

M.S.62. CECILY, P.J.—Materials for Fish net, their properties, selection and preservation—1986—Dr. C.T. Samuel.

While determining the linear density of netting materials it was found that among the vegetable fibres, Italian hemp is heavier than other materials of the same thickness with sunhemp, flax, sisal, manila and coir following in the order,

coir being the lightest among the materials tested. In the case of synthetic twines PE monofilament braided twine was found to be the heaviest.

Evaluations of physical properties of vegetable and synthetic twines used for indigenous nets revealed the need for uniform twists and stability of twines by maintaining the correct ratios for inner and outer twists.

Comparative studies of trawl nets made of different materials including PE monofilament and PE flat tape twines proved the utility and cheapness of these materials for bottom trawls.

Regarding the strength property of netting twines, a comparative study showed that among vegetable fibres, Italian hemp is more than twine as strong as sunhemp. The strength decreased in the order of flax, manila, sun-hemp and sisal. Coir twines exhibited poor strength compared to other materials.

Regarding the comparative breaking stretch values of different vegetable fibre twines, it was evident that the extensibility of sunhemp was lower than those of Italian hemp and flax. Sisal and manila twines exhibited almost the same breaking stretch, while cotton and coir showed greater elongation as compared to the vegetables fibre twines. In all the vegetable fibres tested, the breaking stretches were found to be more in wet condition than in dry condition. In the case of synthetic twines, the correlation between diameter and dry and wet breaking stretch was found to be non-significant in all types of twines tested. One possible explanation is that the stretches of twines are independent of thickness.

It was found that by mixing of yarns it is possible to produce a new yarn which has got a different property from that of the component yarns.

Monofilaments of polyamide, polypropylene and polyethylene were mixed and the combination twines proved to be a better product and it is expected that the mixed monofilaments can be used for lines and ropes.