

posing the sucrose to more inversion, besides decomposing some of the impurities already present with a combined effect of increasing the "stickiness" of massecuites, which in turn will reduce capacity and increase steam consumption.

However no rule can ever be expected to fit all factories equally, due to differences in equipment-production relationships and variations in impurities present.

A factory with ample and efficient pan and centrifugal capacity, or where the nature of impurities does not seriously retard crystallization rates, as a rule will find "straight" boiling best; on the other hand, a factory which is forced to keep pans boiling under full steam pressure throughout the entire cycle may materially benefit from a little "topping-off" with low purity molasses.

An explanation for this may be based upon two facts: (1) A crystal of sucrose grows faster in a high purity mother-liquor than in a low one, other conditions being the same; (2) the rate of crystal growth is approximately proportional to the crystal surface area exposed to the mother-liquor.

At a factory which is short of pan capacity and has to force evaporation rates to the maximum throughout, by selecting an "in-boiling" system we can build up a greater proportion of the strike on high purity material with its fast crystallizing rate, and thus avoid false grain formation in spite of the fast evaporation rate. Then, towards the end of the strike, when it is necessary to take on the low purity molasses in order to finish at the required massecuite purity, we have already established a large crystal surface area which compensates, to some extent, the reducing rate of crystal growth and enables the rapid evaporation rate to be continued without danger of false grain.

SUMMARY.

(1) A comparison of average weekly results from the operation of six different boiling systems in a factory which was rather short of pan and centrifugal equipment for the quantity and nature of impurities handled, resulted in the conclusion that faster and better work was done when commercial sugar massecuites were "topped-off" with 10 to 15 per cent. of molasses of the same grade of massecuite, than when any of the so-called "straight" methods were used.

(2) Attention is drawn to the importance of taking numerous factors into consideration before passing judgment upon any particular system, and support given to the importance of "volume of total massecuite boiled per unit weight of dry non-sucrose entering in syrup." The system which under existing conditions at any factory, reduces this figure most will almost invariably give the best overall results, regardless of whether this is achieved by "straight or by "in-boiling" systems.

(3) An explanation is submitted for the poorer recoveries obtained at a factory where pans had to be forced to maximum evaporation rates, when massecuites were boiled "straight" than when a little "in-boiling" was practised.—(*The International Sugar Journal*).

AZUCAREROS PREEMINENTES



Don MANUEL URQUICO

Distinguido azucarero de Tarlac y una de las columnas mas sólidas de la industria del azúcar en Luzon, nació en Tárlac, Tárlac el 28 de abril de 1883.

Cursó sus primeros estudios en el Colegio de Letrán, tomando luego algunos principios de derecho en la Escuela de Derecho de Manila.

Es actualmente director de la Central Azucarrera de Tarlac, al mismo tiempo que plantador progresivo y Presidente de la Asociación de Plantadores de Tárlac.

Como plantador y azúcarero activo abriga temores por el futuro de la industria ante la perspectiva de una vida independiente atada, sin embargo, con fuertes cordeles de limitaciones e impuestos; pero cree que tal vez se pueda salvarla de un destino nebuloso con los esfuerzos de un sólido frente de los azúcareros que con enérgica batalla logre para ella mejor porvenir.

Sobre el jornal mínimo opina que la clase obrera también necesita del Nuevo Trato, pero, que el tipo de jornal necesariamente varíe según las circunstancias. Las plantaciones y fábricas en la provincia de Tárlac están dispuestas a elevar los jornales hasta donde sea menester siempre y cuando sea razonable.

Como plantador y centralista el Sr. Urquico es un colaborador activo en todas las empresas y movimientos que tiendan no sólo a desarrollar la industria azucarera sino más aún a contrarrestar los obstáculos que, puedan salir al paso, en forma de legislaciones onerosas para su futuro.