

# SUGAR and PLANTATIONS

## BETTER TONE RULES IN SUGAR TRADE

### Alexander & Baldwin's New York Agent Reviews Situation Since McAdoo's Promise Given

Alexander & Baldwin received yesterday from their New York house the following resume of conditions in the sugar market up to ten days ago:

"Since September 18 the market has found its bottom on October 2, when Porto Rico sold at 3.50 and Cubas at 2.64. Since then it has rebounded to 4.27 an advance of three-quarter cent per pound. Circumstances have almost reversed themselves in the meantime. All the breaks have been in favor of the bull side. On October 7, Secretary McAdoo announced the new policy of the administration in favor of retaining the duty on sugar for a few years as a means of producing revenue.

"The domestic beet producers of the Middle West and Michigan were given encouragement by this announcement to hold back a portion of their production instead of trying to sell it all as soon as the beets were concerned into sugar, which meant sending it into every Atlantic coast distributing point for consumption. They argue now that the new sugar tariff policy of the government will allow them to sell more of their product nearer home, keeping it for the usual trade of their own territory, which will save as well the necessity of absorbing the higher freights to the eastern territory.

### Caught Refiners Napping

"The change in selling policy of the domestic beet producers has already brought about new circumstances on the Atlantic coast. The cane refiners having decided that their own markets were temporarily lost to them, cut down their millings to a minimum. They figured that so long as there was beet sugar pressing for sale in their own markets, it would be useless to try to refine the normal amount of product. Except in order to fill whatever foreign orders were on hand, the eastern refiners reduced their purchase of raws and allowed their raw stocks to decrease to almost nothing, figuring that their own stocks of refined should carry them into next season.

"Suddenly the Eastern refiners found themselves getting a more normal share of the Atlantic coast trade. Being short of nearby raws and forced to have sugar to meet the increased demands, they are now forced to pay sellers prices for raws.

"The blocking of the Panama Canal has delayed for forty days 20,000 tons of Hawaiian sugar in getting to its destination, embarrassing the American Sugar Refining Company by that much.

### On Sound Business Basis

"Besides the Hawaiian, 30,000 tons of Peruvian was caught at the Canal, which are now on the way to United Kingdom and France. Owners of these goods were forced to go into the Cuban market and purchase an equivalent amount of Cubans.

"A brand new policy of getting together on selling terms has been inaugurated by the Eastern cane refiners. It has already raised the standard of trading, because contract terms are to mean what they say and the late pricing methods eliminated. The new order of affairs will permit everyone, owners and the whole trade, to do business on sound business principles.

"While the present rise has been too rapid and forced to be permanent, due to conditions as mentioned above, an less unforeseen conditions arise, a liberal or natural, after the present market, it has again reached its normal level of supply and demand, there should be considerably less violent fluctuations and a much greater stability."

## REAL ESTATE VALUES GIVEN BY BALLENTYNE

### Rapid Transit Manager Says Pa-waa Cottages Profitable

Manager Balleentyne of the Honolulu Rapid Transit & Land Company was again in the witness stand yesterday during the further trial of the injunction suit instituted by the Territory against his company and now on before Judge Stuart. The testimony related largely to the value of the real estate acquired from time to time by the company.

A net profit of \$238,274 had resulted, he said, from the company's investment in the cottages at Pa-waa. The total cost of the cottages was \$1,250,000. The net profit showed well in comparison with the cost of a passenger car, which averaged \$250,000 a year.

No information was given out, although such had been expected, in regard to the expert whom the company says it has sent to the mainland. In this case, if it is available, has been withheld. This man will give expert testimony on railroad values and it is believed that on this phase there will be a clash with the government experts, Charles R. Forbes and W. H. Ballinger, who have made a survey and valuation of the company's system for the Territory.

## ADVANCING PRICES AND BETTER DEMAND

### Refiners Caught Short of Supply Again Buy Raw in Heavy Volume

Sales of raw sugar in the New York market during the week ending October 21 totaled 300,000 bags Cuban and Porto Rican, 6,900 tons Philippine and 5,000 tons Cubas—Willett & Gray's report states, in part that stocks in the United States and Cuba together were 471,380 tons, against 506,507 tons last week and 439,867 tons last year, an increase of 31,513 tons from last year.

### Britain Buys Cubas

During the week Great Britain bought 30,000 tons of old crop Cubas for November shipment to replace delayed shipments of Peruvian sugars at the Panama Canal, but has shown no disposition to enter the United States market for refined sugar at present basis of values.

The past week's figures reflect the quiet market in Cuba sugars here for the corresponding week. Receipts are only 1,425 tons and exports 30,043 tons, all of which latter, according to Mr. Himely, were destined to the United States Atlantic Ports. Stocks stood at 217,576 tons against 110,000 tons last year.

One Central, the Santa Lucia at Gibraltar, continues to work, and weather conditions are reported as light showers in some parts or unsettled, which can only be taken as favorable at this time of year. The cable report from London early this week giving confirmation of purchase of 30,000 tons Cuba raws by the British Commission for late October-early November shipment will relieve the situation to that extent by the removal of 30,000 tons excess from our markets.

### Anticipate Export Business

The strong statistical position obtaining in the United States Atlantic Ports and the purchases by our refiners of about 200,000 bags for October and November shipments here, will be shown, no doubt, in the next few weeks' arrivals of sugars at the shipping ports in Cuba and in increased exports and reduced stocks.

Refined, which was quoted at 4.96 to 5.06 as we went to press last week, has advanced sharply, following the course of raws and is now firmly maintained on the basis of 5.25, less 2 per cent for Fine Granulated.

On Friday and Saturday, owing to the stronger feeling, quite a fair amount of business was placed at 1.90c Market Stiffens

The first advance came suddenly on Monday, when all refiners went firm at 1.35c, and buyers who had not fully protected their wants for the next week or so, were obliged to cover some of this basis, as all refiners declined to accept any further business at the old price. In this connection, one refiner issued the announcement here yesterday:

"From and after this date it will be the policy of this company to go firm at once on any change of prices. No business will be taken on any other basis, at any point, from anybody, no matter how large or small such business may be. This policy is announced as a means of making definite and real the relationship of this company to brokers and customers."

### Deliveries Are Slow

Shipments, which were rapidly catching up, are in bad shape again and delays of ten days to two weeks is reported in some quarters. The Federal being about the only refiner in position to ship promptly, although Arlock can ship most grades with only three or four days' delay.

Granulated for export increased in value accordingly, and while moderate sized lots were placed earlier in the week at 2.95c to 3.00c, the quotations are now at 4.20c to 4.25c, not cash, in bond, f.o.b. New York, which prices might be shaded slightly for good sized lots.

Michigan and Ohio beet sugars opened the week at 4.70c, New York basis, for Chicago-Buffalo territory, but have advanced to 5.05c for this section and to 5.15c less 2 per cent east of Buffalo.

### PROGRESS AT WAIHALOLE

Last Monday morning contractor Jorgen Jorgensen had only 173 feet of blue rock to blast out to connect the two ends of the great Waihalole tunnel. The gangs are so near that the sound of the dynamite explosions can be plainly heard through the barrier by the men working in the north and south bores. Four hundred and seven feet of rock is about the length of some of the downtown city blocks, so a good idea can be had of what there is yet to be done. The two faces will meet well before the end of December.

### CHAMBERLAIN'S COUGH REMEDY

When you have a bad cold you want a remedy that will not only give relief, but effect a prompt and permanent cure, a remedy that is pleasant to take, a remedy that contains nothing injurious. Chamberlain's Cough Remedy meets all these requirements. It acts on nature's plan, relieves the lungs, aids expectoration, opens the secretions and restores the system to a healthy condition. This remedy has a world wide sale and use, and can be found in all drug stores. For sale in all dealers, Boston, Smith & Co., Ltd., agents for Hawaii.

## Record and Forecast of Hawaiian Sugar Crops as of Uneven Dates to Oct. 31, 1915

The Hawaiian sugar plantation fiscal year is from Oct 1 to Sept. 30. There are forty-five sugar mills in Hawaii. In addition thereto, there are seven independent cane planters, whose cane is ground on shares, who do business on such a large scale that their share of sugar is listed separately. Planters without mills or not grinding their own cane are indicated hereunder by a \*.

Statistics are of tons of 2000 lbs. each. At this date all plantations are grinding.

NAME OF PLANTATION.	Crop of 1915 - Tons of Sugar		Crop of 1914 - Tons of Sugar
	Actual to Date	Forecast	
*Apokaa Sugar Co.	925	450	855
*Estate V. Knudsen	992	920	728
Ewa Plantation Co.	29,563	30,000	30,126
*Gay & Robinson	5,172	5,000	5,295
*Grove Farm Plantation	4,415	4,400	5,241
Hawaiian Agricultural Co.	17,800	18,000	16,232
Hawaiian (Commercial & Sugar Co.)	56,500	55,000	55,672
Hawaiian Sugar Co.	28,826	24,000	24,754
Hawaii Mill Co.	3,601	3,000	3,713
Hamakua Mill Co.	7,057	11,500	9,283
Halawa Plantation	2,987	1,600	2,400
Hakalua Plantation Co.	16,863	16,500	19,205
Hilo Sugar Co.	18,937	13,300	17,474
Honokaa Sugar Co.	7,273	10,000	10,052
*Pacific Sugar Mill	6,250	7,000	
Hawi Mill & Plantation Co.	6,745	8,600	8,790
Honouliuli Sugar Co.	8,567	9,000	9,827
Hutchinson Plantation Co.	5,999	8,000	6,627
Honolulu Plantation Co.	20,154	19,000	18,233
Kihuna Sugar Plantation Co.	6,426	5,800	6,714
Kipahulu Sugar Co.	2,126	2,500	2,678
Kaeleku Plantation Co.	6,225	5,500	6,760
Kahuku Plantation Co.	8,193	7,000	7,786
Kohala Sugar Co.	8,572	8,500	9,168
Kekaha Sugar Co.	17,153	15,100	14,978
Kohala Sugar Co.	4,475	5,500	7,131
Kona Development Co.	3,477	3,200	3,380
Karwiiki Sugar Co.	6,382	7,000	6,551
Kohala Plantation Co.	3,223	3,700	4,047
*Koolau Agricultural Co.	1,127	600	487
Lanipahoehoe Sugar Co.	11,323	17,300	11,563
Lihue Plantation Co.	22,045	20,000	20,019
*Laiue Plantation	1,400	7,600	487
Mahee Sugar Co.	10,660	10,800	10,820
Maui Agricultural Co.	33,660	34,000	39,430
*McReilly Sugar Co.	18,345	15,000	15,245
Niihau Mill & Plantation	2,700	2,500	2,200
Oahu Sugar Co.	33,474	28,000	28,597
Olan Sugar Co.	25,736	23,000	29,120
Olowalu Co.	2,927	1,850	2,167
Onomea Sugar Co.	19,600	18,000	21,267
Paauhau Sugar Plantation Co.	10,767	10,000	9,935
Pioneer Mill Co.	28,302	28,000	33,137
Pepeekeo Sugar Co.	9,806	10,500	11,387
*Pepeekeo Plantation	1,035	1,200	1,300
Uleia Mill Co.	2,608	3,000	2,674
Waialea Mill Co.	14,922	14,000	15,621
Waialea Sugar Co.	18,100	18,000	19,102
Waialea Agricultural Co.	30,298	31,000	29,791
Waianae Co.	3,043	4,500	4,971
Waimanalo Sugar Co.	5,133	4,800	4,890
Waimoena Sugar Mill Co.	2,258	1,900	1,215
Total	617,026	612,530	637,490

## OAHU PLANS ARE MATURING FOR BIGGER CROP BASIS

H. Harkfield & Company stated yesterday that Oahu Sugar Company will close its year with a credit balance of over \$800,000 in its treasury. If sugar prices remain at their present level the company will continue to pay dividends of one percent a month during 1916. The plantation has paid a total of nine per cent during 1915 and all of the old sinking fund has been returned, this in addition to the heavy extra payments and expenses on account of clearing new lands and getting it in shape for cultivation.

Provisional estimates on the basis of weather and field conditions at this time are that the 1916 crop will be between 30,000 and 31,000 tons. The 1917 crop will probably amount to between 35,000 and 36,000 tons. In 1918 the new average planted will bring the crop up to between 40,000 and 45,000 tons, and thereafter the plantation will operate on a normal crop basis of 45,000 tons.

### WAIKAEA ENDS SEASON

Waikaea Mill Company finished its 1915 crop October 30 with a total of 17,428 tons. This is 2500 tons more than was harvested in 1914 and is 3100 tons in excess of the manager's January estimate.

### SIX MILLS GRINDING

Only six plantations are still grinding. These are Hawaiian Agricultural and Hutchison, in Kauai, both of which will continue harvesting until the end of the year; Nihiu and Union Mill, in Hawaii on account of unfavorable weather conditions; Olan, which will finish about the middle of the month, and Waimea, where the delay was caused by breakages to the machinery. All except the two Kau plantations will probably complete their harvest this month.

### WAIMANALO PAU TOMORROW

Waimanalo Sugar Company finishes grinding its 1915 crop of 5300 tons tonight or tomorrow morning. The yield has been about 500 tons over the manager's first estimate early in the season.

## SUGAR FACTORS SHIPMENT

The Sugar Factors' Company shipped \$22,098 tons of 1915 crop sugar to October 31, and there is still between 4000 and 5000 tons to go forward. The last to go to the Pacific coast will be the Matsun, November 17. Final shipments to Atlantic ports will not leave Hawaii until December 1 when the first vessel to carry 1916 crop is scheduled to depart. Manager A. M. Newell stated yesterday that so far as estimates now go the total 1915 sugar handled by his company will be about 533,000 tons.

## HOW BANANAS GET RIPE

The chemistry of ripening bananas has been worked out by H. C. Gore, of the United States department of agriculture. He found that the most sugar is formed just at the stage where the banana is beginning to turn from green to yellow. After this sugar forming period the fruit further ripens the most important changes are in the water content of the banana. The pulp gains water and the peel loses it. The concentration of water by the peel and the stalk of the bunch lasts until the fruit becomes over-ripe.

### CANE TASSELING LATE

Weather conditions are reported to be excellent from Kauai to Kauai. Showers and warm, growing days make crop prospects for 1916 look extremely rosy. John Waterhouse stated yesterday that the cane is only just beginning to tassel, the first "arrow" having shown itself a good two weeks later than last year. This means that much more growth, and more sugar in the bags when harvest time comes.

### PIONEER ESTIMATES FOR 1916

Preliminary estimates of the 1916 crop of the Pioneer Mill Company are that between 30,000 and 31,000 tons will be harvested. The estimated crop a year ago was 28,000 tons, which grew to 32,220 tons when all 1915 sugars were accounted for.

## FERTILIZER MAY PREVENT COFFEE CHERRY FALLING

The mulching of coffee is practiced on an extensive scale in India. A series of experiments has been planned by the Madras agricultural department to study the relation which the maintenance of a heavy mulch has to quality and yield. As a preliminary the chemists have made a rather complete series of analyses of the coffee berry at the various stages in its development, and they announce in the Annals of Applied Biology that they have arrived at certain averages.

The potash remains in almost constant ratio in the berry from the time it first sets until the cherry is ripe, they state. The proportion of phosphoric acid, on the other hand, steadily increases until the fourth month and then steadily declines. Variation in the water content of the coffee berry is quite marked. When the fruit first sets it is very high but steadily decreases until within a few weeks of the time the cherry begins to turn red. As the berry begins to ripen the amount of water actually rises. These chemists therefore believe that this is the critical stage in the life history of the berry. "It may account for the premature falling and failure to ripen of the crop on certain soils and in years of low rainfall," they state, "at any rate it suggests changes in methods of cultivation and manuring so as to develop the root area and conserve the soil moisture."

### MOLASSES BAYASSE

The suggestion comes from one of the mainland exchanges that molasses and bagasse when mixed for stock feed should also contain seven per cent of salt "and a little whitewash." Very little has been done with molasses lagoon in Hawaii. In Germany the waste molasses from the beet factories is mixed with peat moss to supply the crude fibre necessary in all animal rationes. Molasses peat moss is there largely used in combination with alfalfa meal and dried blood as pig feed.

### C. & C. ESTIMATES, 1916

Castle & Cooke announced yesterday that their provisional estimates for 1916 are: Ewa Plantation Company, 29,000 tons; Waialea Agricultural Co., 30,000 tons; and Kohala Sugar Co., 5,000 tons.

## F. C. LOWREY OF FEDERAL PREFERS CONSUMPTION TAX

The New York Journal of Commerce of October 19 states that F. C. Lowrey, manager of the sales department of the Federal Sugar Refining Company, has sent a letter to President Wilson saying that if the administration felt itself forced to revise the sugar tariff because of the need of greater revenue congress might obtain the desired result by imposing a consumption tax without disturbing the present tariff act.

"He points out that a consumption tax would be evenly divided between domestic and imported sugars, and cites figures to show that the total revenue derived by the government through this means of taxation would be considerably greater than could possibly be obtained from postponing the operation of the 'free sugar' provision of the tariff, which goes into effect on May 1, 1916.

"Mr. Lowrey also alleges inadvisability of any tariff revision at the present time, and says that if congress begins with the sugar schedule it is likely to be bothered by other interests which are certain to take steps calculated to bring about a modification of other schedules.

### An Amiable Suggestion

"A consumption tax of one cent per pound, Mr. Lowrey has figured out, would net the government \$84,000,000 a year. A tax of this sort, he says, is easily collectible at the source, the number of refineries and beet sugar plants in the United States being comparatively small.

"Mr. Lowrey says that the subject of sugar taxation resolves itself to the question whether congress desires to afford protection to the domestic interests or whether it merely seeks to tax that commodity because of need for greater revenue.

"He says that congress, by its action two years ago, has indicated its refusal to give 'protection' and that Secretary of the Treasury McAdoo's recent statement concerning the revision of the sugar schedule was based on the need for greater revenue. If congress needs more revenue, declares Mr. Lowrey, it can best get it by imposing a consumption tax."

Refusal of British ships to accept cargoes either to or from Germany or Austria in the Far East has further complicated the already acute Pacific shipping situation, according to official reports reaching Washington. As the vast bulk of the trade between the Far East and the United States is handled through German firms, American commerce is being seriously affected. "Only the Far East seems now to be offered by the order," said a statement by an official in close touch with the situation. "But there are rumors that it is to be extended. There are many German firms in Latin America and if shipments to or from these firms are refused by British vessels, American trade would be hard hit."

## NOT AN INCH OF HEALTHY SKIN

### Left on Whole Body—Boy of Five a Mass of Itching Eruption and His Screams were Heart-Breaking—Bandages Stuck to His Flesh.

### CURED BY CUTICURA TWELVE YEARS AGO

"My little son, a boy of five, broke out with an itching rash. Three doctors tried to cure him, but he kept getting worse until I was unable to do anything for him. I finally advised me to try a certain medical preparation, but the treatment did no good. At the time I was induced to try Cuticura because I saw so bad that I had to cut his hair off and put the Cuticura Ointment on his head, neck, and arms. It was impossible to touch him with the bare hand. There was not one square inch of skin on his whole body that was not affected. He was one mass of sores. The bandages used to stick to his skin and in removing them it used to take the skin off with them, and the screams from the poor child were heart-breaking. I began to give up, but after the second application of Cuticura Ointment I began to see signs of improvement, and with the third and fourth applications the sores commenced to dry up. His skin peeled off twenty times, but it finally yielded to the treatment. Now I can see that he is entirely cured, and a stronger and healthier boy than ever since the cure was effected. Robert Watters, 1148 Fort-eighth St., Chicago, Ill., Oct. 9, 1909."

Millions of women prefer Cuticura Soap to all other skin soaps for preserving, purifying and beautifying the skin, scalp, hair and hands. For rashes, itching and chafing, red, rough hands, dry, thin and falling hair, for infantile eruptions and skin blemishes and every purpose of the toilet, bath and nursery, Cuticura Soap and Cuticura Ointment are invaluable.

Passing above this point in the direction of saturation, growth is again retarded, because plants find as much difficulty in drawing moisture from the soil when there is too much water as when there is too little. If the soil were to be kept saturated few crops could live many days.

It naturally follows that irrigation, to produce ideal soil conditions, must take into account something more than the available water supply, or an eight days' labor schedule. On many plantations irrigation practice is governed very largely by rule of thumb and convenience.

To Use Water Best

There have been abundant experiments which prove that for all soils there is an ideal moisture condition at which point all crops grow most rapidly—fertility, temperature and other conditions being equal. In other words there are good reasons for irrigation for all other agricultural operations, if they can only be discovered. Too much water is just as bad as too little besides being wasteful. There is need of soil tests on every irrigated plantation to find out just where the "critical moisture content" lies. If by modification of field practice the water content of the soil can be maintained at that optimum level, an additional 10 to 15 per cent increase in yield, under a condition of maximum growth during the entire crop season.

## USING LESS WATER MAKES BETTER GROWTH

### Too Much Water in Soil As Bad As Too Little

### Best Amount For Growth Can Be Determined By Laboratory Tests

Much attention has been given in recent years to making better use of the water where irrigation is practiced and to making the soils more retentive of moisture in districts where the rainfall is insufficient.

What is the best percentage of water, is a question that might well be asked. The physicists have determined, by theory and laboratory tests, that the best moisture content of a soil to promote most rapid growth of crops, and also the point at which the labor of cultivation is the least, is at just that degree of water retaining capacity where each soil particle is wet, but where there is no surplus free water in the minute spaces between them. That is to say a soil moist enough to supply growing crops with the large quantities of water which they require must have air as well as water in its pores.

### Critical Moisture Content

It has been proved that when a soil is in this condition cultivation is easiest.

This exact point of optimum water supply can be determined by a very simple laboratory experiment, and is termed the "critical moisture content." If more than the critical moisture content is retained in a soil it becomes hard to plow and is also not in good condition for crops to grow to best advantage because the soil contains too much water and not enough air.

A soil may be moist to the touch and in appearance and yet not have enough free water in it to grow crops. Taking the "critical moisture content" as the optimum moisture condition, the point at which plants no longer can take water from the soil is known arbitrarily as the "wetting point," yet at this point the soil is by no means dry. At the other extreme would be the point of saturation when all the air is driven out of the soil and its place taken by water.

### Water Holding Capacity

Some experiments recently made at the College of Hawaii with "red" and "black" soils from Maui are interesting in showing that the saturation, wetting and wilting points are. The air dried soil weighs approximately eighty pounds per cubic foot, so that an acre of soil to the depth of one foot would weigh, in an absolutely dry condition, about 3,500,000 pounds. In reality an acre-foot of soil never gets absolutely dry, but this weight may be taken as representing the mineral "skeleton" of the soil absolutely devoid of free water.

It was found that this red cane soil contained 58.6 per cent of air spaces, so that if all the air was displaced with water a cubic foot of the red dirt would weigh 127.3 pounds, while an acre to the depth of one foot, saturated, would weigh over 5,545,000 pounds.

At the wetting point, or when the roots of plants were no longer able to take enough water out of the soil to sustain growth, it was found that nearly one-fifth of the weight of the soil was water. There was still 19.8 per cent of water in the soil. Stated another way, although an acre foot of this red soil still held 86,000 gallons of water, it was too dry to grow a crop or sustain the life of plants.

At the "critical" moisture point, where growth would be best if just that degree of moisture could be maintained, the water per acre-foot was 127,000 gallons. Hence there would be a margin of only about 41,000 gallons of water held in the first acre-foot of red cane soil between the condition of moisture where growth is best and the point where growth ceases, or say an inch and two-thirds of water.

### Saturated Soil is Poisonous

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