

SOME RESEARCH RESULT ON MULTIPURPOSE & INDIGENOUS SPECIES OF THE NORTHERN VIETNAM THAT HAVE BEEN BEING DOMESTICATED FOR PLANTING IN AGROFORESTRY FARMS.

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1. BACKGROUND

The natural forest in the Northern Vietnam is very diversified with species, of which there are many multipurpose & indigenous species such as *Madhuca pasquieri* H.J.LAM that is a multipurpose & indigenous species that was classified in Vietnam (the products from this species consist of good wood, oil attracted from seeds, eatable fruit and leaves used for medicine). In Vietnam *Madhuca pasquieri* is distributed in the natural forests of the northern provinces, but especially in Tam Quy – Hatrung – Thanh Hoa province, there is a natural forest covering mostly with pure *Madhuca pasquieri* species. This area was recognized by the Government Decision as a special used forest for extremely precious and rare gene bank preservation. Attention is paid for domestication of this species for planting in farmers’ farms.

2. SOME RESEARCH RESULT ON THE NATURAL FOREST STATUS IN TAM QUI – THANH HOA PROVINCE OF VIETNAM.

Through investigation, it was shown that the forest here consists of only two main species: *Madhuca pasquieri* and *Erythrofloeum fordii* formed into a dominant community, of which *Madhuca pasquieri* as mainly dominated occupied with a simple canopy and low density.

Table 01 Result of forest structure in Tam Quy – Ha Trung

Position \ Density	Foot of the hill		Lope of the hill		Top of the hill	
	Tree number	%	Tree number	%	Tree number	%
<i>Madhuca. P</i>	360	92.3	730	97.0	485	95.1
<i>Erythrofloeum. F</i>	30	7.7	25	3.0	25	4.9

So, in the slope position *Madhuca pasquieri* density is rather thick and mostly pure but distribution is not even, in the foot position the density is low but distribution is even and *Erythrofloeum fordii* density is higher than that in the slope and its crown is bigger than *Madhuca pasquieri* crown. Especially *Madhuca pasquieri* trees mostly coppiced. $\bar{D}_{1.3} = 20.2$ cm, $\bar{H}_{full\ length} = 11.8$ m and $\bar{M} = 157$ m³/ha. *Erythrofloeum fordii* density is thin but grow well, $\bar{D}_{1.3} = 33$ cm, \bar{H}_{full}

length = 13.7 m and $\bar{M} = 158 \text{ m}^3/\text{ha}$. Structure of the forest storey is simple, it seemed to be of two layers, the main layer consists of the above two species and the under layer consists of regenerated trees and bushes.

3. SOME RESEARCH RESULT ON INSECTS OF THE *MADHUCA PASQUIERY* FOREST IN TAM QUI – THANH HOA - VIETNAM

Through the survey result of insects on the sample plots system, it is shown that the insects of the *Madhuca pasquiere* forest are rather abundant with 19 species under 15 families belonging to 6 orders. The result is indicated in table below:

No	Insect groups	Number of species	%
1	Defoliators	8	42.11
2	Stem borers	2	16.53
3	Shoot moths	2	10.53
4	Root borers	2	10.53
5	Useful insects	6	31.58
6	Other insects	1	05.26

It is indicated specifically some species such as *Hyporreles squamosus* F and *Orgyia postica* etc., as defoliators. *Arbela bailbarara* Mat as stem borer, *Holotrichia sauteri* Mauser as root borer etc., Otherwise there are also some useful insect species i.e. *Creobroter urbanus*, *Xanthopunpla pedator* Krieger etc.,

4. SOME CONCLUSIONS AND RECOMMENDATIONS

Madhuca pasquiere in Tam Quy special used forest mainly originated from coppice regeneration with simple storey structure and medium growth, occupying 92 – 97% of tree number of the forest stand . Together with *Erythrofloeum fordii*, two species have approximate equal volumes ($157 \text{ m}^3/\text{ha}$).

There are three main insect groups in Tam Quy *Madhuca pasquiere* forest area. It is the useful insect group of 19 species under 15 families belonging to 6 Order. It is needed to promote the insect (pest) management, follow up, forecast the insect and protect the useful insect species. It is also needed to protect the ground cover under the forest canopy, stimulate *Madhuca pasquiere* regeneration and prevent the forest fire etc.,

It is necessary to facilitate the vegetative propagation of *Madhuca pasquiere* species (with the macotting method) in order to provide the ex tu conservation. This is a species that need to be domesticated in order to plant in farmers' farms for fruit, oil from seed and dealing with the need of ideal firewood.