

# *Floods and Drought*

MONICO PASTOR (B.S.F.) '48

It is an undeniable fact that in many regions, particularly the Northern and Central Luzon, the people suffer destructive floods during rainy days, and face shortage of water for farm use during the dry season. These prevailing conditions which are apparently more serious every year are partly attributed to lack of forestry consciousness among the people.

A great majority of our people still holds the idea that the forest is a hindrance to the expansion of agriculture. They contend that the social and economic problems of this country could be eased by clearing the forests in order to give way to the increasing population. This attitude has led to the present problem of squatting on public forests by no less than 25,600 heads of families and the establishment of 2,381 kaingins during the last fiscal year. These intruders never thought that the yearly loss of lives and property wrought by floods, which should have been minimized or prevented if the forests were not destroyed, are worth several hundred times more than the value of agricultural crops grown from forest lands.

We are, therefore, duty bound to correct wrong public opinion on forests. Let us find a means of letting them understand that to minimize the flow of water during the rainy days and to preserve water for our farm needs during dry season is vital for the existence of our forests and watersheds. This calls for a concerted effort and cooperation in educating our neighbors, our townmates and our children about public forests for the welfare of the country.

In view of its absorbing capacity, forest surface run-off is slowed down and water

is retained. The excessive surface run-off is checked and water is absorbed because of the living and non-living vegetation peculiar to forests; the great depth of soil resulting from the effects of forest retarding wind and water erosion; the effect of vegetation in decomposing rock; and the more broken condition of underlying rocks through action of deep-rooted plants, particularly the forest trees, all add up to the increased rate of absorbing capacity of the forests.

Forests do not entirely prevent the occurrence of destructive floods, but aid materially by rendering low stages of stream flow higher and the high stages lower.

In the regulation of stream flow, it is estimated that the amount of water that forest vegetation saves for German soil in mountainous regions, by converting surface run-off to seepage, is approximately 50 per cent of the precipitation. When regions having rough topography are denuded, the percentage of precipitation that escapes from a drainage area in streams is ordinarily high, sometimes as much as 80 per cent.

It should also be known that numerous cases have been cited where springs dried up or noticeably decreased their flow after deforestation. In some instances, springs reappeared after reforestation. Potable water derived from springs in well-forested watershed has the maximum clearness, and reservoirs remain free from silt.

Another way by which forests influence the conservation of water is by increasing evaporation and transpiration at the expense of surface run-off, thus enriching the passing air currents and in this way help to carry additional moisture into the interior of the country. Observations in various parts of

the world show that precipitation at the station surrounded by forests was considerably more than at the stations in the open. The condensation of vapor on the leaves, branches and other parts of trees and its later dripping to the ground add to the annual precipitation. The more abundantly developed the vegetal cover, the faster the moisture is returned to the air through evaporation and transpiration combined, and there is larger amount for reprecipitation available. In the late afternoons and evenings, although there is no rain, the ground under the trees are wet the next morning. Small shallow pools of water 1 to 2 feet in diameter are frequent on trails under trees.

If our people would only understand and appreciate the influence of forests as discussed above, they will not mercilessly cut forest trees and illegally occupy forest lands. There would not have been huge expenditures appropriated yearly for irrigation and river control projects as are found in Pangasinan, Iloilo and other provinces.

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The installations of deep artesian wells have become now a necessity in the rural areas and still a must program of the government, because the springs common in previous years are no longer in existence.

The Bureau of Forestry should not be left alone working single handed to provide the required protection of our forests. This Bureau, because of limited funds, could only allow one instead of three personnel to guard 15,000 hectares of forest land. So, it is very necessary that every one should do his part in this gigantic task for our happiness and survival.

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THE MEASUREMENT . . .

*(Continued from page 83)*

8. MERCHANTABLE

Variations in sawing same as in "clears." Sound stained sap not considered a defect in this grade.

Up to 4" in thickness, this grade will admit all sound lumber that does not contain defects seriously impairing the strength of the piece for ordinary temporary structural purposes.

Timbers from 6" x 6" upward, this grade will admit boxed heart, provided heart cracks do not extend to more than one face; also sun checks, pitch pockets, slight shakes or heart cracks, sound sap, knots, or other defects not seriously affecting the strength of the piece.

Pieces containing more sap than heartwood shall be excluded from this grade. In determining this, the solid contents and not surface measure should be taken into consideration.

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*Arts and sciences are not cast in a mould, but are found and perfected by degrees, by often handling and polishing.*

—Michel de Montaign

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*Logic is the art of thinking well: the mind, like the body, requires to be trained before it can use its powers in the most advantageous ways.*

—Lord Kames