

PERUVIAN INDUSTRY WITHIN THE WORLD
CONTEXT WITH SPECIAL REFERENCE TO
MALUMA
O Duarte



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Maluma
dag 2017

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90 PASSIEVOLLE JARE

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General aspects

A VERY YOUNG EXPORT INDUSTRY

- Up to the 90s Peru used to grow basically 'Fuerte' and some 'Nabal' in the coast, for the local market
- There were some scattered plantations of Mexican type avocados (small, purple, shiny fruit) in the Andean highlands and some plantations of West Indian type avocados in the Eastern foothills of the Andes, the pre Amazonian portion
- First commercial Hass planting: 1994
- First Peruvian Hass export: 1999



- Peru is now one of the largest world producers and exporter, after only 20-23 years of having started to plant 'Hass'
- Mexico is the largest producer and exporter

AREA OF HASS AVOCADO IN PERU

(estimated)

YEAR	HECTARES	
1993	20	
1994	400	FIRST PLANTATION
1996	1300	
1998	1700	
1999	2100	First Export
2000	2500	
2002	5300	
2004	6200	
2006	7500	
2008	9600	
2009	10500	
2010	12000	
2011	13500	
2012	16000	
2013	19000	
2014	21000	
2015	23000	
2016	25000	

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AREAS OF MALUMA AVOCADO IN PERU

YEAR	HECTARES	
2010	1	
2011	1	
2012	10	
2013	16	
2014	18	
2015	19	
2016	85	
2017	96	
2018	170	*
2019	270	*
2020	363	*

* Pre ordered

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General aspects

- Peruvian avocado production is located mainly in the coast (a desert with practically no rainfall), water comes from rivers that end up in the Pacific ocean. (70-90% of the water is lost) . It originates from rains in the Andes mountains or from melting of ice in the high peaks.
- Building dams is difficult and expensive and their average useful life is around 50 to 80 years due to the sediments that the river waters leave since they come from sparsely or non vegetated areas

General aspects

Most new avocado orchards in the coast

- Are on very sandy or almost pure sand soils
- Use heavy amounts of organic matter at planting time
- Use drip irrigation. Normally 2 lines
- Are planted in mounds
- Are using about 50 cubic meters per hectare a day in summer

General aspects

- Most used rootstock is 'Zutano'
- In areas with alkalinity/salinity West Indian rootstocks are used (seeds imported from Israel).

In some cases what is called 'Topa Topa' can be used, but it is not really that variety. Quality and uniformity are not very good

- Clonal rootstocks are not being used yet
- Most farmers do their own plants
- In many cases grafting is done in the field

General aspects

- Most plantings use a pollenizer (Zutano). Some technical people doubt about the benefit of this.
- Bees are used in most cases to improve pollination.
- Plantings normally are done with 6m between rows and 2, 2.5 or 3m between plants along the row
- Different pruning systems are used

General aspects

- Harvest season is between March and August.
- The further north along the coast the earlier the harvest
- In the Andean valleys harvest is from December to April, with 'Hass' slowly replacing 'Fuerte'

General aspects of MALUMA in Peru

- Fruit set tends to be heavier than in 'Hass'
- Harvest season is similar to that of 'Hass'
- Yields tend to be heavier
- Average fruit size is larger than for 'Hass', like in other places





Ecuador

Colombia

Piura

Chiclayo

Trujillo

Lima

Main growing areas

Brazil

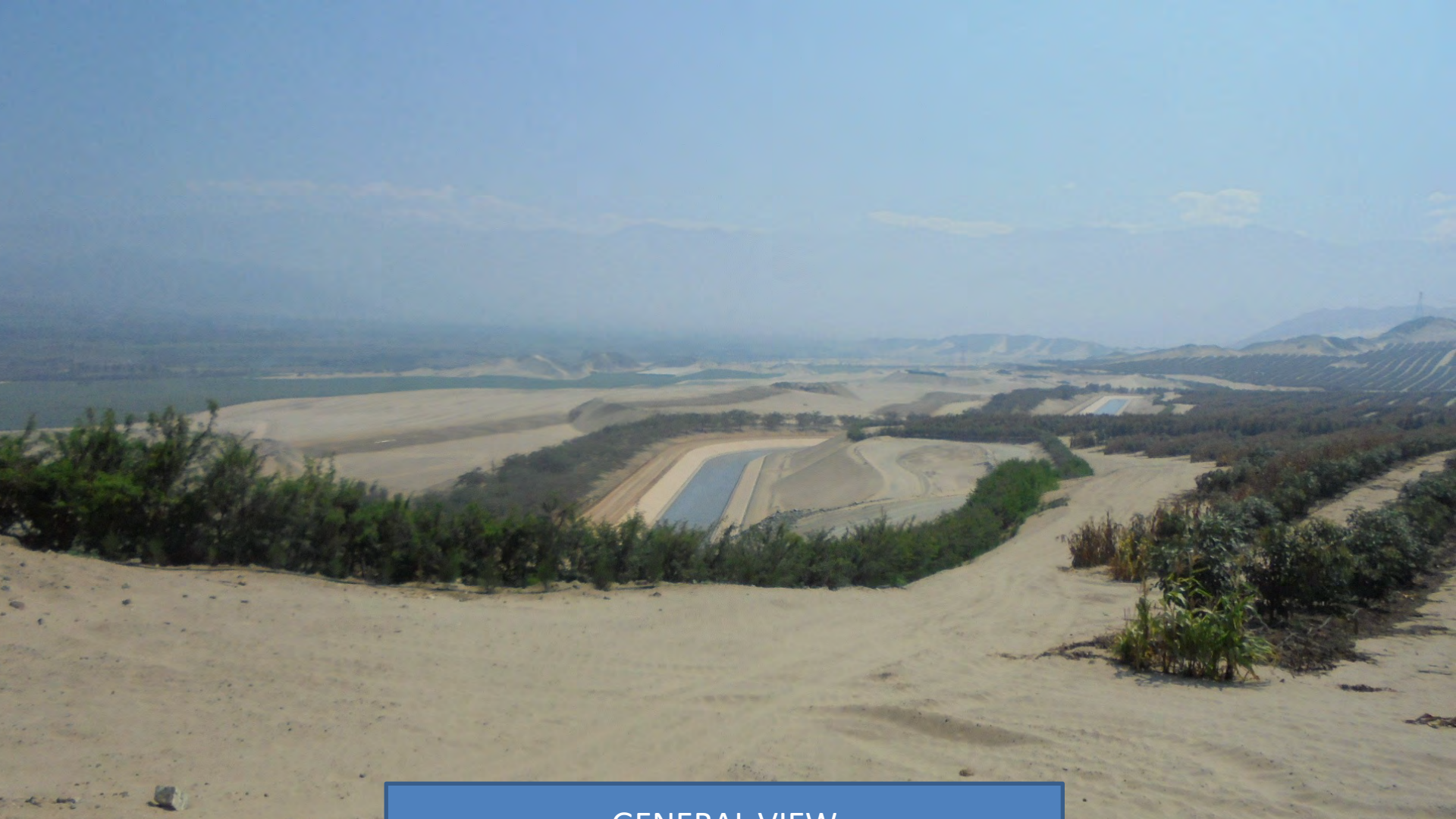
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GENERAL VIEW



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THE BEGINNING



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NURSERY



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FIELD PREPARATION



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ORGANIC MATTER



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ROOTSTOCKS



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ROOTSTOCK JUST PLANTED



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ROOTSTOCK JUST PLANTED



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ROOTSTOCK JUST PLANTED



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GRAFT IN FIELD



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MULCH



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WIND PROTECTION



TYPICAL NEW PLANTING



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TYPICAL NEW PLANTING



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WINDBREAK AND MOUND



WINDBREAK AND MOUNDS



MOUND



MOUND



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LOTE: 18
VARIEDAD: MALUMA
PATRÓN: ANTILLANO
SIEMBRA: OCTUBRE 2013
N° PLANTAS: 83
ÁREA: 9.20
SECTOR: SOLEDAD BAJA





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PEACH AND AVOCADO

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BLUEBERRIES



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talsa

MALUMA

A new avocado variety grown in the north coastal desert of Peru by Talsa

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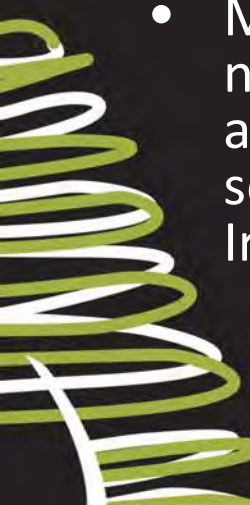
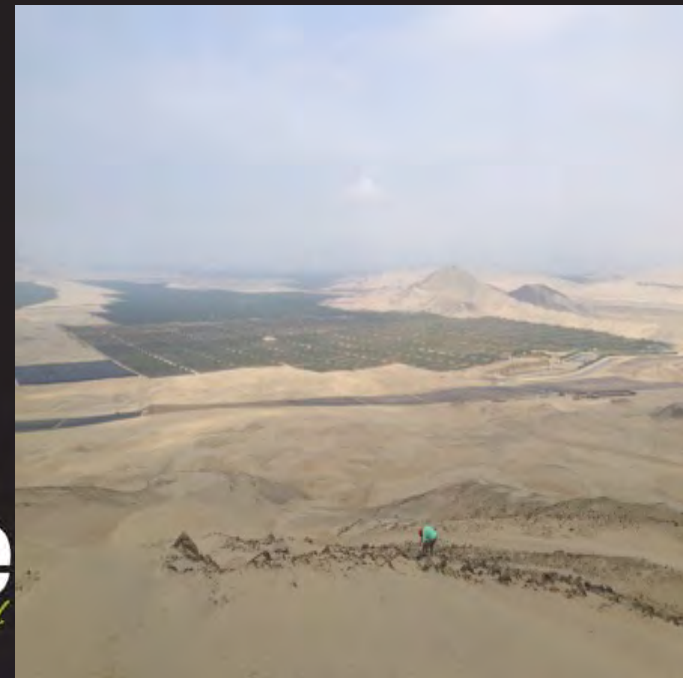


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Tal S.A.

- Tal S.A. is Grupo Rocío's (group of Peruvian companies dedicated to poultry, dairy and agriculture) agricultural company. It is dedicated to the production, packing and export of fresh produce.
- The three major crops grown are Blueberries (1120 Ha), Avocados (580 Ha) and Asparagus (750 Ha).
- Most of our fields are located in the northern coastal strip, with sandy soil, and moderate climate. The water source is the canal of Chavimochic Irrigation Project.



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Ensueño farm in the valley of Chao



- By the end of 2012 we requested license for growing 5,000 Maluma plants
- Maluma buds were first imported in February 2013, and after dealing with several difficulties during the trip, 1,271 buds arrived in acceptable conditions. The buds were immediately grafted on Zutano rootstocks and six months later these plants were moved to the field (August 2013).
- A standard planting density was used: 7m x 3.5 m



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Ensueño farm in the valley of Ch...



- The first harvest occurred in January 2015 from fruits produced from early flowers. Yield: 1,740 Kg/Ha.
- The main harvest was done on May 2015. Yield: 7,880 Kg/Ha.
- The Hass variety used as a control had a yield of 2,470 Kg/Ha.
- The mean weight per fruit was 277 gr.
- 1,174 new Maluma's were planted.

Fruit size distribution for main harvest

Size	Weight Range	Percentage
10	366-460	4.9%
12	306-365	22.0%
14	266-305	32.3%
16	236-265	17.5%
18	211-235	9.9%
20	191-210	8.1%
22	171-190	2.7%
24	156-170	1.3%
26	146-155	0.4%
28	136-145	0.4%
30	125-135	0.4%

Ensueño farm in the valley of Ch...



- The second harvest was done in May 2016
- Maluma average yield was 13,170 Kg/Ha
- The correlation between dry matter and oil content was determined:

% MATERIA SECA	15	16	17	18	19	20	21	22	23	24	25	26	27
% ACEITE	3.90%	6.70%	6.60%	7.00%	8.20%	9.90%	10.30%	10.90%	12.00%	--	14.30%	16.10%	17.30%

San Gustavo farm in the Valley of Zaña

- The San Gustavo Farm is located further north, approx. 200 km north of the city of Trujillo.
- The temperatures are warmer than in Chao by 2-3° C. The soil is of medium texture and the water source is from wells.
- We have been licensed to grow 60,400 Maluma plants in 63 Ha.
- The rootstocks being used are mostly West Indians.
- The planting density is 6m x 2m and 5m x 2m
- The Maluma plants were transplanted July 2016 and the first harvest is programmed for April 2018.



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July 2016



talsa



July 2016



talsa

July 2016



talsa



Feb 2017



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talsa

THANKS!

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R&D Manager and Agricultural Production Manager

TALSA

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