

Bamboo Collection at the Arcamanik Forest Research Station, Bandung, Indonesia.

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Introduction

Bamboo is a flowering perennial evergreen plants in Poaceae family. Bamboos are in the grass family, fast growing, having columnar stems which can be used as construction material. Indonesia has 157 species of bamboo which is 10% of the world total bamboo species. Sumatra has 76 species while java has 59 species. Indonesian government has allocated few research station for bamboo research and one of them is Forest Research Station Arcamanik, Bandung, Indonesia. It is part of the Indonesia's Forestry Research and Development Agency vast network of research stations.

Location

Arcamanik Forest Research Station, Bandung, Indonesia with an area of approximately 17 ha is located in Desa Mekarmanik, Kecamatan Ujung Berung, Bandung District, West Jawa Province. It is located at 1350 m above sea level, an hour drive from Bandung. It is connected by partly asphalt and graveled road and can be accessed using a 4 WD vehicle.

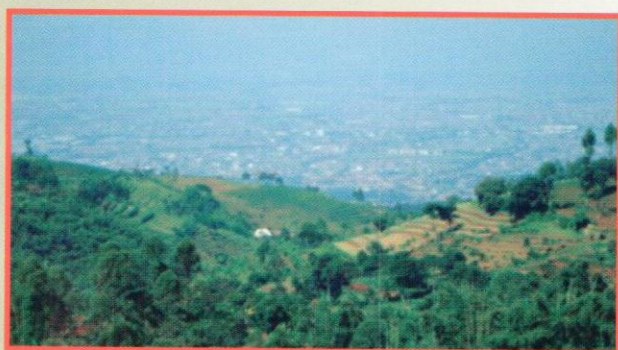


Figure 1. Arcamanik Forest Research Station site is an hour drive from the City. City of Bandung is at the background.

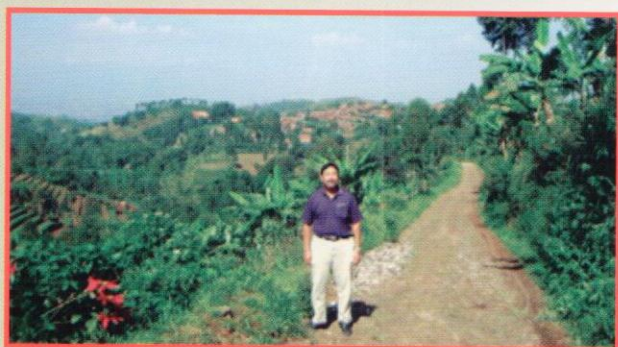


Figure 2. Gravel road leading to the Arcamanik Forest Research Station site.

Climate and Site Characteristics

Arcamanik Forest Research Station received an average of 2200 annual total rainfall and according to Schmidt and Ferguson (1951) climatic classification falls under type wet B with Q value of 32.5 %. The soils are mostly association of brown andosol with regosols originating from volcanic ash parent material.

Table 1. Rainfall and rainday at Forest Research Station Arcamanik, Bandung

| No. | Month | Rainfall (mm) | Rainday (day) |
|-----------------|-----------|---------------|---------------|
| 1 | January | 355.1 | 19.4 |
| 2 | February | 292.4 | 19.0 |
| 3 | March | 295.9 | 14.0 |
| 4 | April | 299.7 | 14.6 |
| 5 | May | 113.6 | 8.4 |
| 6 | June | 84 | 5.3 |
| 7 | July | 190.1 | 4.9 |
| 8 | August | 47.0 | 2.7 |
| 9 | September | 74.4 | 5.4 |
| 10 | October | 151.3 | 9.6 |
| 11 | November | 247.1 | 12.6 |
| 12 | December | 304.4 | 15.4 |
| Rainfall Annual | | 2597.9 | 131.29 |

One of the aims of this research station is to plant different species of bamboo available in Indonesia. A total of 24 Bamboo species are planted here starting from 1961 and the latest was 2007. The bamboos were planted along the trail and the visitors can view the bamboo from the trails within the research station. Even though many bamboos originated from Bogor, there are also others originated from different part of Indonesia.



This visit was beneficial and educating especially on different types of bamboos planted in the research station. The visit has allowed us to interact with FORDA's expert on bamboo and this will foster further collaboration on bamboo with INTROP scientists.

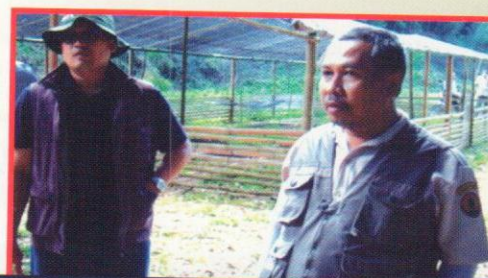


Figure 3. Researchers from FORDA involve in Bamboo research program in this Forest Research Station.

Table 2. Living collection of bamboo species at Arcamanik Forest Research Station, Bandung.

| No. | Latin name | Local name | Year of plantin | Origin |
|-----|---|--------------------|-----------------|------------|
| 1 | <i>Arundinaria japonica</i> | bambu jepang | 1991 | Bogor |
| 2 | <i>Bambusa vulgaris</i> var <i>vitata</i> | bambu ampel hijau | 1961 | - |
| 3 | <i>B. vulgaris</i> var <i>striata</i> | bambu ampel kuning | 1961 | - |
| 4 | <i>B. arundinaceae</i> | bambu duri | 1991 | Bogor |
| 5 | <i>B. maculata</i> 1 | bambu tutul 1 | 2007 | Lampung |
| 6 | <i>B. maculata</i> 2 | bambu tutul 2 | 1991 | Bogor |
| 7 | <i>B. multiplex</i> | bambu pagar | 1991 | Bogor |
| 8 | <i>Dendrocalmus asper</i> | bambu bitung | 1991 | Bogor |
| 9 | <i>Gigantochloa atter</i> | bambu ater | 1961 | - |
| 10 | <i>G. apus</i> | bambu tali | 1961 | - |
| 11 | <i>G. atrovioleacea</i> | bambu hitam | 1961 | - |
| 12 | <i>G. manggong</i> | bambu manggong | 1991 | Banyuwangi |
| 13 | <i>G. nigrocollata</i> | bambu lengka tali | 1991 | Bogor |
| 14 | <i>G. pseudoarundinacea</i> | bambu andong | 1961 | - |
| 15 | <i>G. pseudoarundinacea</i> | bambu temen | 1961 | - |
| 16 | <i>G. robusta</i> | bambu mayan | 2007 | Lampung |
| 17 | <i>G. levis</i> | bambu peting | 1991 | Banyuwangi |
| 18 | <i>Gigantochloa</i> sp | bambu batu | 1991 | Banyuwangi |
| 19 | <i>Phyllostachys aurea</i> | bambu cendani | 1961 | - |
| 20 | <i>P. pubescens</i> | bambu moso | 2007 | China |
| 21 | <i>Schizostachyum blumei</i> | bambu tamiang | 1961 | - |
| 22 | <i>S. brachycladum</i> var <i>hijo</i> | bambu leman hijau | 1961 | - |
| 23 | <i>S. brachycladum</i> var <i>kuning</i> | bambu leman kuning | 1991 | Bogor |
| 24 | <i>S. zollingeri</i> | bambu cakeutruk | 1991 | Bogor |

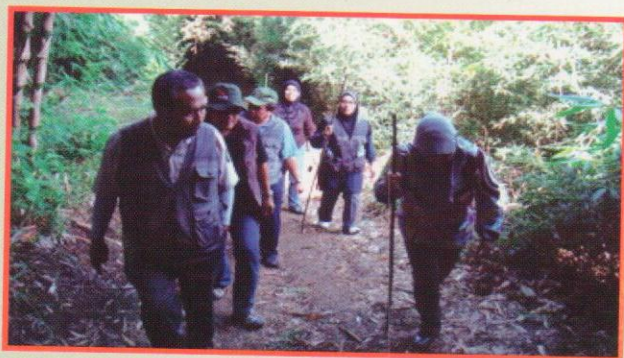


Figure 4. INTROP entourage with FORDA researchers walking along the trail in the Forest Research Station

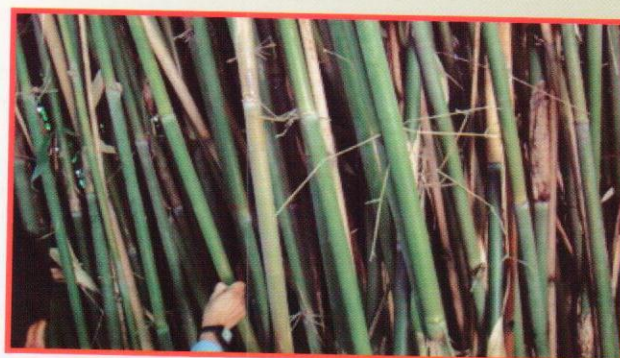


Figure 5. Bamboo species grown in Arcamanik Forest Research Station.



Figure 6. Black Bamboo species grown in Arcamanik Forest Research Station.



Figure 7. May culms of bamboo are planted in this research station.

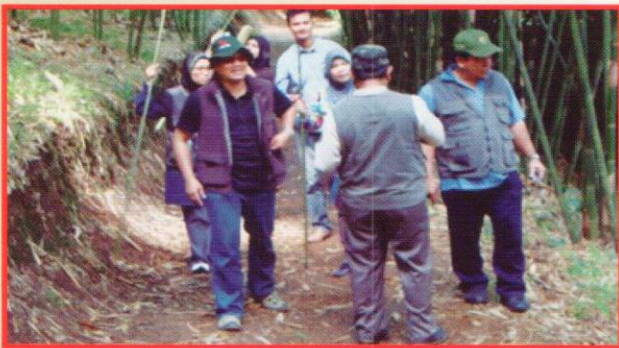


Figure 8. FORDA's researchers explaining different types of bamboo available in this research station.



Figure 9. The yellow stripes on this bamboo species give beautiful appearance to the stems.



Figure 10. Angklung is an musical instruments made of bamboo.

References

- Schmidt, F. H., and J. H. A. Ferguson, (1951). Rainfall types based on wet and dry period ratios for Indonesia with western New Guinea. *Verhandelingen*, 42, 77 pp.
- Widjaja, E. A. (1998). Bamboo genetic resources in Indonesia. In Vivekanandan, K. Rao, A.N. and Rao, I.V.R. (eds.), *Bamboo and Rattan Genetic Resources in Certain Asian Countries*, International Network for Bamboo and Rattan (INBAR), New Delhi.