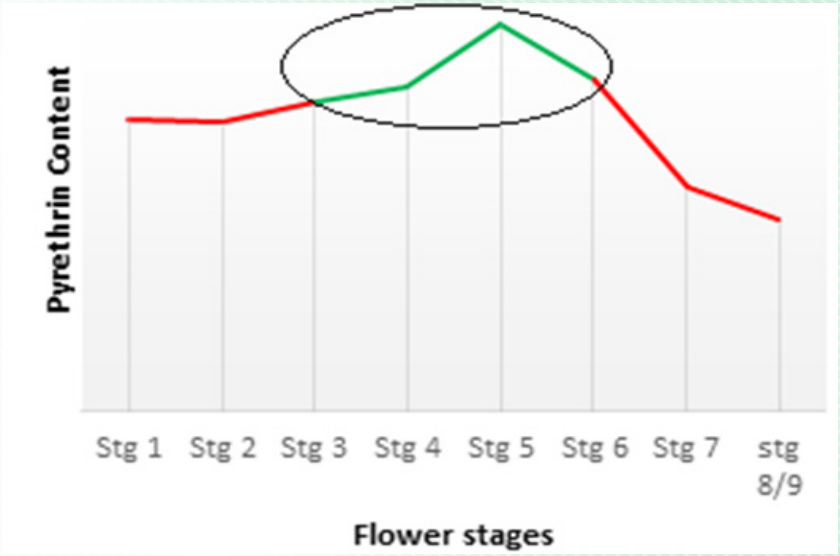

Figure 3: Illustration of flower stages in relation to maturity; where the peak quality stages range 3 to 5 (circled) (Source: Collins Kimutai, KENTEGRA)

MATURITY INDICES FOR PYRETHRUM

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NATIONAL AGRICULTURAL VALUE CHAIN DEVELOPMENT PROJECT

Maturity Indices and correct time for harvesting

Maturity indices for pyrethrum flowers ready for harvesting comprise visual, physical, and chemical features used to determine the ideal time to harvest pyrethrum flowers with maximum pyrethrin content. Harvesting pyrethrum flowers at the proper maturation stage ensures the highest pyrethrin content.

The right stage to pick pyrethrum is when ray florets (the white petals) have opened to horizontal position and 3 to 4 disc florets are open (Figure 1). This occurs approximately 3 to 4 months after planting. This is the time the flowers are in full bloom (stage 3 to 5 in Figure 2 and Figure 3), and the concentration of pyrethrin is at its peak. During the optimal stage the pyrethrins content may reach 1.8 to 2.2% in improved clones. Farmers

Figure 1: Left: A good stand of pyrethrum flowers ready for harvesting; Right: 3 to 4 disc florets open with estimated pyrethrin content of 2.2% w/w. (Source: Caroline Imbwaga, PPCK)

should harvest their crop when approximately 80% of the flowers have bloomed. After the first picking, subsequent harvesting should be done after every 2 weeks.

Importance of harvesting at the right maturity index

Picking pyrethrum flowers at the right stage is critical for optimizing pyrethrin content (quality) and profitability. Harvesting pyrethrum flowers at the wrong time results in pyrethrin losses, leading to low income for the farmer. Both young and overgrown flowers contain lower pyrethrin content, and if picked in large quantities, they can significantly reduce the overall pyrethrin content.

Figure 2: Illustration of flower stages in relation to maturity stages where; peak quality stages range 3 to 5 (circled) (Source: Collins Kimutai, KENTEGRA)