Bulletin of the Rubber Research Institute of Sri Lanka, (2000) **42**, 25-28

A SHORT ACCOUNT ON THE NUMBER OF BUDS ON VARIOUS TYPES OF BUDWOOD

P Seneviratne, U S Weerakoon, M N de Alwis and G Karunaratne

One important aspect in budwood nursery management is knowing the exact amount of buds that can be harvested from budwood plants. Errors in this, always leads to use of poor quality budwood or waste of good budwood.

In brown budwood, the number of usable buds is normally calculated on the basis of 10 buds per yard. But as you are aware, the number of buds vary with the clone. The main reason for this is the variation in the internodal distance (Plate 1a). This is more clear in Plate 1b where the leaves have been removed.

It is also a known fact that, all the buds available on the budwood stick cannot be used as those located around a leaf story are too crowded. However, Table 1 shows the total number buds available and the number usable in one meter of 11/2 year old budwood of various clones.

Fig. 1 shows the average number of total and usable buds arranged in ascending order. Here, the total number of buds was counted while the number of usable buds were those practically cut and removed.

As it can be seen from Fig.1 a large variation exists among clones for both the number of available and usable buds. Therefore, knowing the number of buds in a yard is important when calculating the amount of budwood required for bud grafting programmes. Shortage of budwood is the main cause to use budwood from overaged nurseries and also from mature plantations.

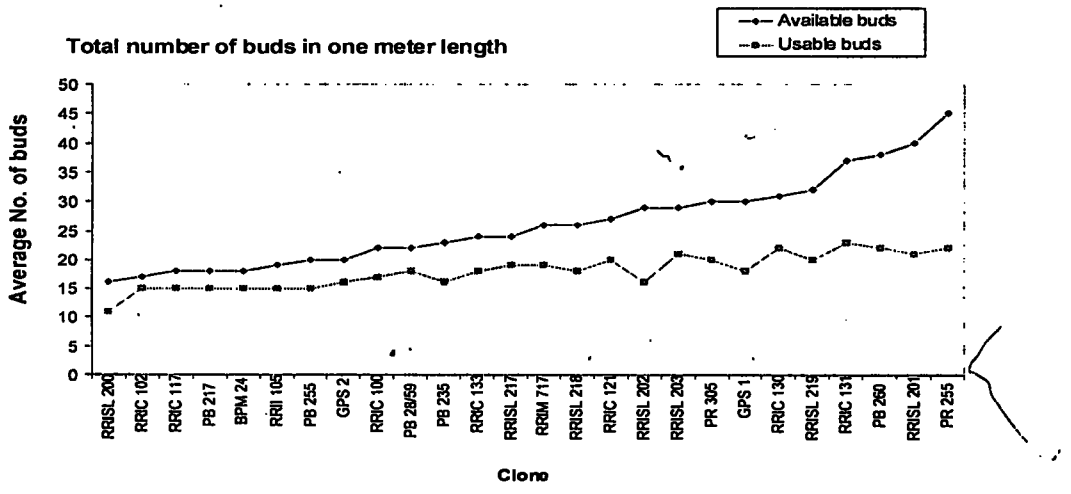

Fig. 1. The average number of available buds and the usable buds arranged in ascending order

Plate 1. The variation in internodal length (from left to right clones RRIC 117, RRIC 121, RRIC 100)

Table 1. Total and usable number of brown budwood

Clone	Plant #	1st meter		2nd meter		3rd meter		4th meter	
		Total number of buds	Usable number of buds	Total number of buds	Usable number of buds	Total number of buds	Usable number of buds	Total number of buds	Usable number of buds
RRIC 100	1	15	14	20	17	25	20	28	20
	2	18	11	15	14	37	26		
RRIC 102	1	10	10	22	19	15	14		
	2	15	15	21	19	21	18		
RRIC 117	1	16	13	17	14	27	21		
	2	16	13	20	16	16	15		
RRIC 121	1	17	15	27	21	25	20	38	27
	2	24	18	27	21	30	20	35	22
RRIC 130	1	20	15	30	24				
	2	29	21	45	31				
RRIC 131	1	44	24	25	22				
	2	49	25	30	21				
RRIC 133	1	23	16	23	20	33	20		
	2	16	14	23	18	30	24		
PB 28/59	1	25	20	23	21	19	16		
	2	25	20	21	19	22	13		
PB 217	1	22	16	20	18	20	16		
	2	10	10	23	17	18	16		
PB 255	1	19	16	18	13	21	17	18	15
	2	21	15	26	16	21	15		
PB 260	1	35	23						
	2	41	21						
PB 235	1	13	12	20	16	30	20	25	19
	2	18	15	18	14	36	20		
PR 255	1	55	26	38	21				
	2	45	22						
PR 305	1	23	17	28	21	25	19		
	2	31	20	40	21	37	23		
BPM 24	1	16	15	24	19	18	16		
	2	17	14	17	13				
RRIM 717	1	15	14	23	19	26	23	25	22
	2	22	17	32	20	40	21		
RRII 105	1	15	14	18	16	19	14		
	2	16	15	20	14	24	18	27	17
RRISL 200	1	20	13						
	2	13	10						
RRISL 201	1	38	21						
	2	42	22						
RRISL 202	1	32	18						
	2	27	15						
RRISL 203	1	38	20						
	2	40	22						
RRISL 217	1	18	16	33	22				
	2	21	19	26	20				
RRISL 218	1	31	22	24	16				
	2	27	20	24	17				
RRISL 219	1	37	23	30	21				
	2	37	20	25	19				
GPS 1	1	27	17	39	21				
	2	24	16	33	19				
GPS 2	1	17	15	22	11	23	16		
	2	19	18	21	19	20	17		

Green budwood

Brown budding technique is increasingly replaced by the green budding. Accordingly management of budwood nurseries also need changing. For green budding tender shoots are harvested to obtain buds. Since the shoots need to grow only for 2-3 months, unlike in brown budwood all the shoots emerge at a cut point are allowed to grow. Sometimes, the number of shoots is as high as 15 and in extreme cases it can be very low as 2-3. However when the number is too high and if the management conditions are poor, *i.e.* not applying fertilizer in required doses, most of the shoots will be very thin and weak and therefore unusable.

Figure 2 Shows the average number of shoots per plant and the average number of usable buds for 11 different clones.

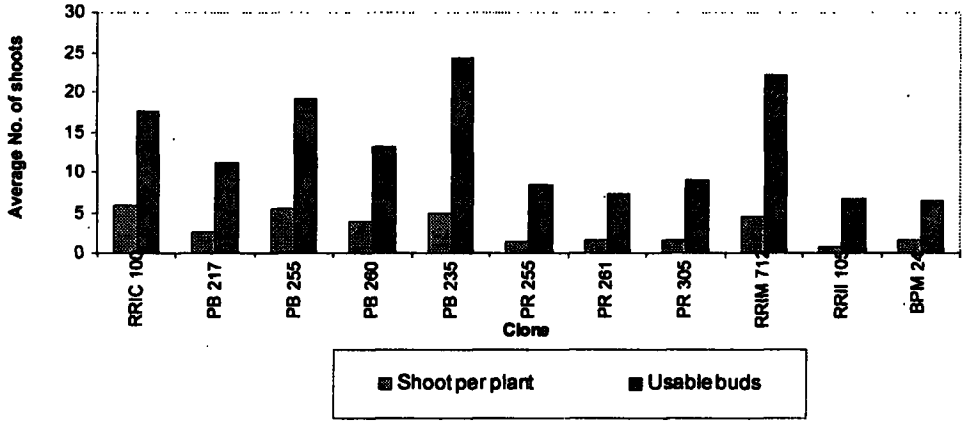

Fig. 2. Average number of shoots per plant and the average number of usable buds per plant for 11 clones. *The number of trees of each clone is given within brackets and bars show SEM values*

The correlation between the number of usable shoots per plant and the number of usable buds is shown in figure 3.

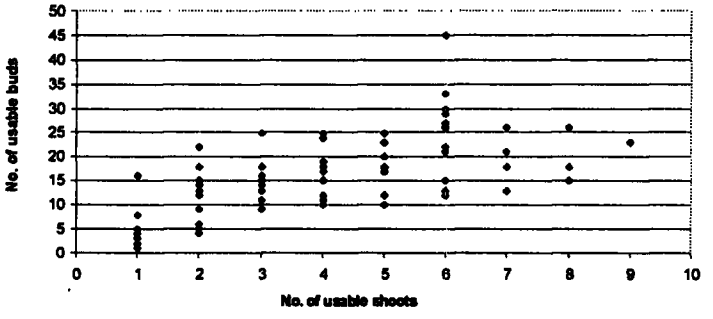

Fig. 3. Correlation between number of usable shoots and the number of usable buds of individual plants