

Madurez y calidad - Basico

Chris Peereboom Voller S.

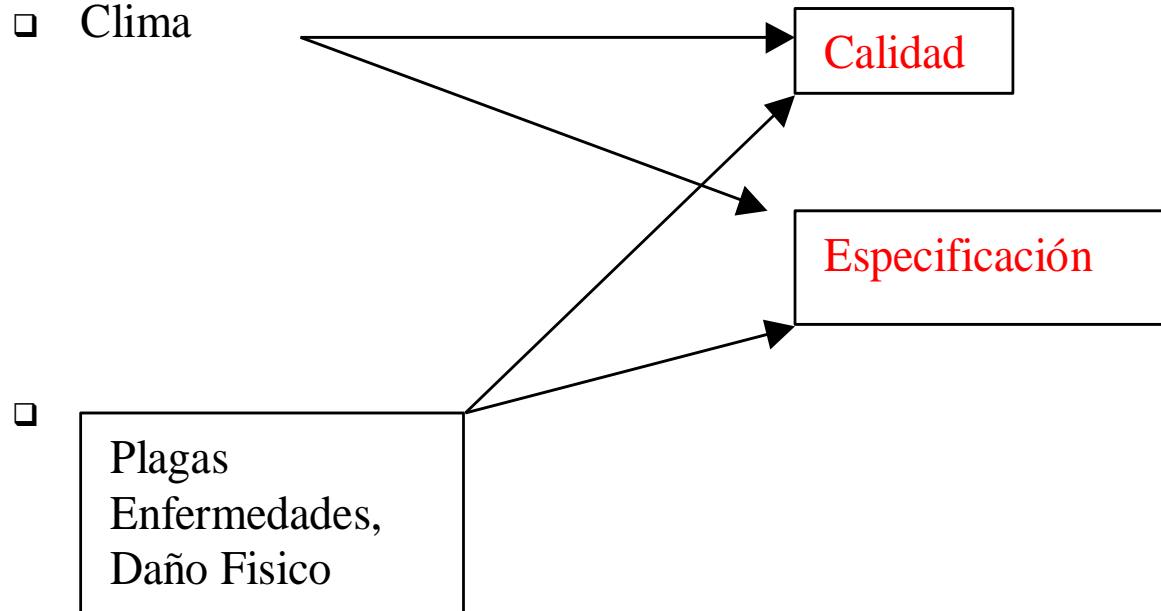
Tasc

International Horticultural Consultant



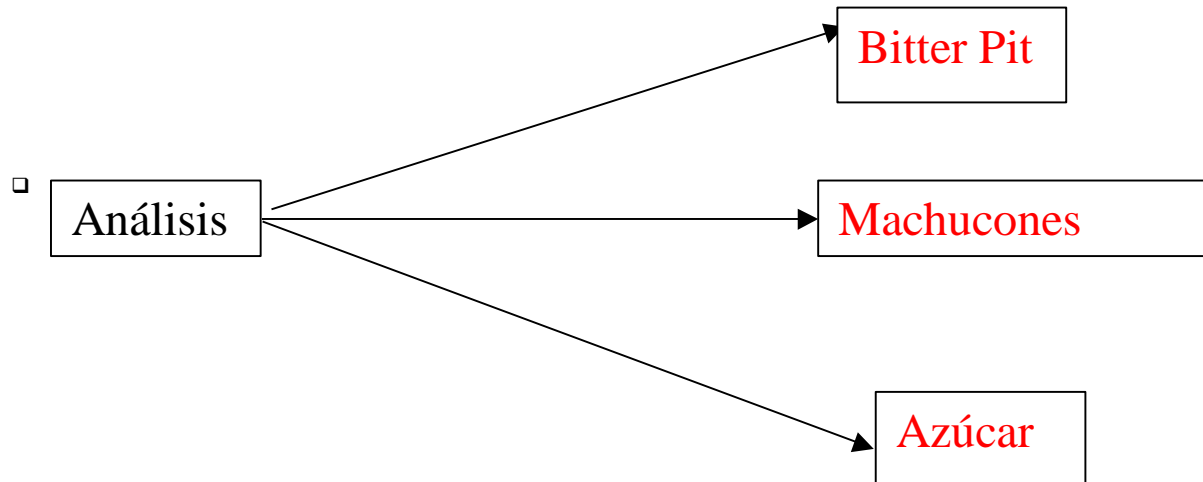
Objectives of discussion

- ❑ Origen de incidente
- ❑ Tipos de madurez
- ❑ Madurez / Calidad
- ❑ Parametro de informacion basico
- ❑ Clima

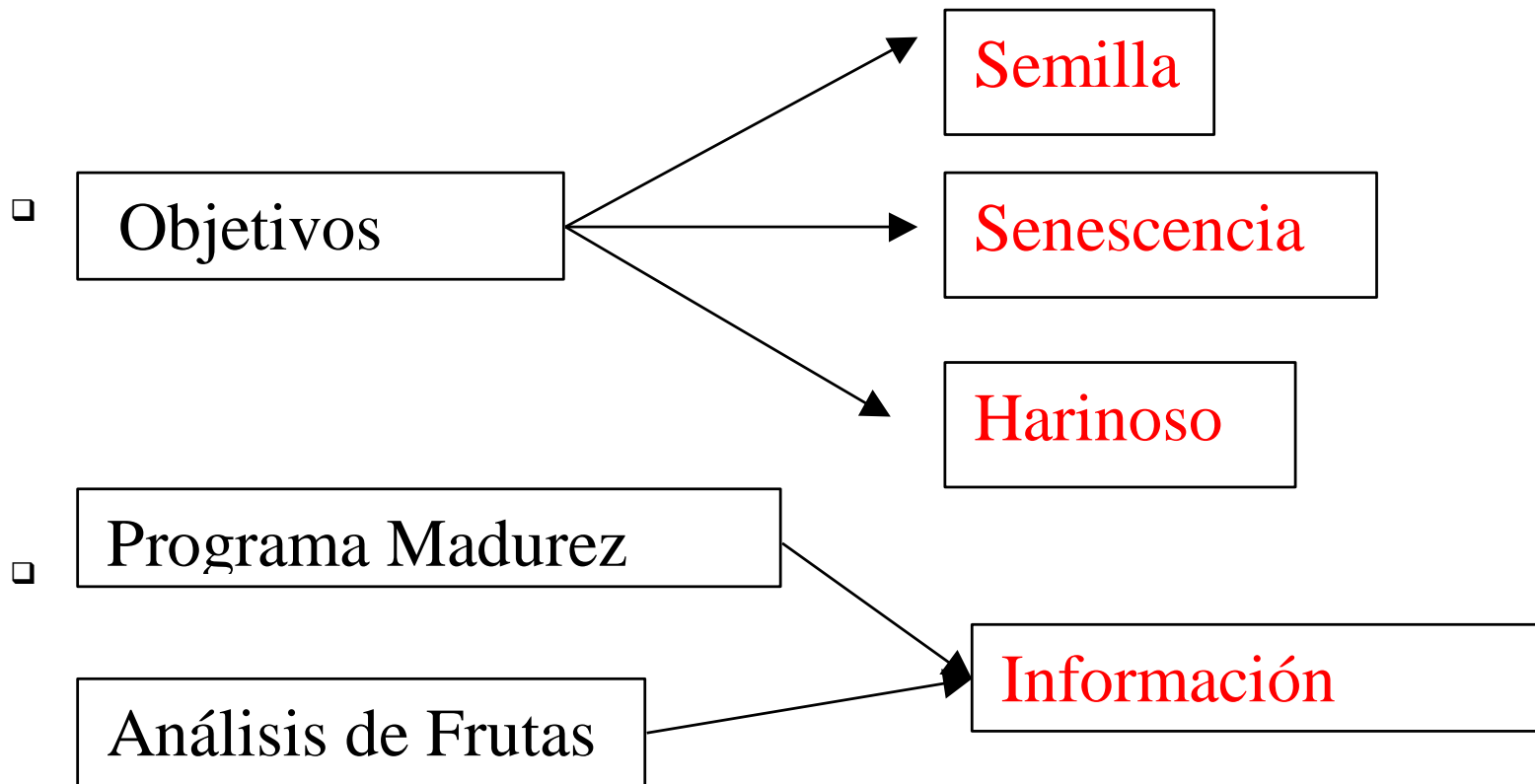


Objectives of discussion

- Etileno →
 - “Calidad” Fruta →
 - Predecir niveles de parametros
- Conservación
Frutas “Infladas”

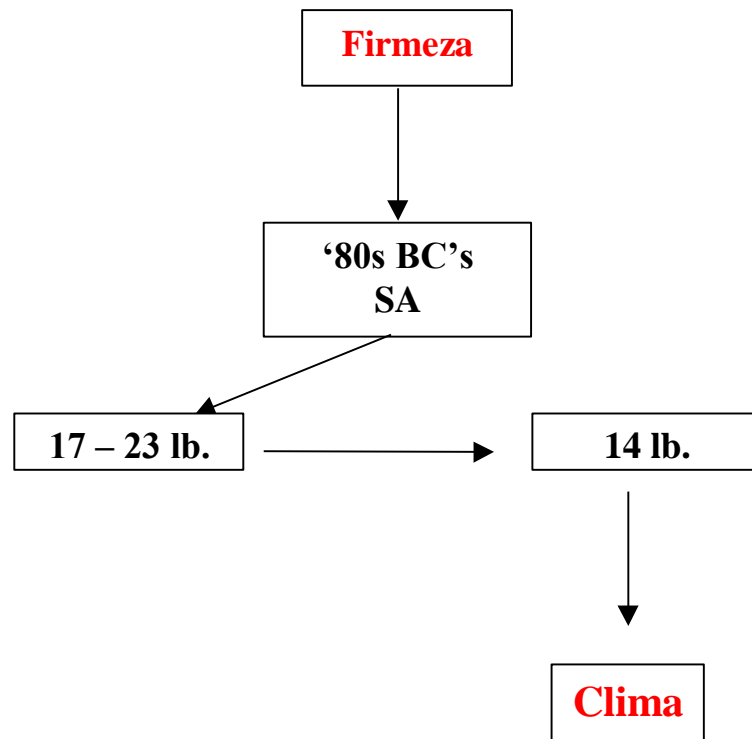


Objectives of discussion



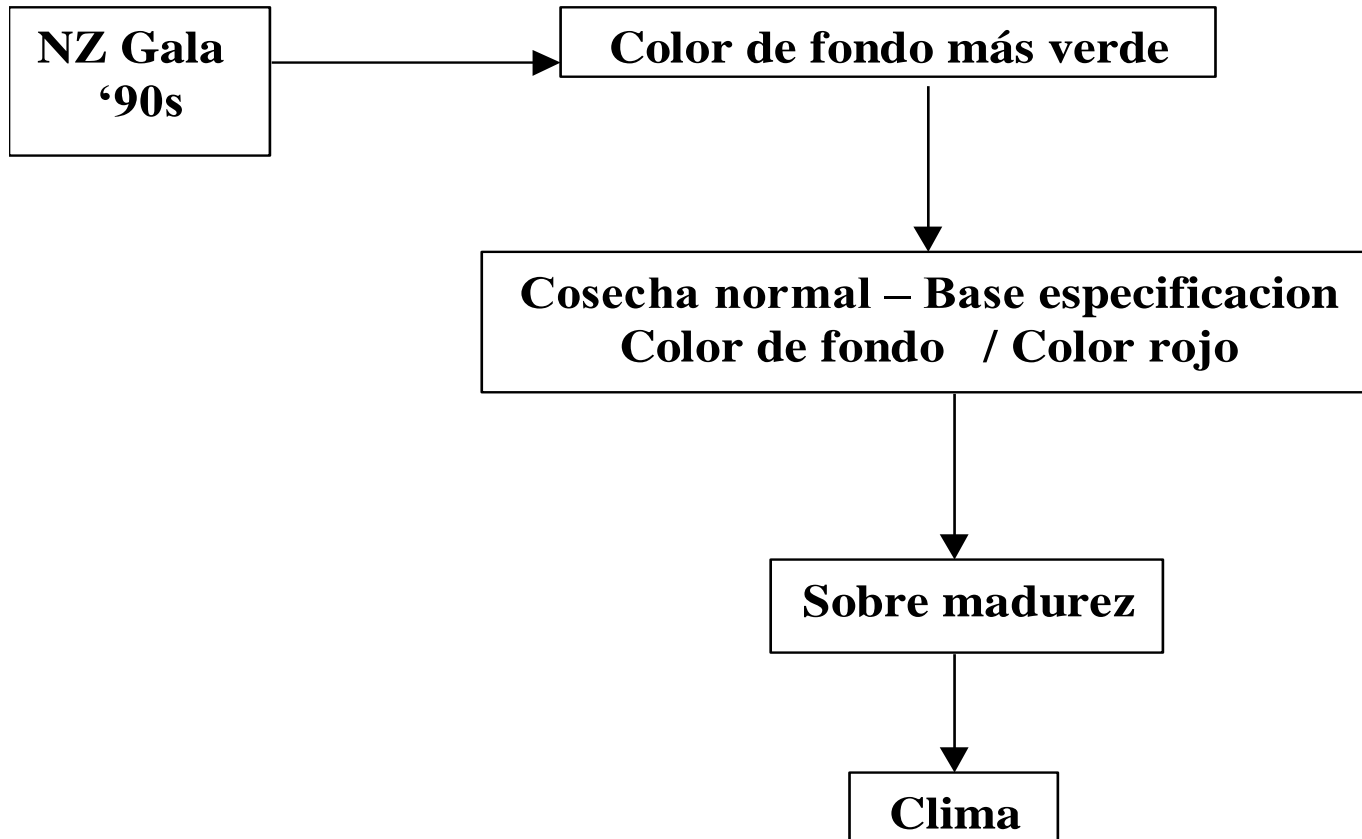
Introducción

Madurez – Problemas de Calidad



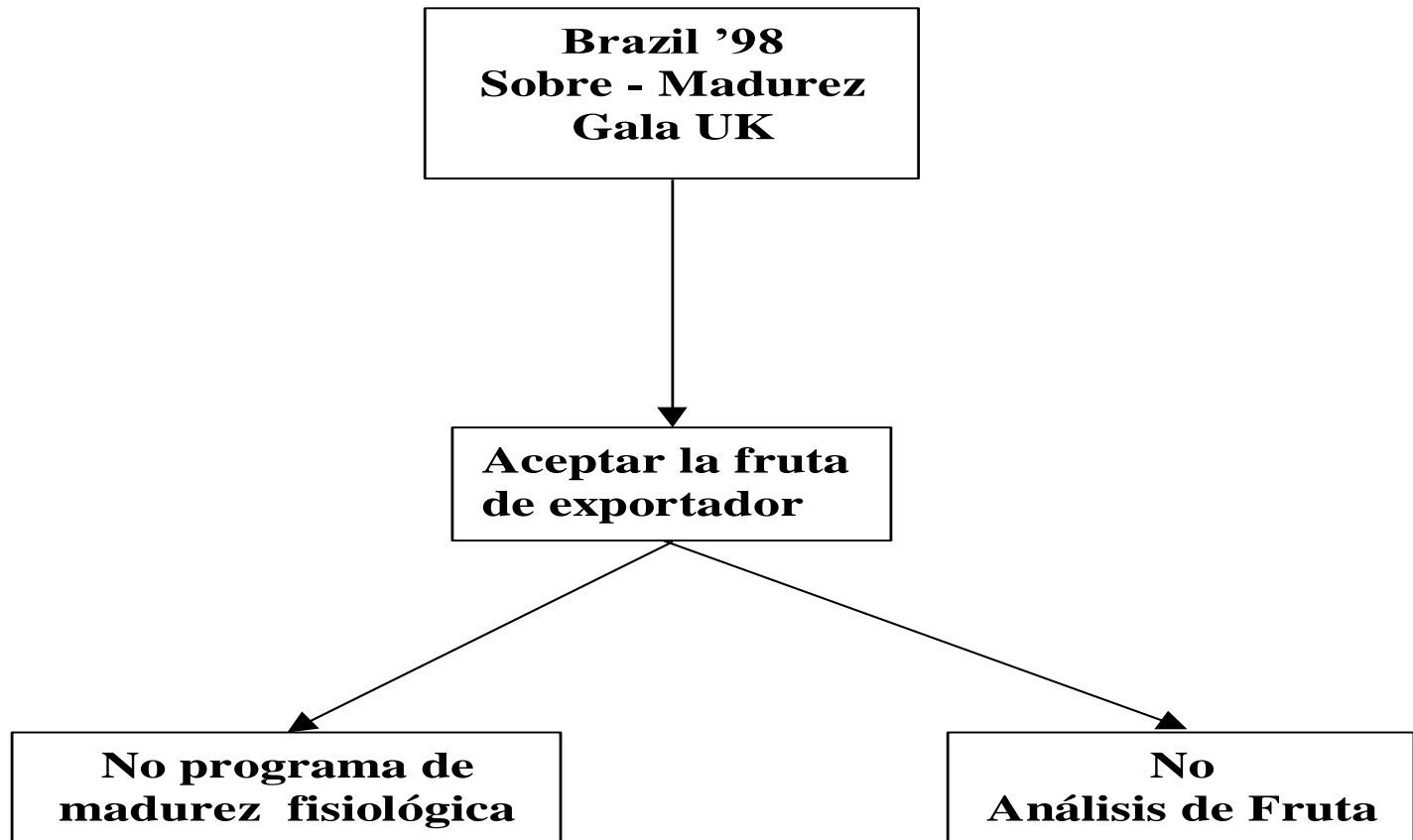
Introducción

Parametro Color de fondo / Color



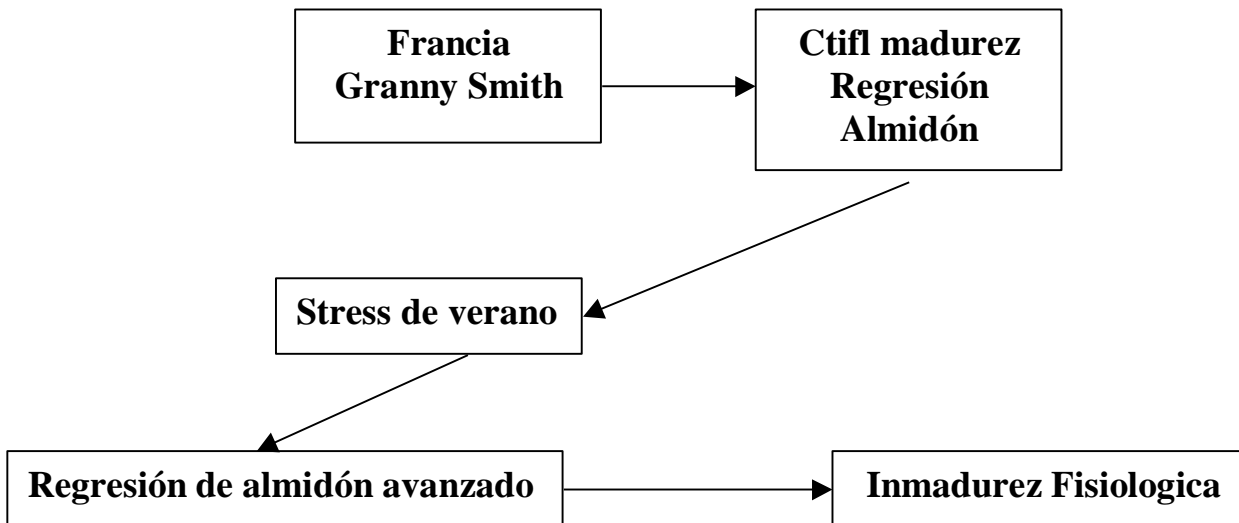
Introducción

Gala Madurez

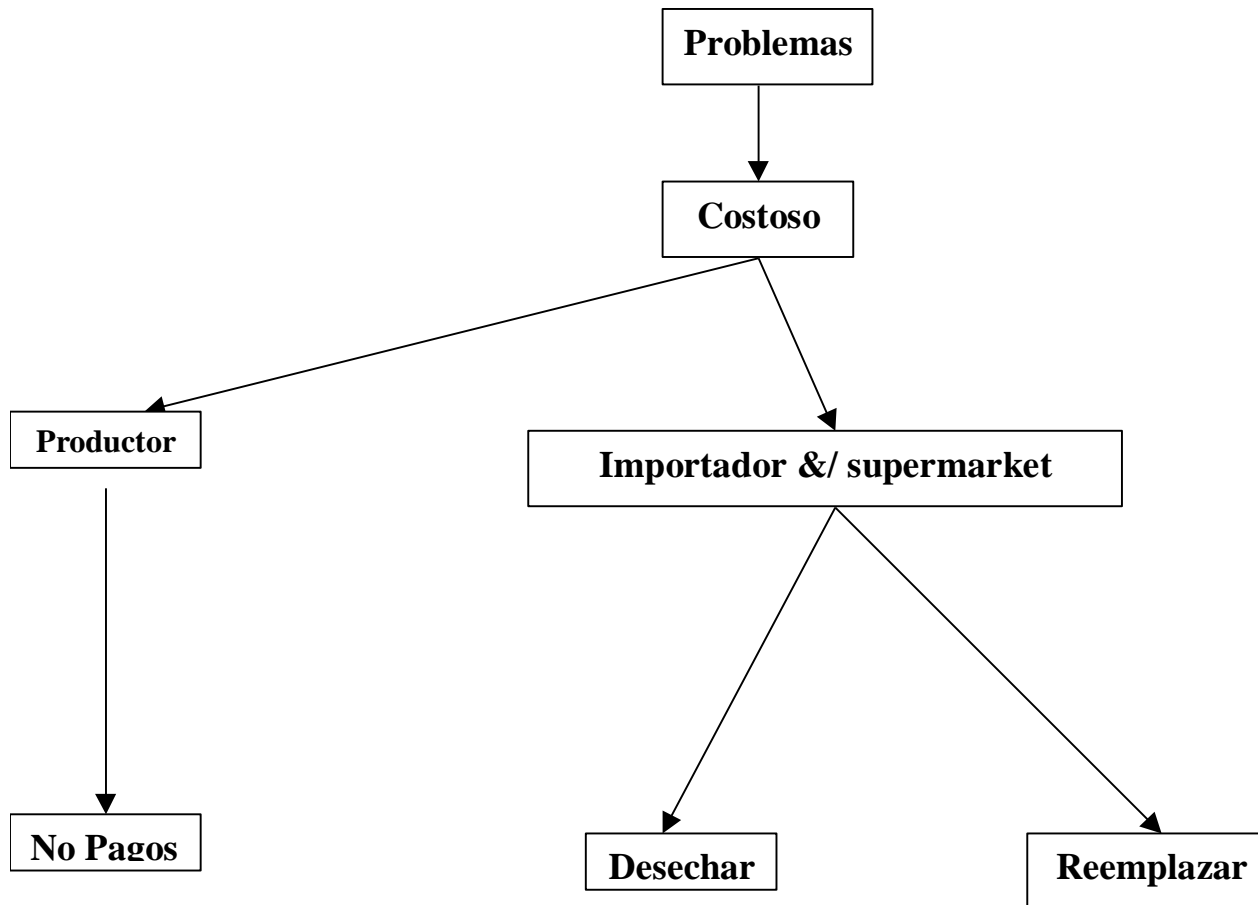


Introducción

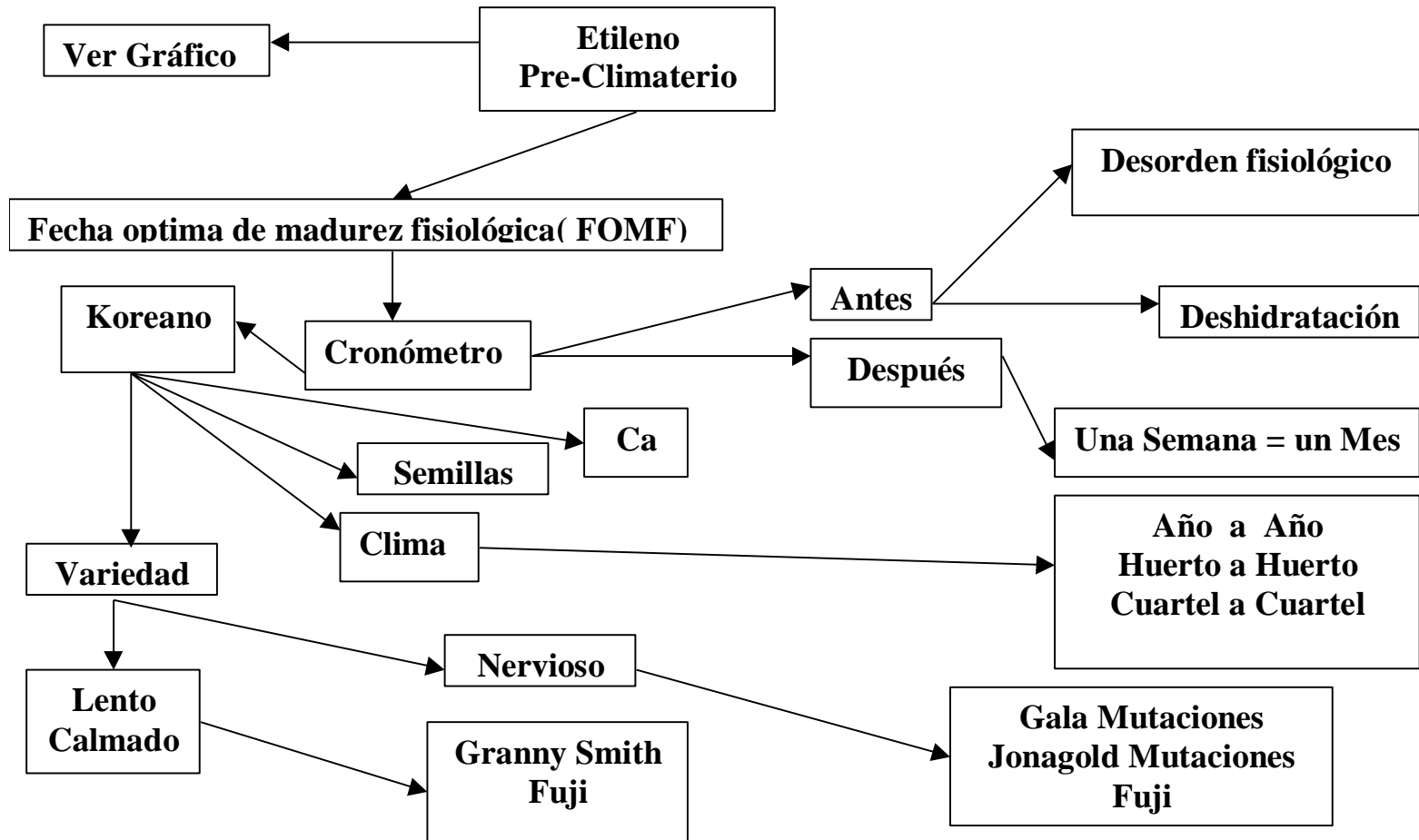
Scald



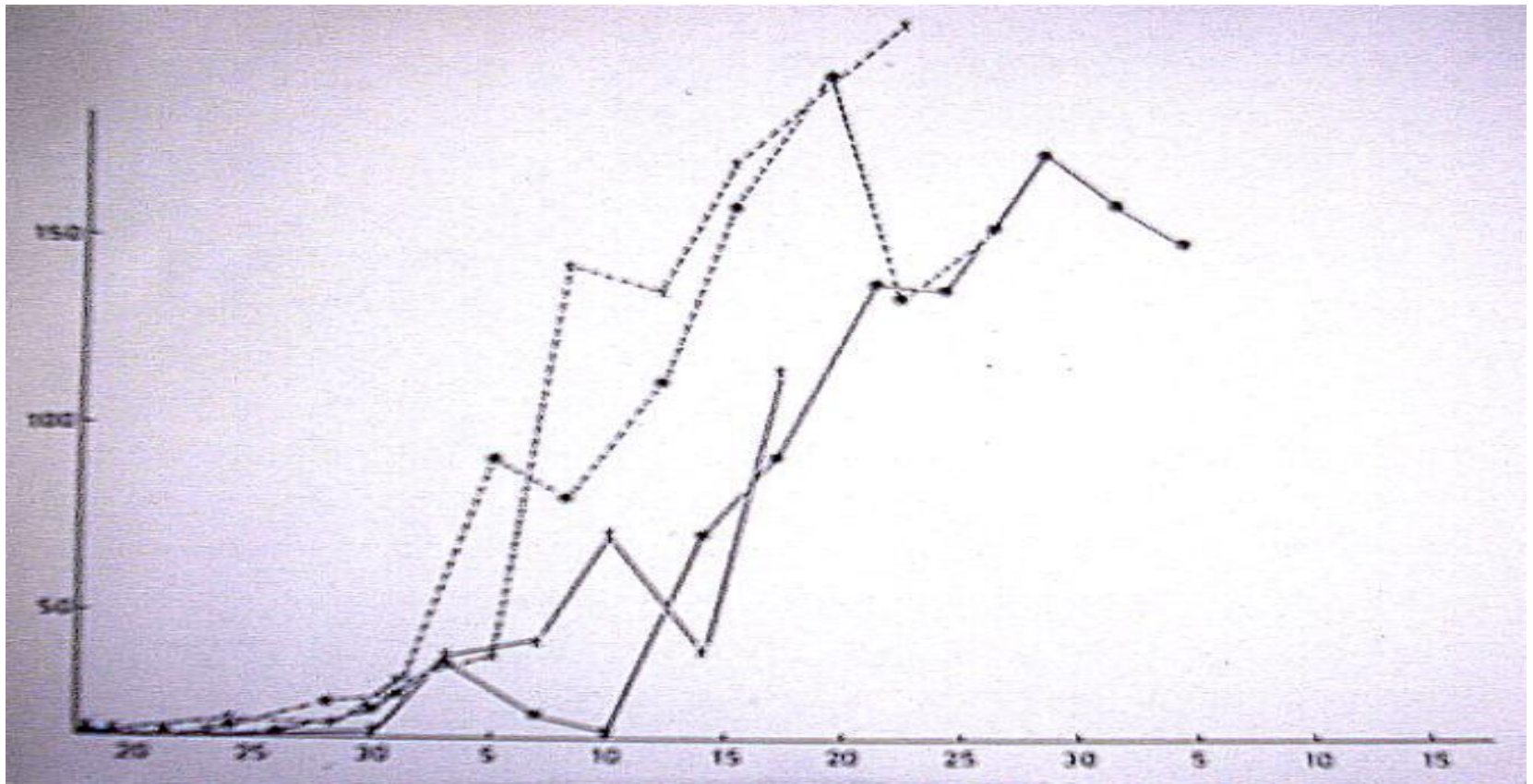
Introducción



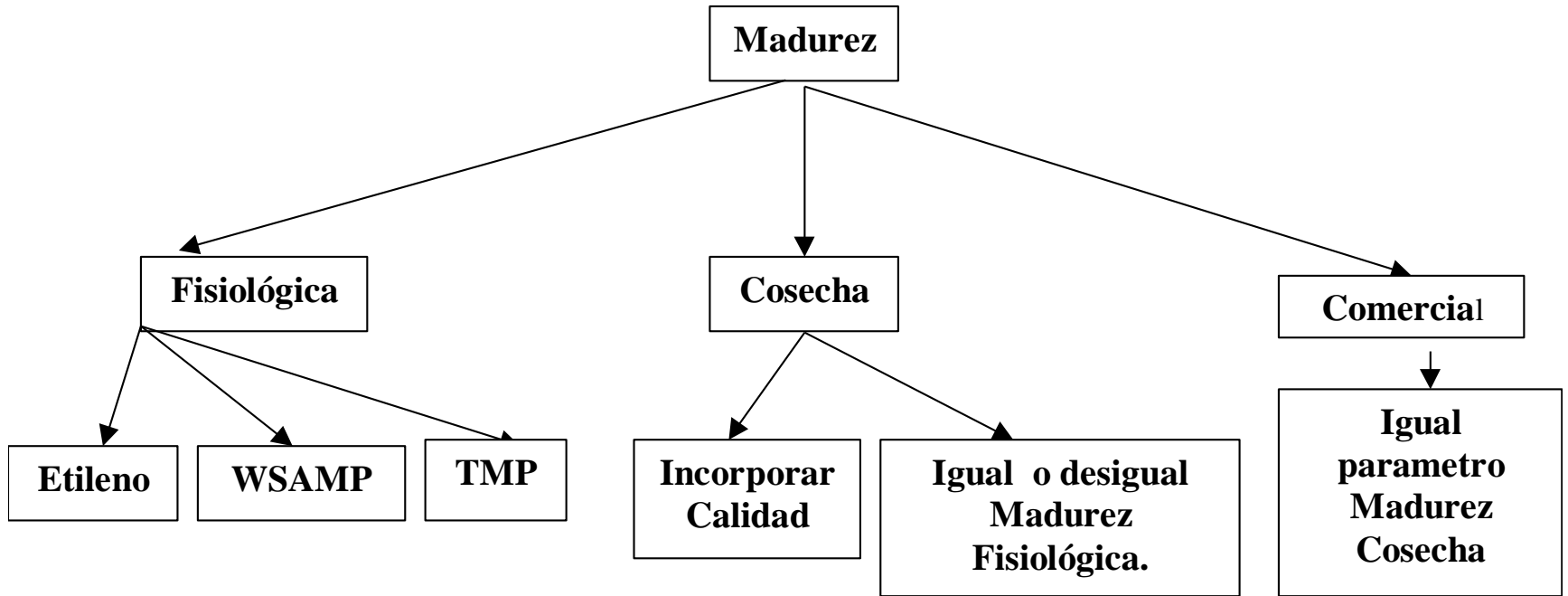
Fundamentos de madurez



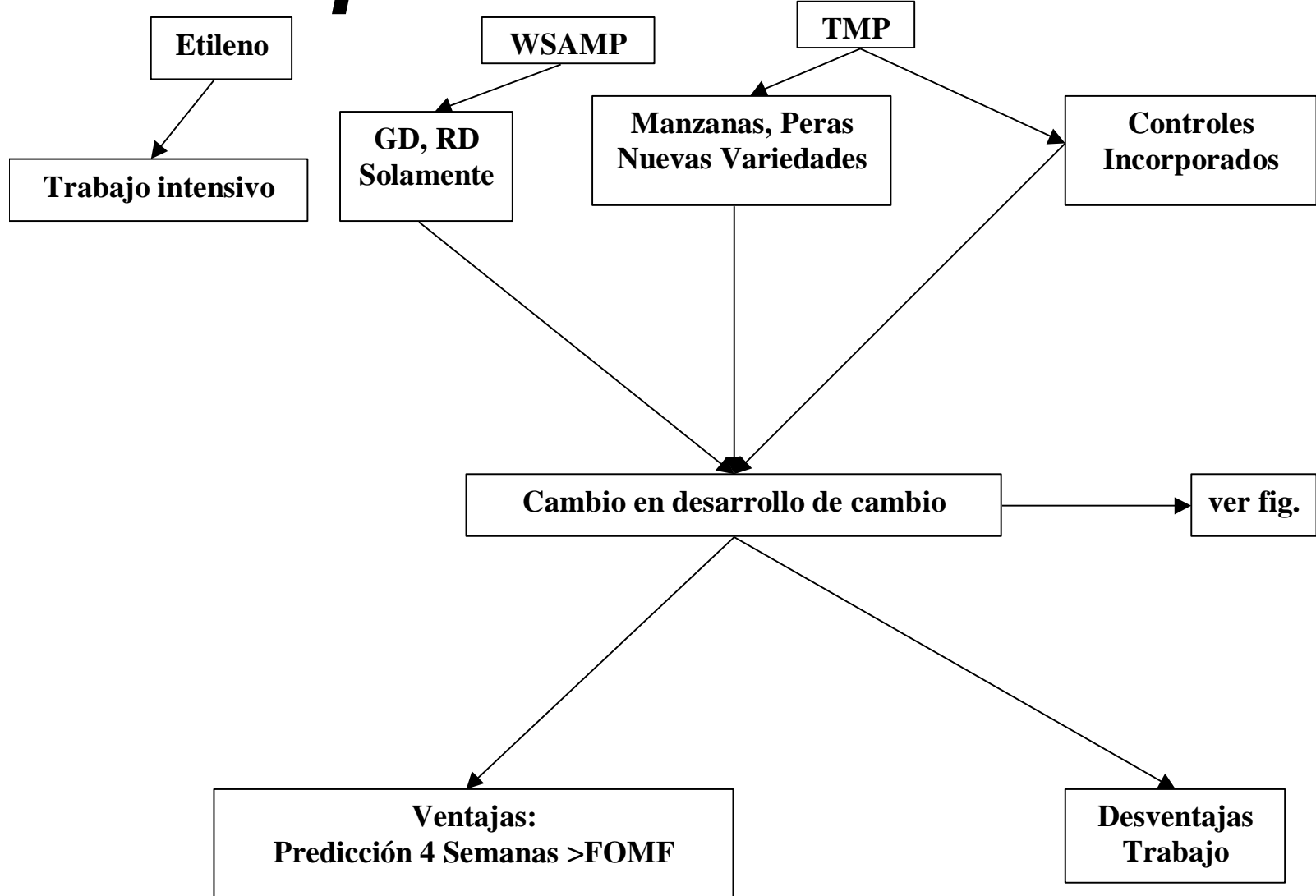
Etileno -Pre-climacterio



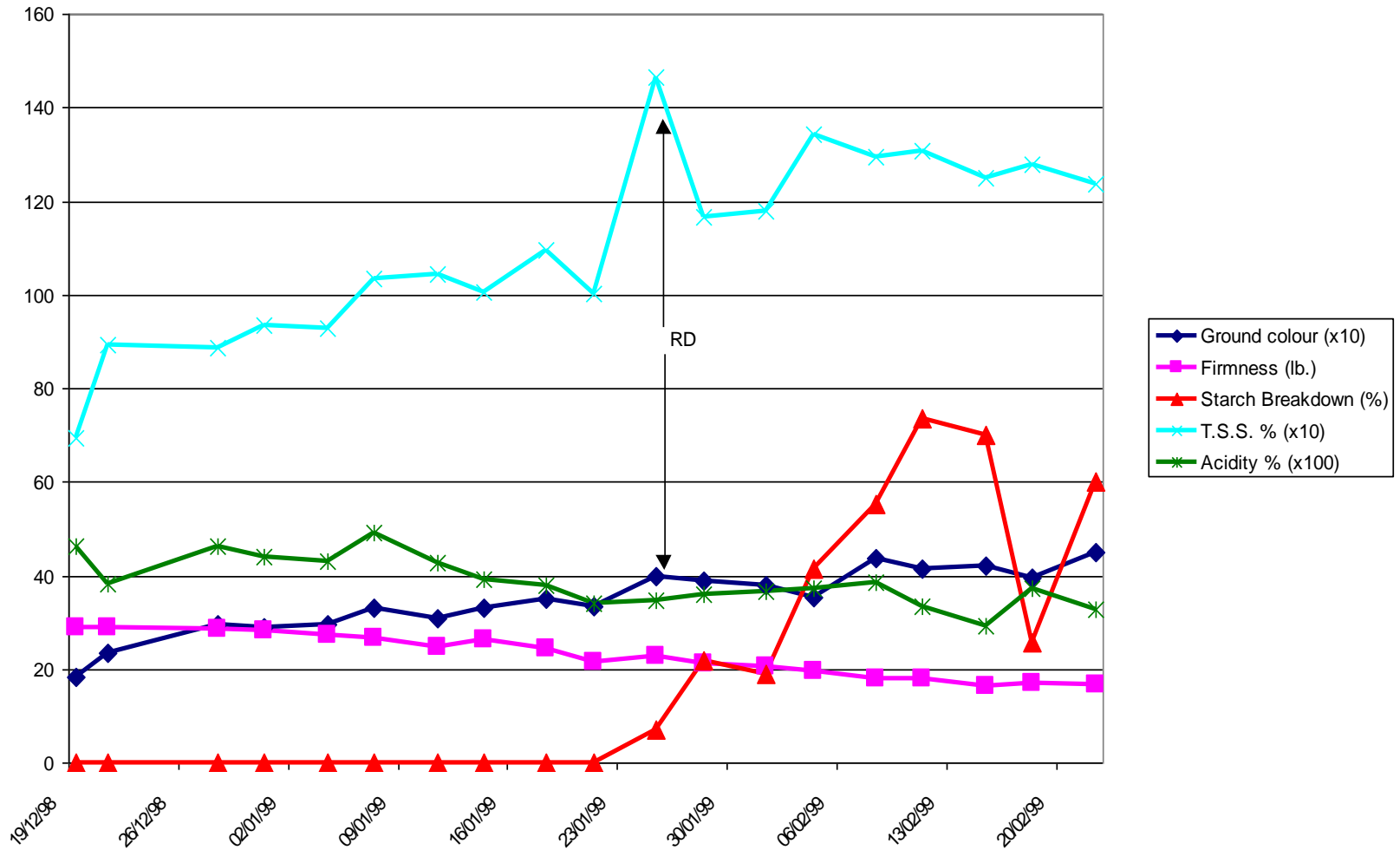
Tipos de Madurez



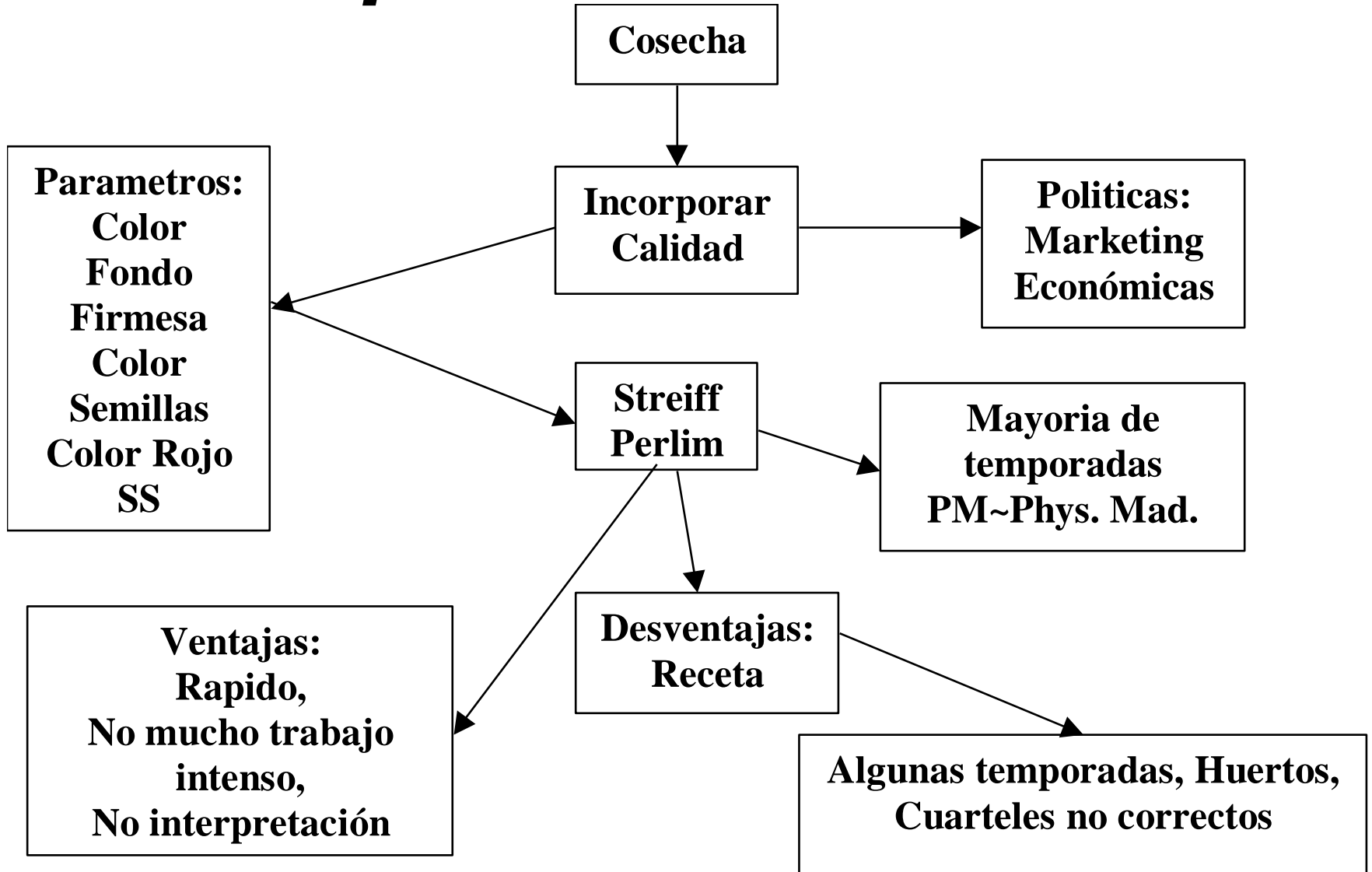
Tipos de Madurez



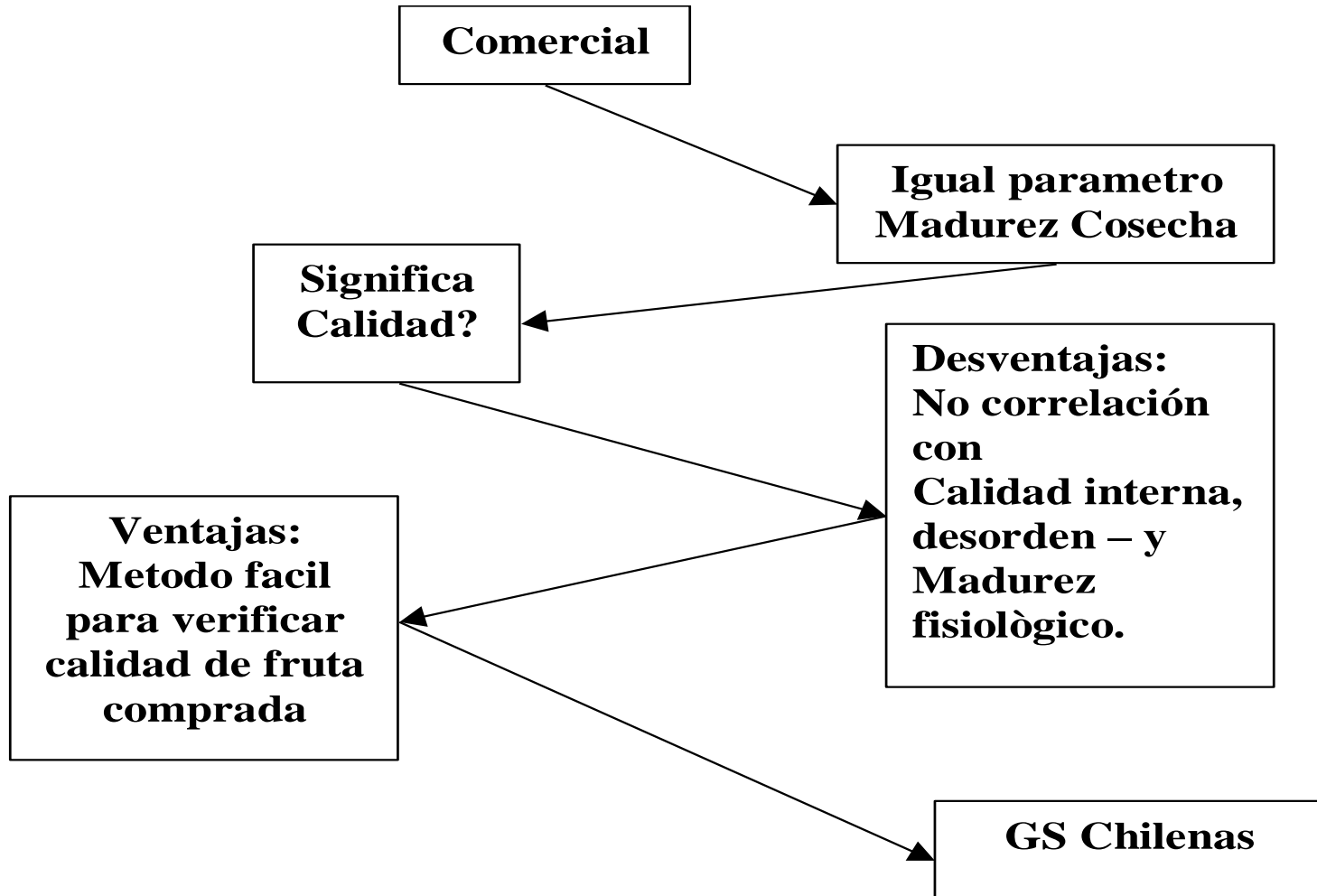
Tipos de Madurez



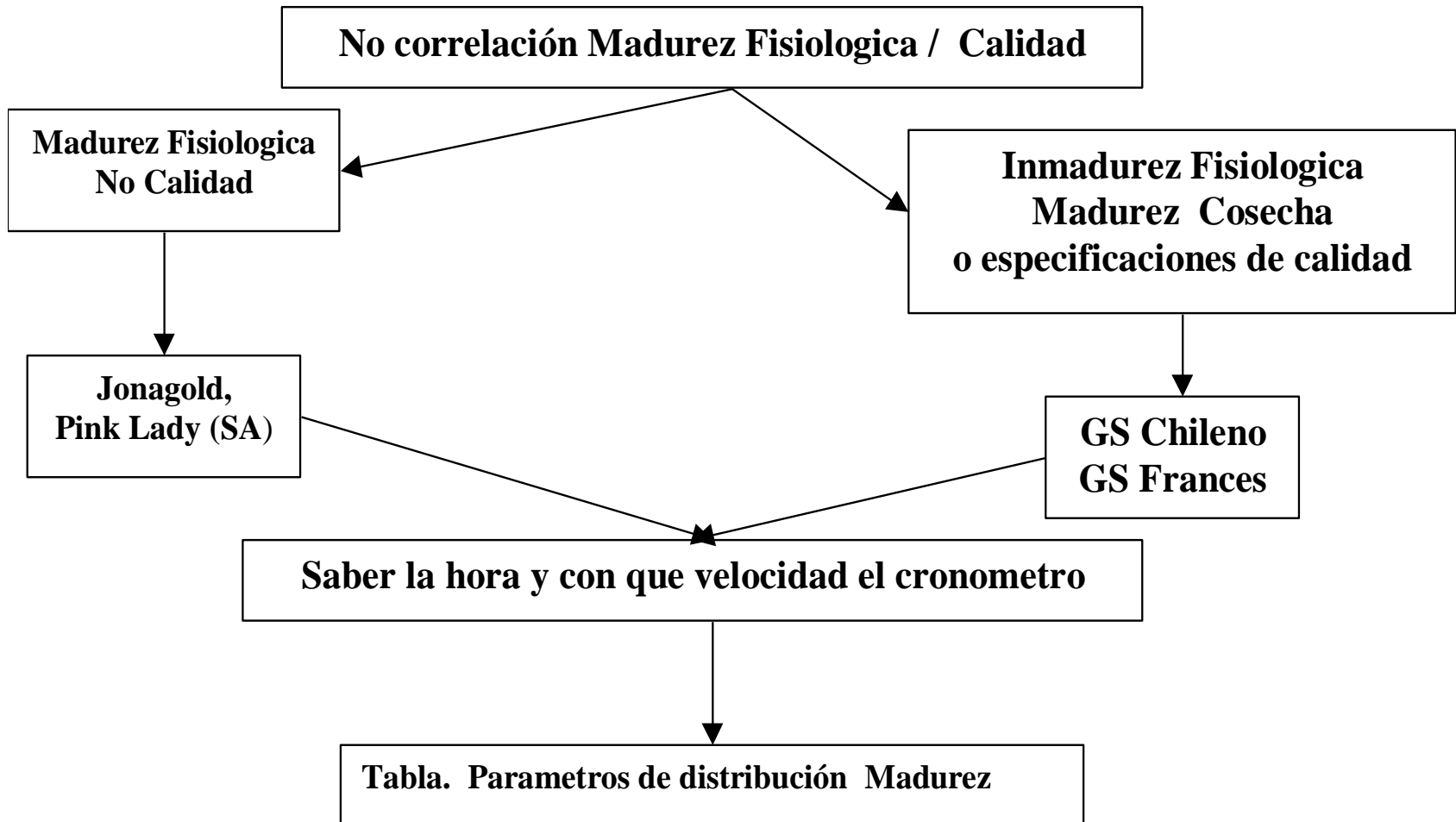
Tipos de Madurez



Tipos de Madurez



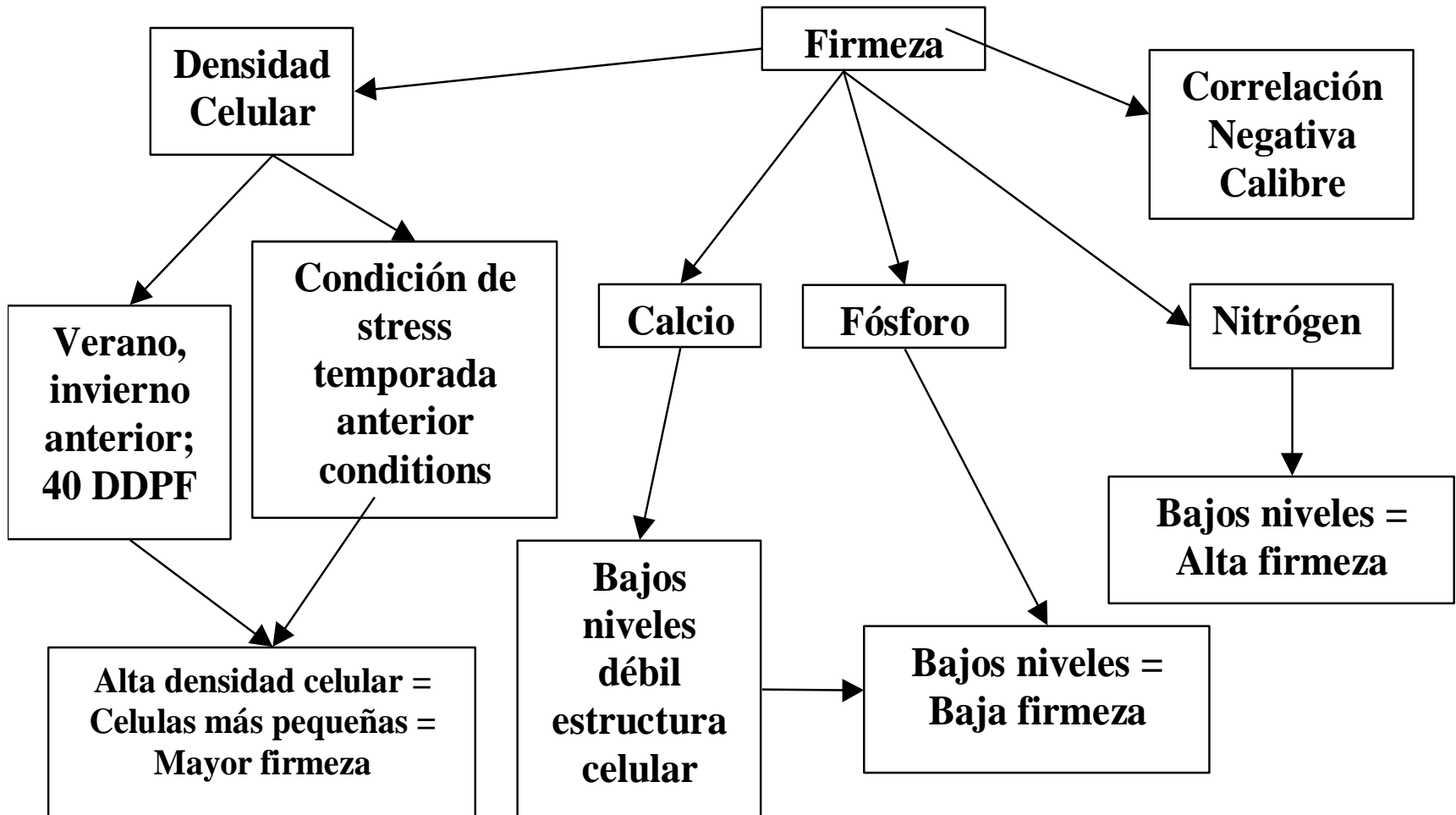
Correlación Calidad / Madurez



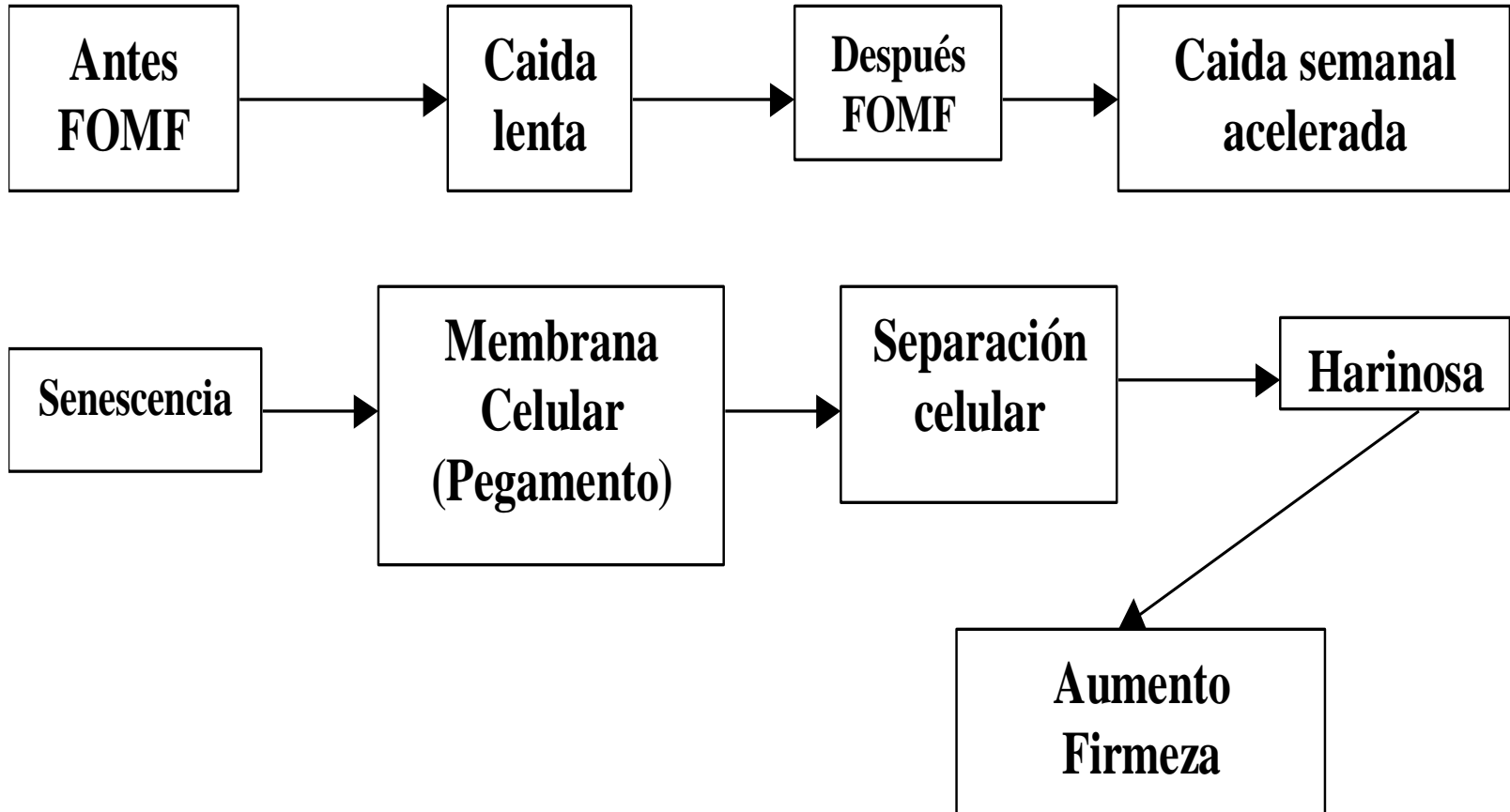
Distribution maturity parameters Gala Season 98/99 (Brazil)

Orchards	Avg	P1-3C	P2-2	P2-4	P5-5	P5-7	P5-8	P5-17	P6-4	P6-7	P6-9	P6-15	P6-16	Min.	Max.
Release Date	2/6	1/28	2/11	2/22	2/22	1/18	1/25	2/15	2/17	2/8	2/8	2/4	2/8	1/18	2/22
DAFB	118.8	116	127	130	143	108	113	136	127	116	117	115	119	108	143
Weight g	132.7	125.2	117.3	130.2	165.6	98.4	101.5	116.9	172.8	161.3	150.6	119.5	149.0	98.4	172.8
Grad Colour	3.9	3.5	3.6	3.8	4.3	3.8	4.0	4.2	4.0	3.7	4.2	3.6	4.7	3.5	4.7
Red Colour %	73.3	61.0	46.5	70.5	63.5	53.5	71.5	80.0	95.0	97.5	79.5	86.0	92.0	46.5	97.5
Firmness (lb.)	19.6	20.9	19.7	17.5	16.5	25.5	21.6	17.9	16.9	18.9	16.9	22.3	20.3	16.5	25.5
Size (mm)	64.6	63.8	61.2	64.2	70.4	58.4	59.0	72.6	71.8	66.6	67.2	62.8	67.4	58.4	72.6
Starch B. (%)	17.6	14.2	16.7	8.6	33.6	10.8	18.8	23.0	24.6	22.5	68.9	0.0	15.3	0.0	68.9
T.S.S. %	12.3	11.7	12.0	12.4	12.6	11.0	15.4	9.4	13.7	12.6	13.1	11.9	14.6	9.4	15.4
Acidity %	0.4	0.3	0.4	0.2	0.3	0.4	0.3	0.3	0.6	0.5	0.5	0.5	0.5	0.2	0.6

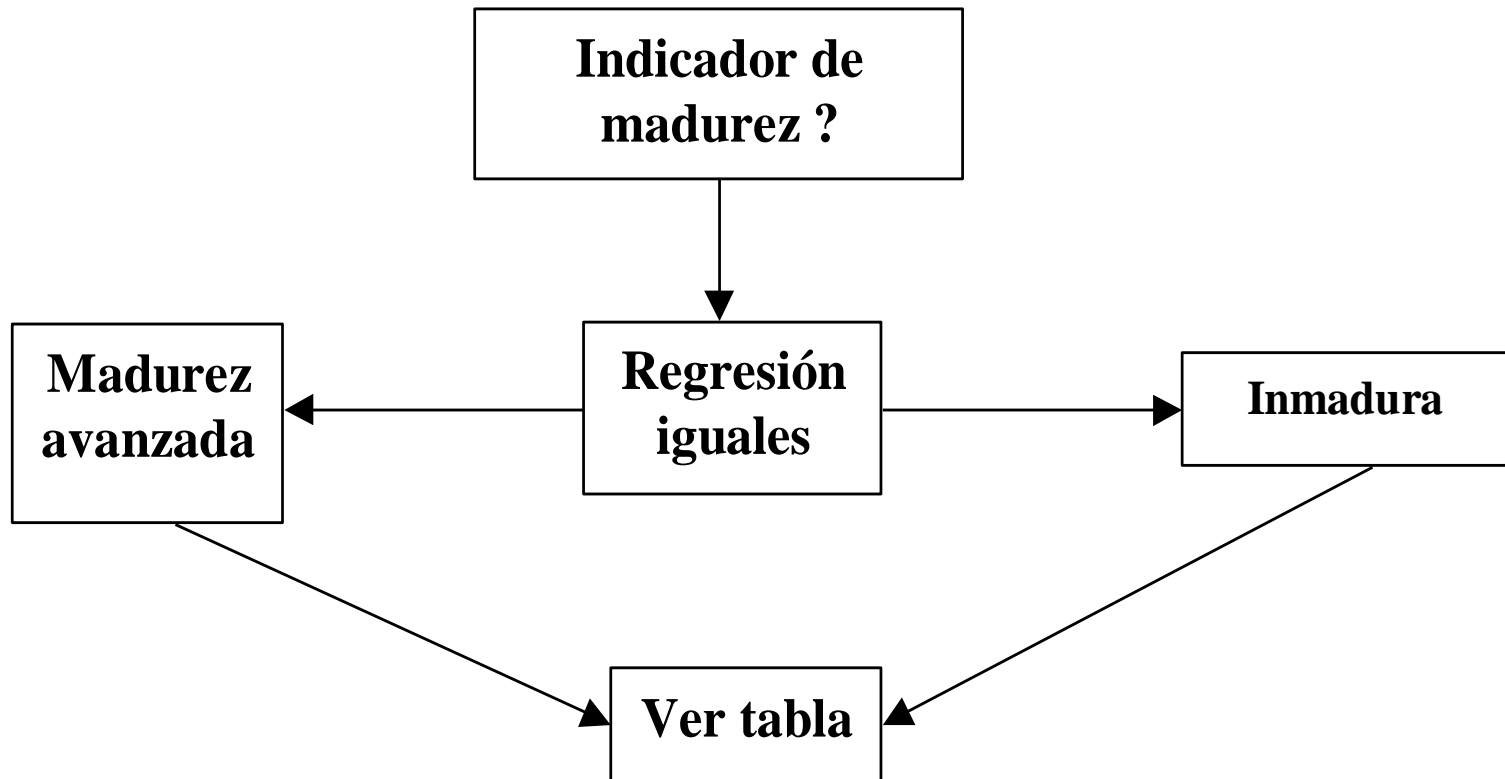
Parametros - Firmeza



Parametros - Firmeza



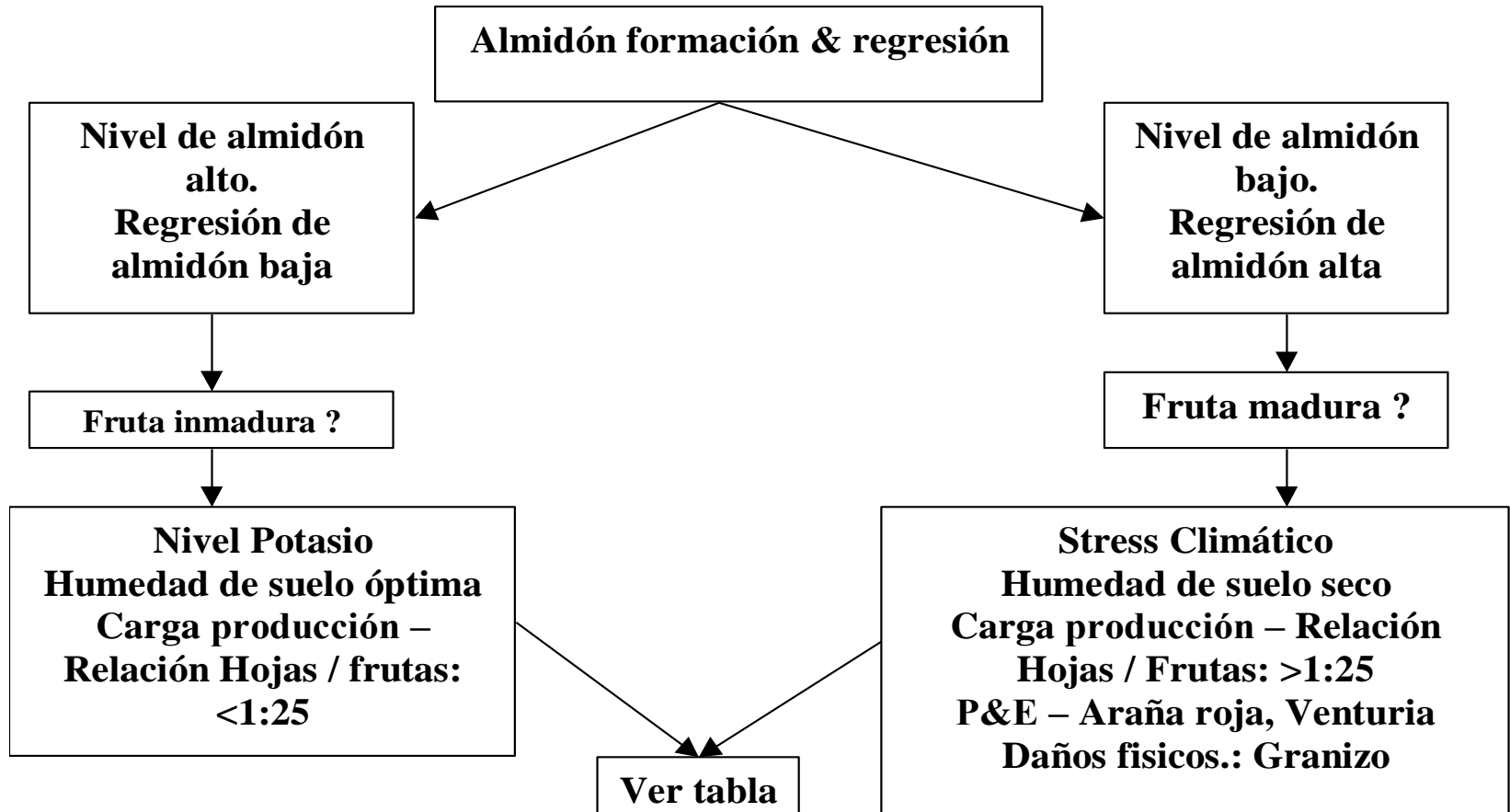
Regresión de Almidón



Regresión de Almidón

Orchards	Avg	P1-3C	P2-2	P2-4	P5-5	P5-7	P5-8	P5-17	P6-4	P6-7	P6-9	P6-15	P6-16	Min.	Max.
Release Date	2/6	1/28	2/11	2/22	2/22	1/18	1/25	2/15	2/17	2/8	2/8	2/4	2/8	1/18	2/22
Starch B. (%)	17.6	14.2	16.7	8.6	33.6	10.8	18.8	23.0	24.6	22.5	68.9	0.0	15.3	0.0	68.9

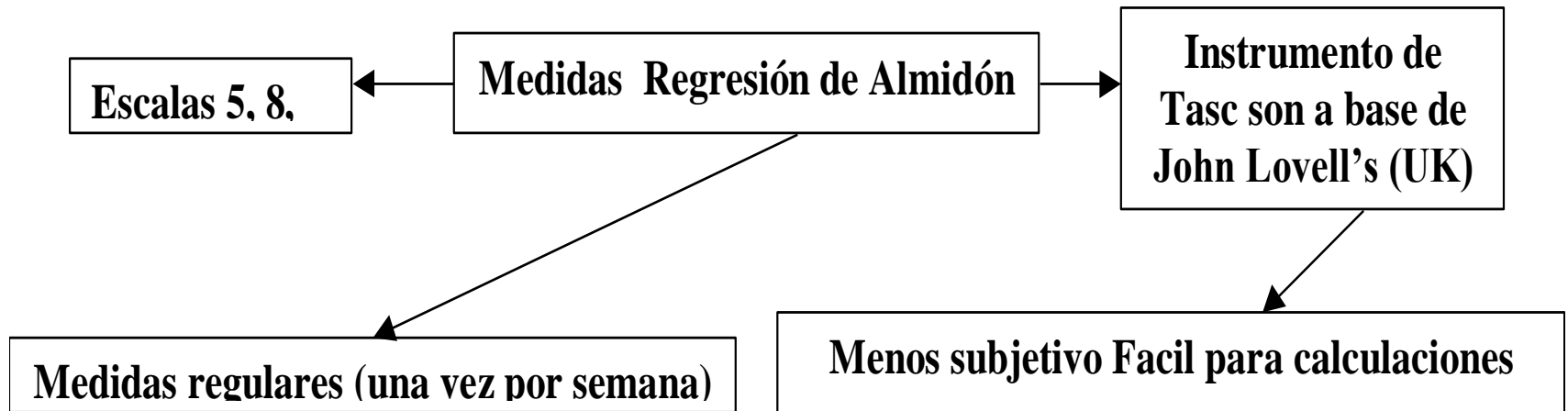
Regresión de Almidón



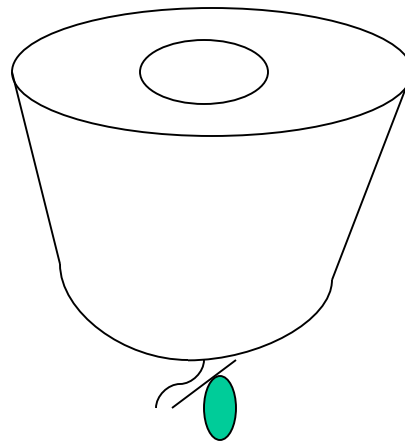
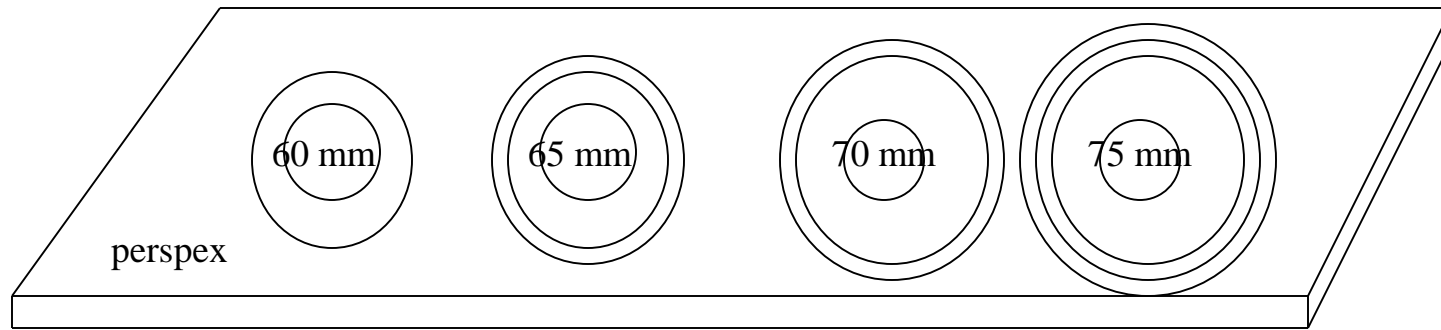
Regresión de Almidón

Purportedly immature (low starch breakdown)	Production Factors	Purportedly over-mature (high starch breakdown)
Low	Fruit load	High
Very Large	Fruit size	Small
Dark green	Leaf colour	Poor, N shortage
High	Exposure to sun	Low, shade
Purportedly immature (low starch breakdown)	Climatic Factors	Purportedly over-mature (high starch breakdown)
Optimum	Temperature	Low, excessive
Optimum to slightly dry	Soil moisture level	Too wet, very dry
High	Light intensity	Low

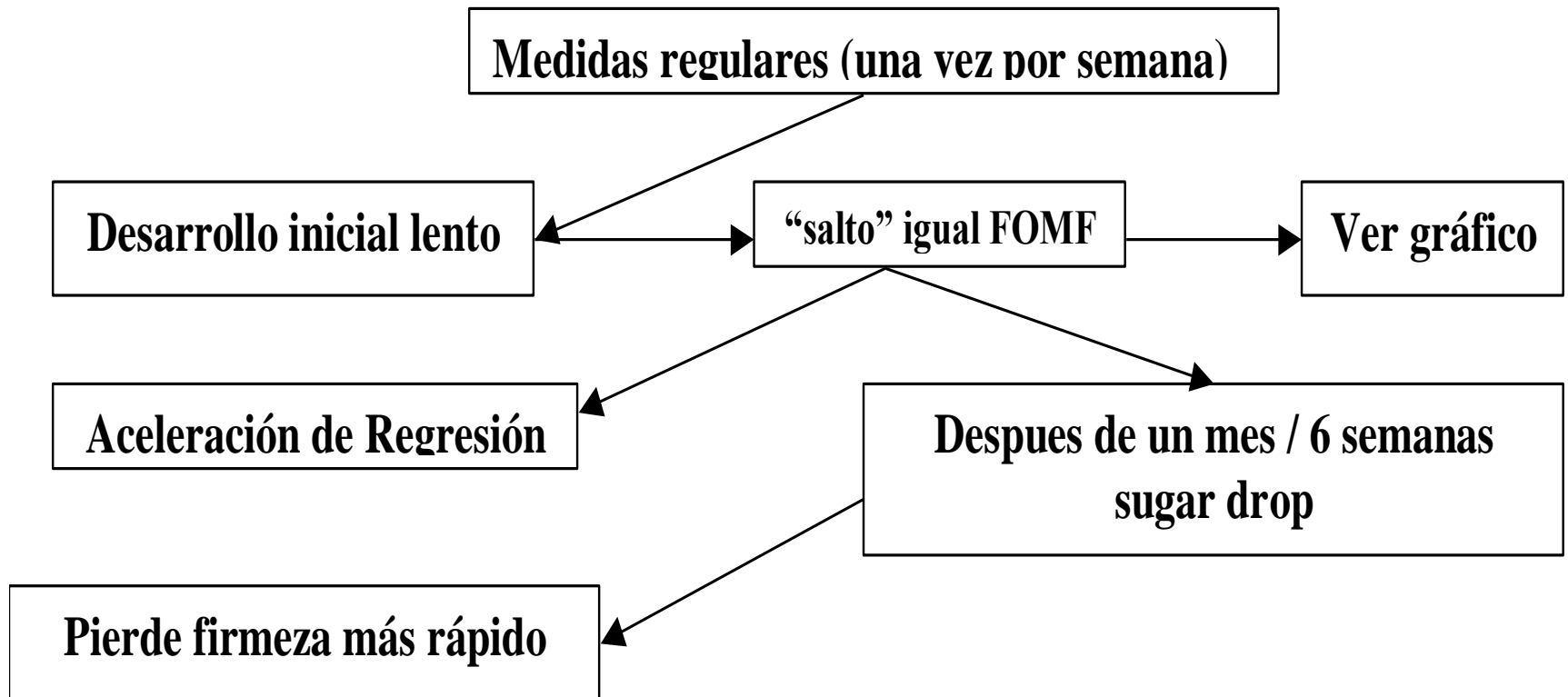
Regresión de Almidón



Escala John Lovell's

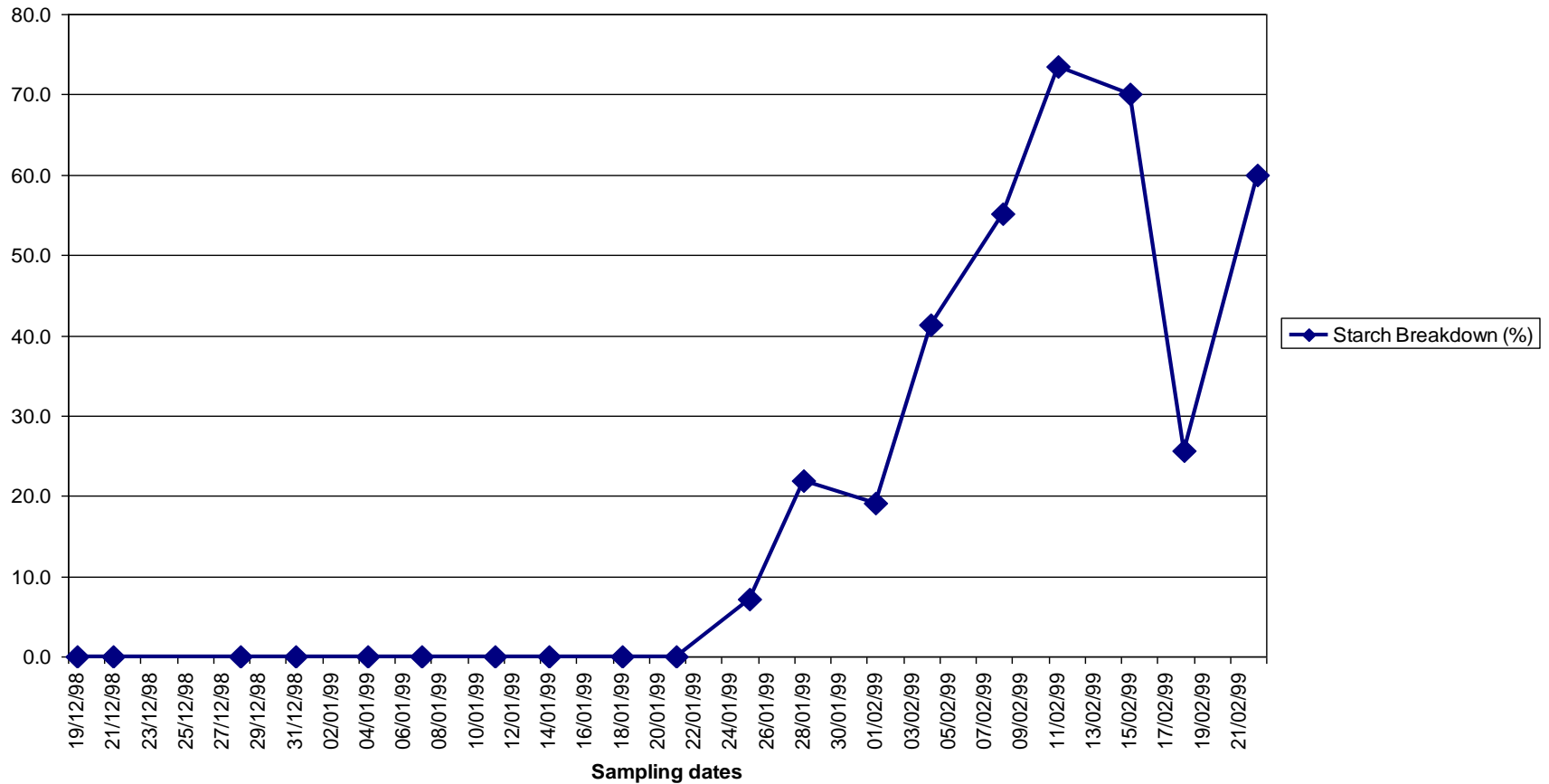


Regresión de Almidón

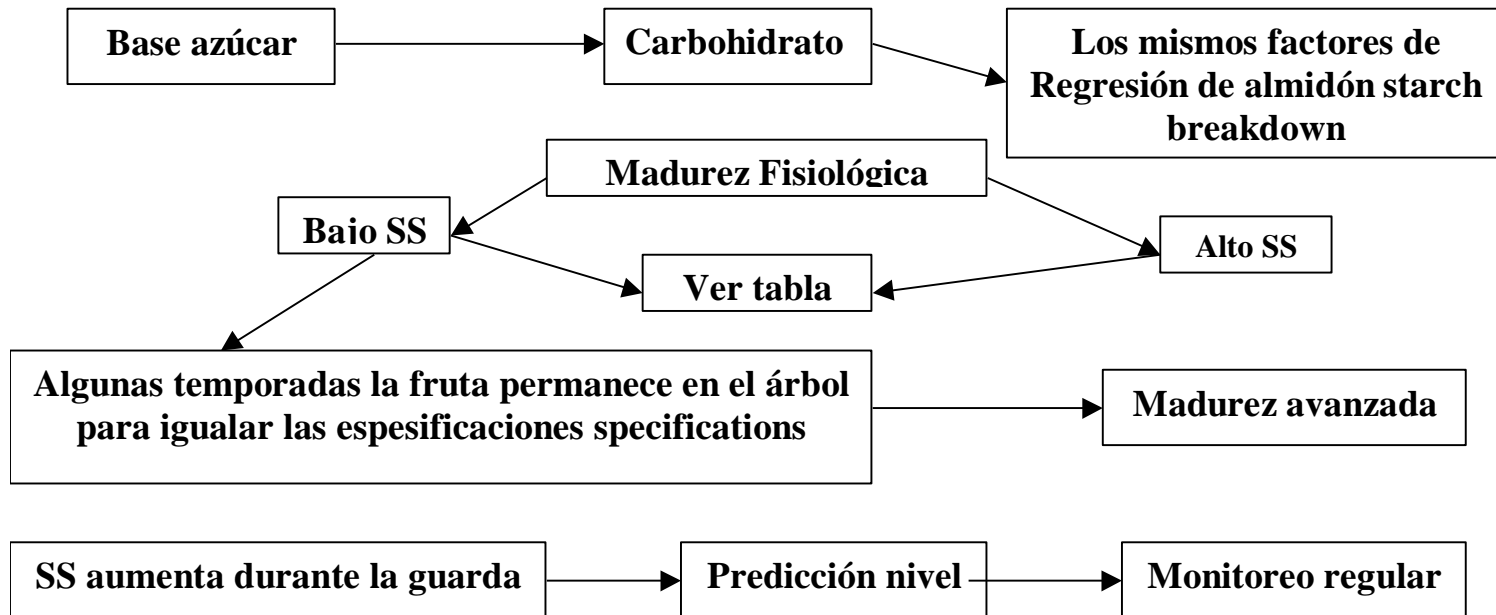


Regresión de Almidón

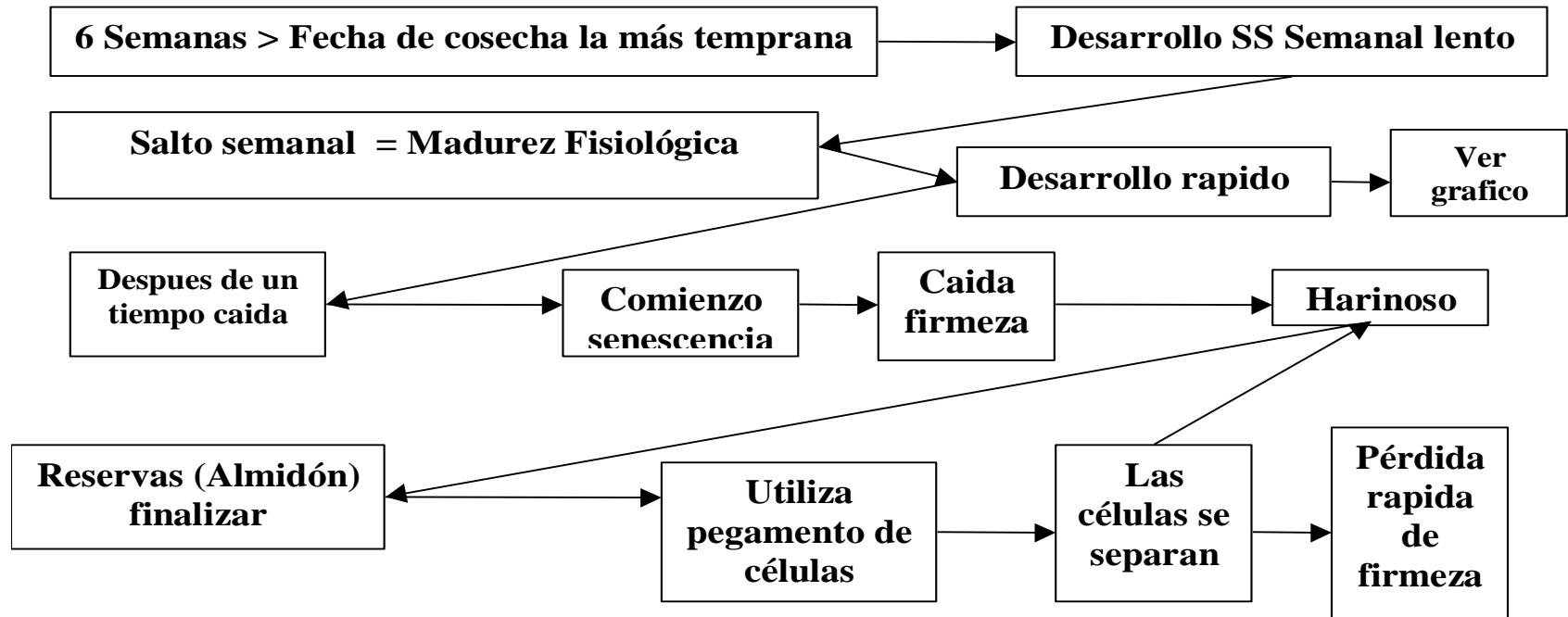
Starch Breakdown (%)



Azúcar (SS)

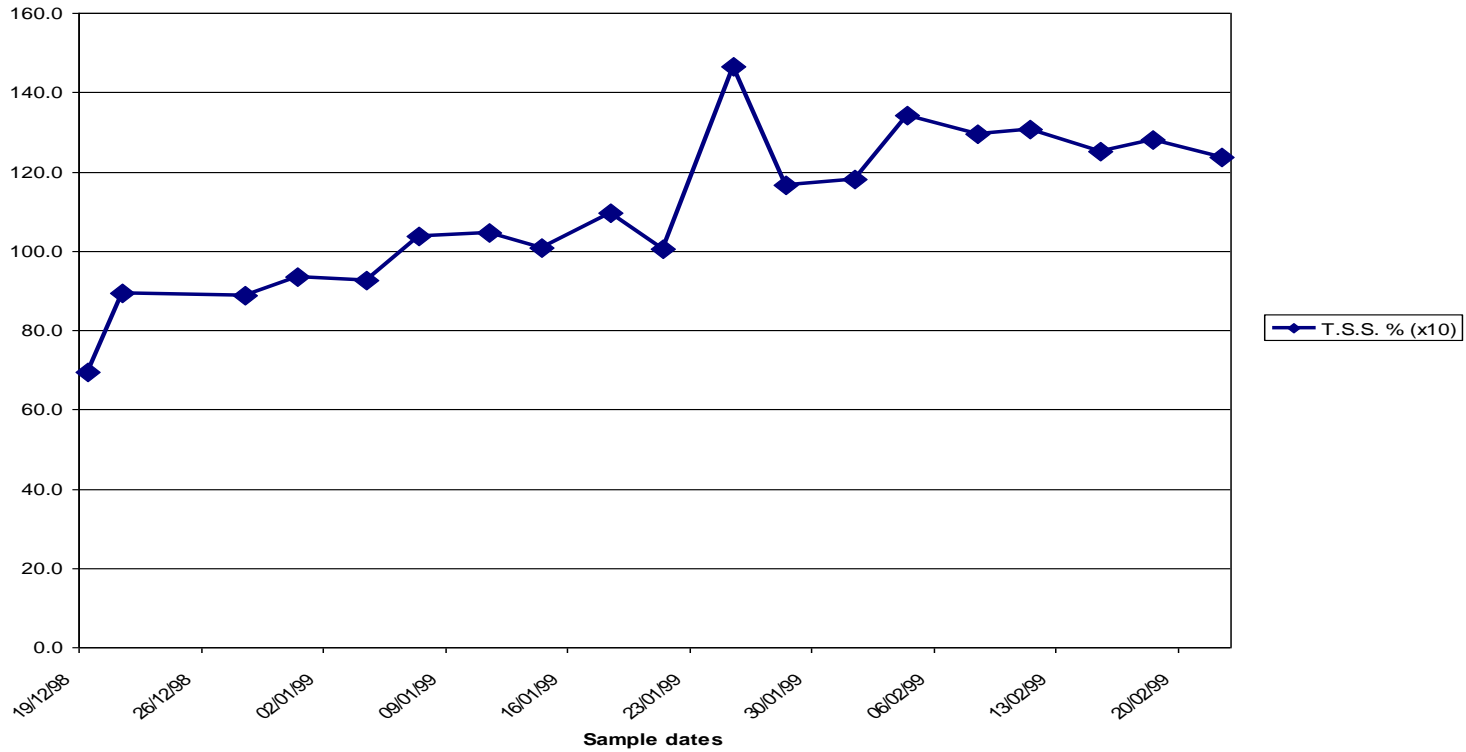


Azúcar (SS)

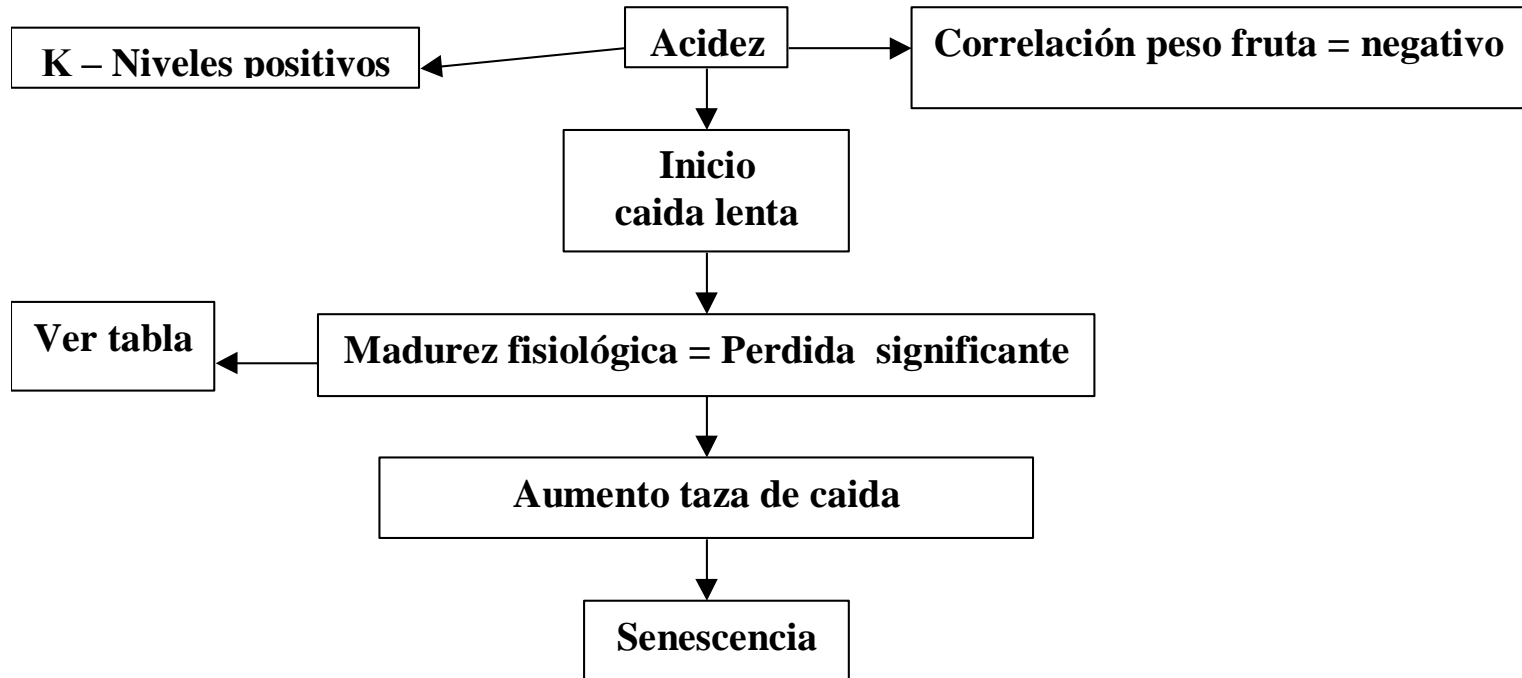


Azúcar (SS)

Sugar development



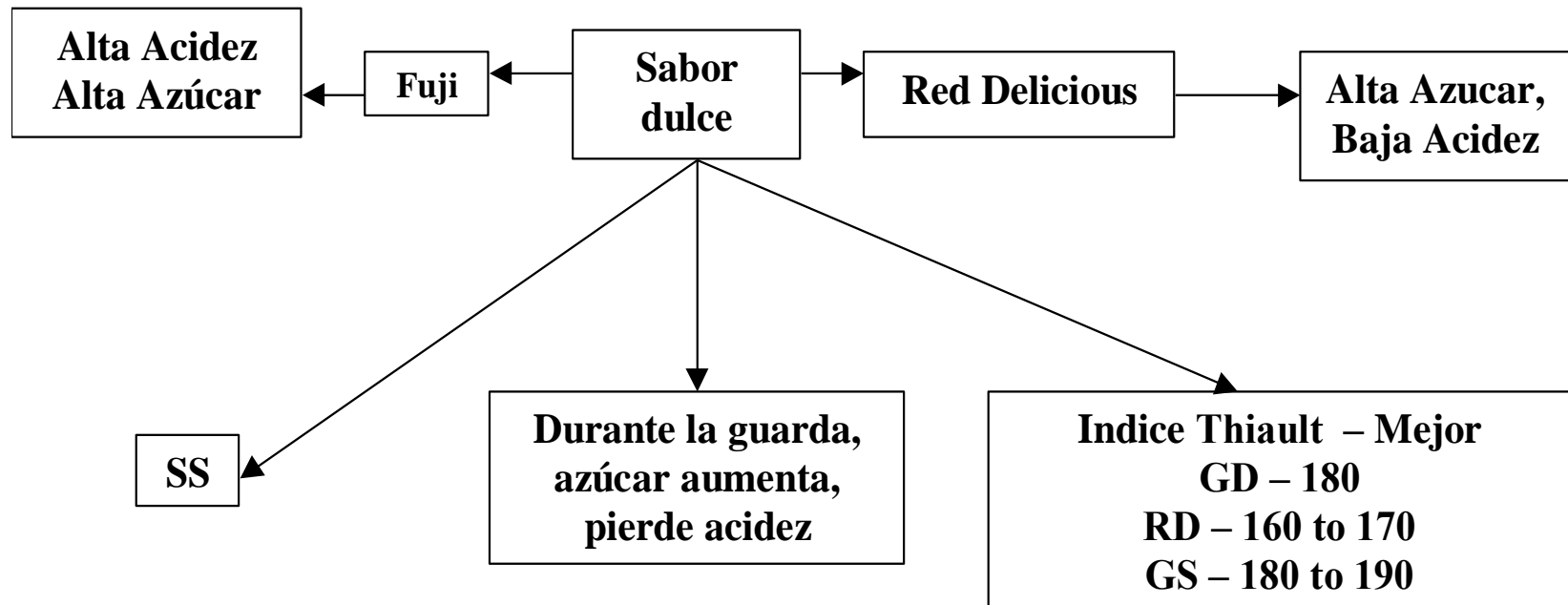
Acidez



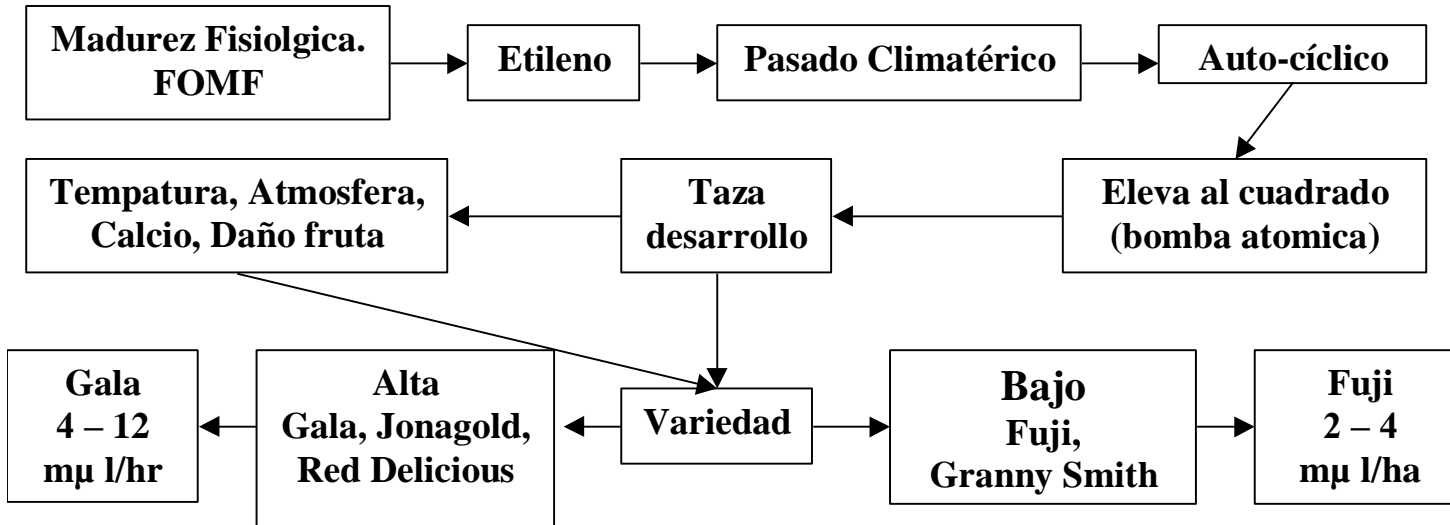
Acidez

Orchards	Avg.	P1-3C	P2-2	P2-4	P5-5	P5-7	P5-8	P5-17	P6-4	P6-7	P6-9	P6-15	P6-16	Min.	Max
Release Date	2/6	1/28	2/11	2/22	2/22	1/18	1/25	2/15	2/17	2/8	2/8	2/4	2/8	1/18	2/22
Acidity %	0.4	0.3	0.4	0.2	0.3	0.4	0.3	0.3	0.6	0.5	0.5	0.5	0.5	0.2	0.6

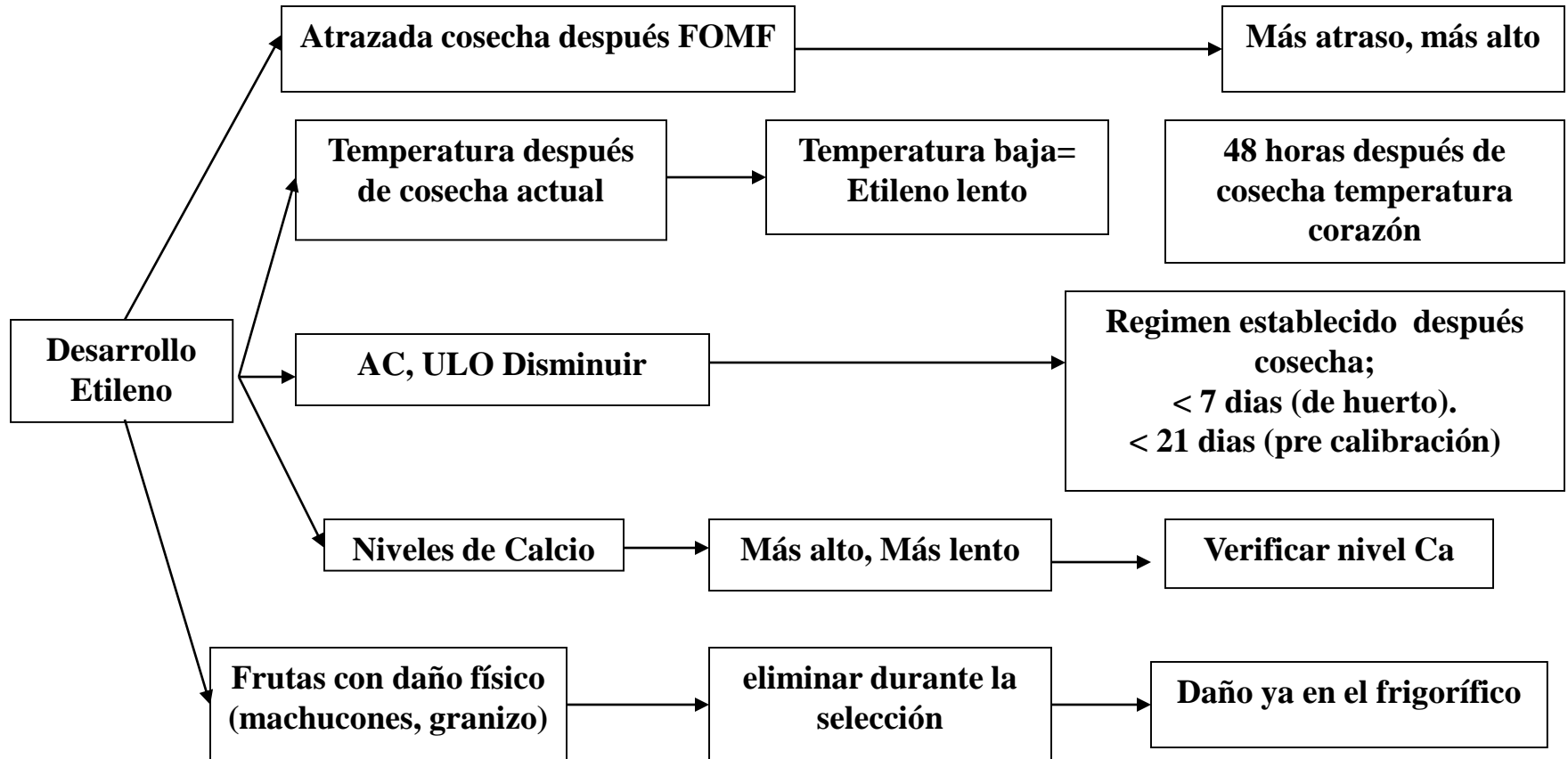
Relación Azúcar/Acidez



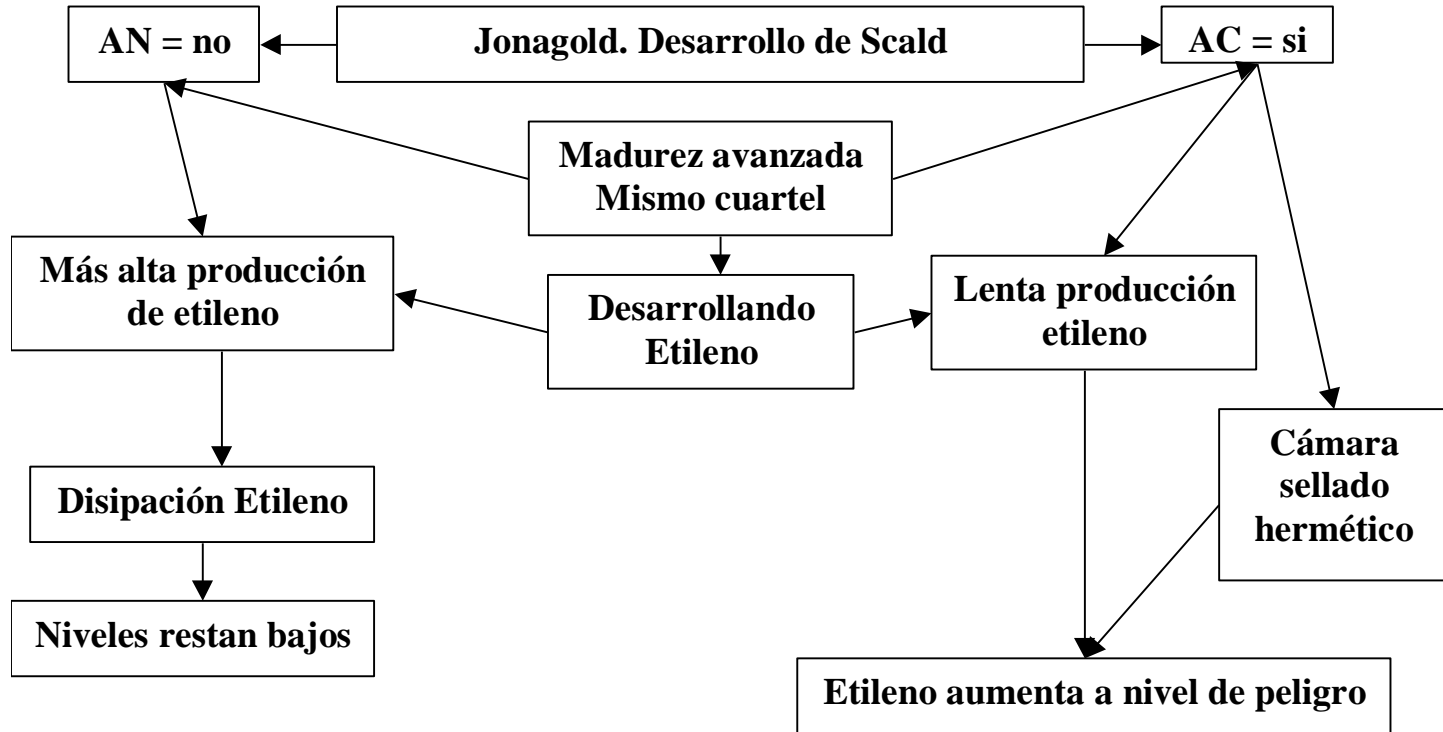
Etileno



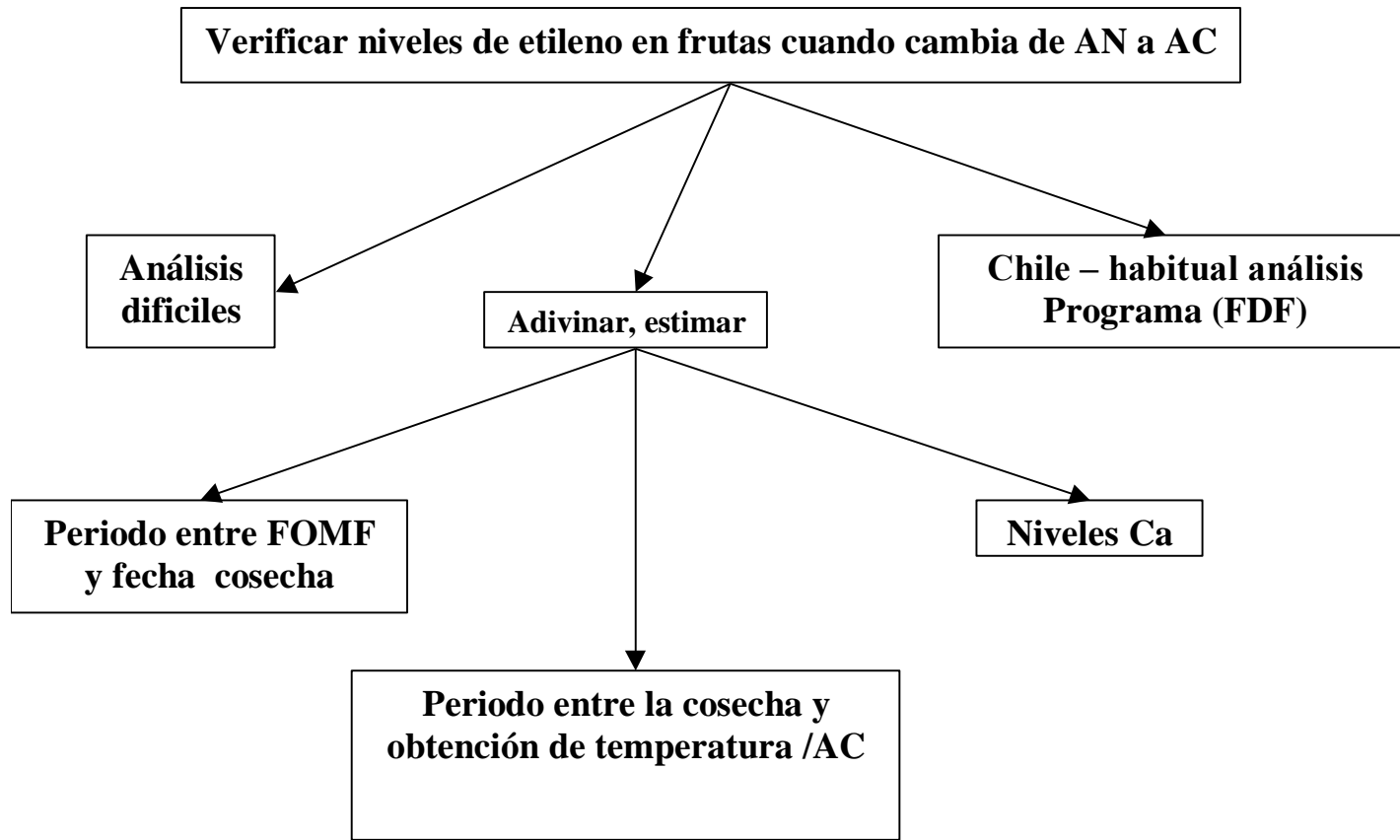
Etileno



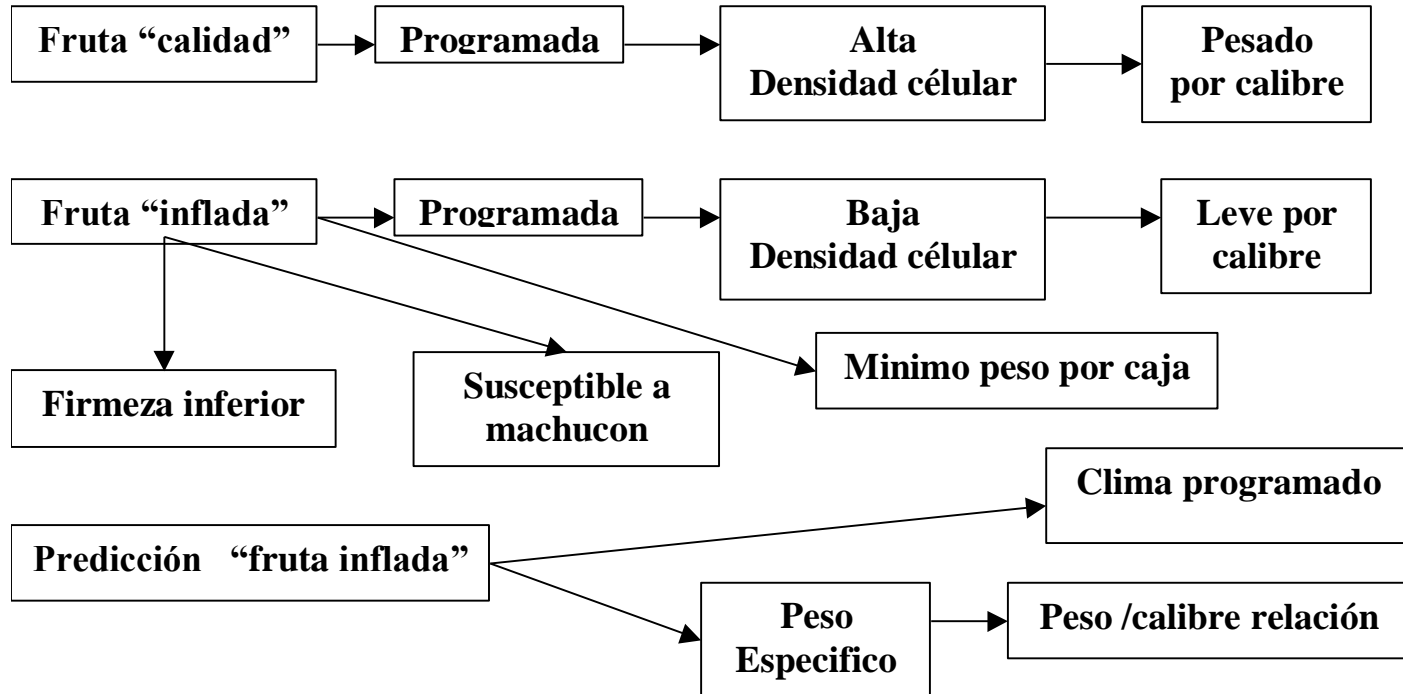
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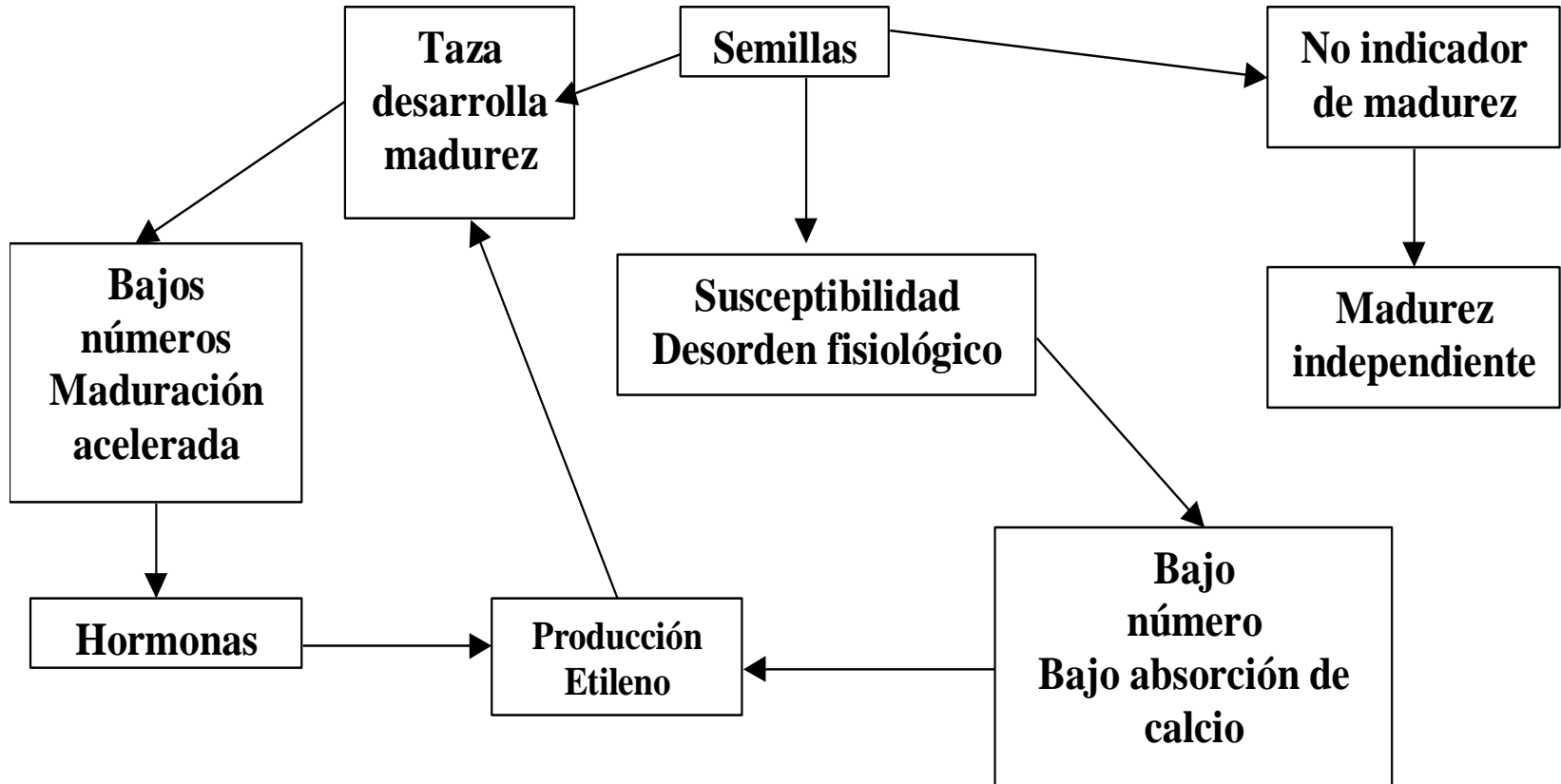
Etileno



“Quality” fruit versus “blown-up” fruit



Semillas



Harinosidad versus Blando

