tons of un-husked rice, or 2 million tons milled rice from local farmers.

Policy

The GOI has taken several steps to encourage production, such as providing special credits, and also to protect the domestic rice industry, and most dramatically the recent temporary rice import ban (which is effective until June 2004). The GOI is also improving/building new irrigation facilities, providing seeds for flood farmers, subsidizing fertilizer prices, and facilitating the opening of new rice areas. At this time, the GOI is not considering increasing rice floor prices, i.e., the purchasing price paid to farmers. Debate regarding increasing the import tariff (currently at Rp. 430/kilogram) continues, but no action in this regard is expected in 2004.

Under the temporary rice import ban regulation, rice (including rice for seeds, glutinous rice, rice flour and other flours) imports are subject to inspections and verifications in the exporting countries. Through Ministerial Decree No. 67/MPP/Kep/2/2004 dated February 24, 2004, the Minister of Industry and Trade appointed PT. Sucofindo and PT. Surveyor Indonesia (both are state enterprises) as the authorized surveyors to conduct inspections and verifications. The decree also allows the Minister to appoint new surveyors and/or replace those currently appointed. The surveyors are to submit monthly reports regarding country of origin, rice specification (Harmonized System Code and description of rice), tonnage, and rice variety, shipment date, and ports of destination. This point of origin inspection requirement will also remain in effect once the ban has been lifted beginning in July 2004. Also at that time, importers must be registered to be eligible to import rice. Reportedly, the registration

process has been difficult, and it remains to be seen just how many importers will be eligible to import once the market is open again.

Agricultural Inputs

On February 13, 2004, GOI increased the total fertilizer price subsidy to Rp. 1.3 trillion (US$ 152.9 million), and implemented a new price structure. The new price structure determines the highest prices by farmers at authorized retailers, effective until December 31, 2004. The new ceiling prices at the district level are as follows: Urea fertilizer (Rp. 1,050/kg); SP-36 super phosphate (Rp. 1,400/kg); ZA - ammonium sulphate (Rp. 950/kg); and fertilizer mix of NPK is Rp. 1,600/kg. To guarantee that retail prices will not escalate and exceed the set prices, the GOI also requires retailers and distributors to sign a contract agreement. Also, liberalization of the pesticide sector has resulted in a dramatic decline in agriculture chemical prices.

Exchange Rate (Rp./1US$) on Period Month Ending Basis

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2000	7,414	7,517	7,598	7,988	8,728	8,742	9,055	8,370	8,891	9,483	9,524	9,385
2001	9,488	9,914	10,460	12,117	11,423	11,436	9,744	9,045	9,696	10,358	10,476	10,450
2002	10,383	10,222	9,779	9,441	9,823	8,741	9,171	8,938	9,057	9,257	9,020	8,929
2003	8,877	8,917	8,957	8,711	8,274	8,259	8,643	8,488	8,389	8,520	8,537	8,465
2004	8,441	8,447	8,587									

Source: BPS Statistics Indonesia and Business Indonesia Daily Newspaper.

Note: - November 2003 exchange rate is quoted for November 21, 2003
- January 2004 exchange rate is quoted for January 30, 2004
- February 2004 exchange rate is quoted for February 27, 2004
- March 2004 exchange rate is quoted for March 25, 2004
- BPS data available up to August 2003

Rainfall Pattern at Selected Station in Rice/Corn Producing Areas
(in millimeters, except where stated)

JATIWANGI (WEST JAVA)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30 yr avg.	455	380	371	227	151	79	48	36	49	122	269	419
2000	311	146	263	209	138	39	1	11	0	12	n/a	117
2001	147	133	na	na	na	106	11	0	60	64	155	54
2002	252	na	101	207	21	48	11	0	0	0	180	113
2003	86	215	99	46	97	3	0	0	13	26	53	117

TEGAL (CENTRAL JAVA)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30 yr avg.	356	335	250	117	116	70	55	36	26	55	112	236
2000	271	240	230	60	25	20	2	0	8	21	184	106
2001	232	253	163	223	27	30	55	1	12	35	292	160
2002	375	106	103	81	101	42	55	0	0	1	76	39
2003	306	424	251	100	24	17	0	1	7	51	32	151

SURABAYA (EAST JAVA)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30 yr avg.	310	255	237	145	94	51	23	15	22	45	126	231
2000	422	255	151	223	105	48	0	0	0	101	151	119
2001	231	204	552	232	77	149	91	0	0	91	120	419
2002	544	209	131	121	167	1	102	0	0	0	36	180
2003	543	402	275	103	117	52	0	0	0	0	178	142

DENPASAR (BALI)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30 yr avg.	345	274	234	88	83	53	56	25	48	63	179	276
2000	365	412	309	404	177	46	35	0	3	142	331	15
2001	574	209	169	57	5	34	11	1	2	95	29	329
2002	284	398	61	36	9	2	11	0	3	0	82	207
2003	627	214	39	155	72	8	4	10	97	6	142	380

UJUNG PANDANG (SOUTH SULAWESI)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30 yr avg.	734	533	391	235	127	66	66	15	32	83	273	549
2000	496	670	325	157	131	205	27	1	14	123	427	365
2001	724	851	682	218	97	53	0	0	20	216	346	995

2002	523	299	386	398	139	17	0	0	6	9	103	290
2003	586	586	293	172	157	18	13	14	20	25	266	656

LAMPUNG												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30 yr avg.	281	299	241	177	99	95	77	83	83	93	171	248
2000	201	267	141	128	14	63	72	107	25	118	124	79
2001	79	156	37	79	123	13	70	39	108	161	114	284
2002	293	26	550	150	49	14	70	2	0	0	31	131
2003	65	188	111	78	33	8	37	2	69	57	76	99

Source: Meteorological and Geophysical Agency (Badan Meteorologi dan Geofisika - BMG), Ministry of Communications.

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