ANEC Presentation
ACCI – MICI

For modernization of the countryside with campesinos and without GMOs

GENERAL INFORMATION

- *Constituted: 8 September 1995.*
- *Non-profit civil society association.*
- *220 ECCs y 16 EISCs in 17 states: Chis., Camp., Oax., Gro., Pue., Tlax., Mor., Mich., Gto., Jal., Nay., Zac., Ver., Chih., SLP, NL and Tamps.*
- *60,000 small and medium producers of basic grains.*
- *Self-managed operation and administration of 220 storage units.*
- *Harvest and commercialization of:*
  - *600,000 tons of corn*
  - *200,000 tons of sorghum*
  - *40,000 tons of wheat*
  - *45,000 tons of beans*
  - *20,000 tons of rice*

CENTRAL OBJECTIVES

I. Defense and promotion of small and medium scale campesino agriculture and family farms.

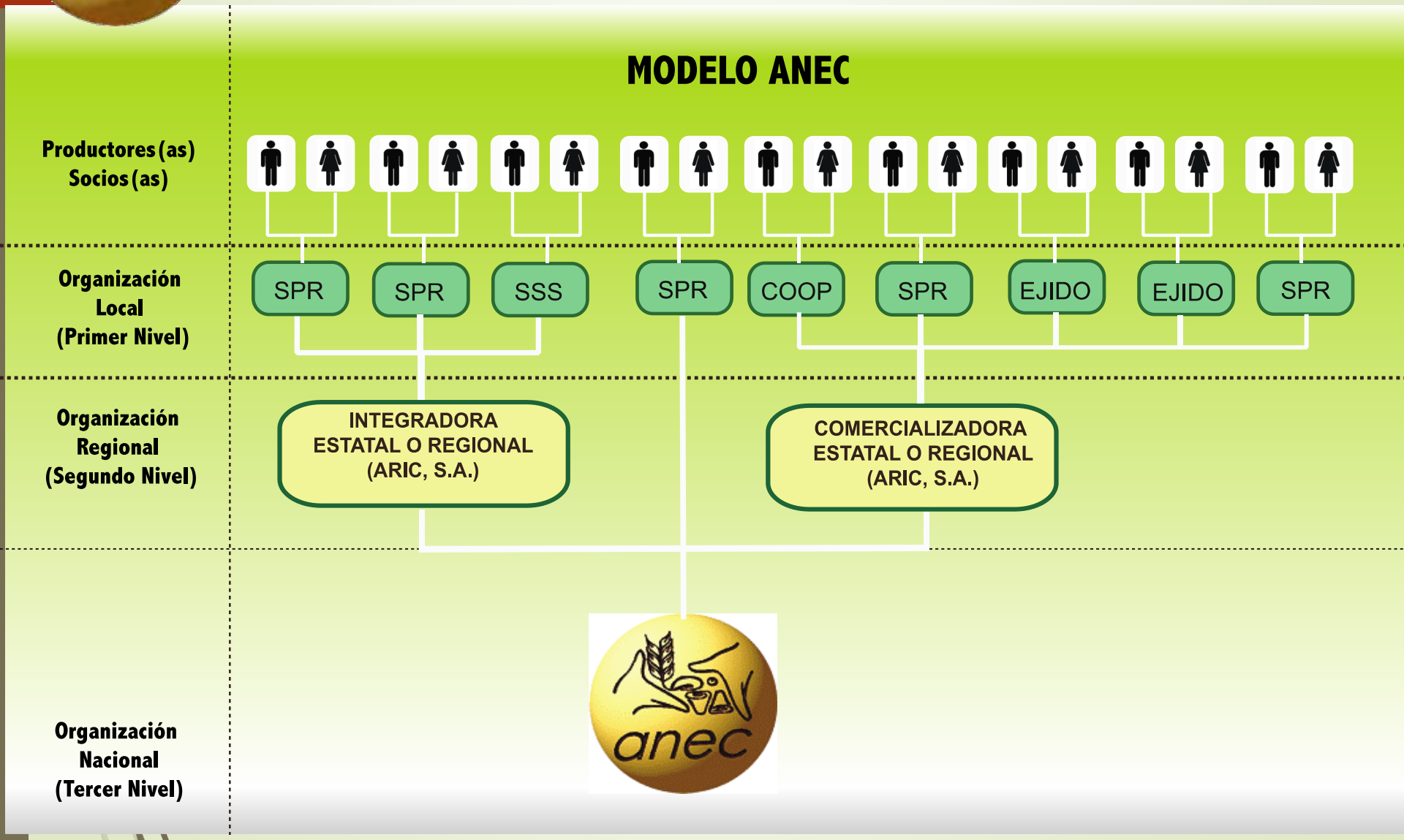
II. Promoting the development of fair, inclusive, truly competitive and socially responsible agri-food markets.

III. Promotion and defense of the country's food sovereignty and the population's right to food.

IV. Defending and valuing territorial resources in favor of campesinos.

V. New model of food and farming/new deals between the State/rural/urban society.

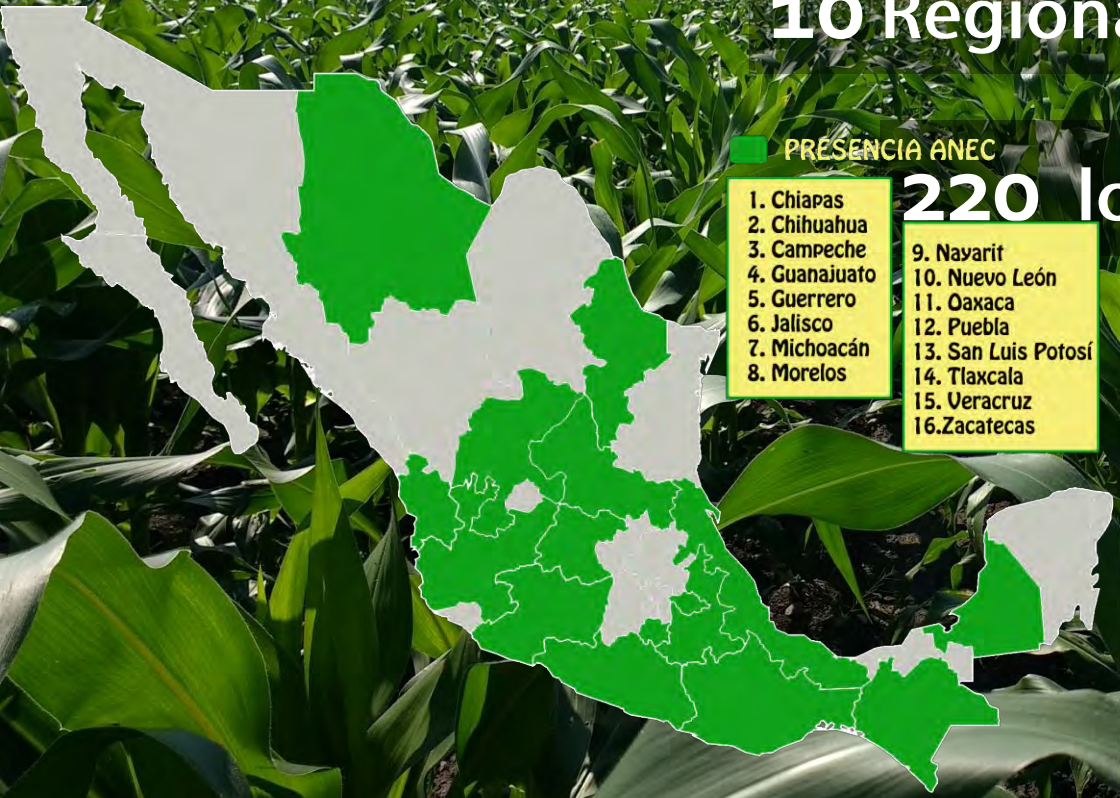
Overview of ANEC



Reach and presence

1 National Campesino Organiation

10 Regional organizations



220 local organizations

60,000

campesin@s;
Small producers of basic grains (corn, beans, wheat, rice and sorghum).

STORAGE CAPACITY BY STATE

Núm	State	Storage Capacity (tons)
1	Chiapas	42,500
2	Chihuahua	18,800
3	Guanajuato	49,000
4	Guerrero	1,000
5	Jalisco	16,000
6	Michoacán	66,900
7	Morelos	1,000
8	Nayarit	36,000
9	Puebla	10,000
10	San Luis Potosí	300
11	Tamaulipas	48,000
12	Zacatecas	2,400
	TOTAL	291,900

12 States
291,900
Tons

WHAT DOES THE NEW GOVERNMENT PROPOSE ON AGRICULTURE?

25 Priority Programs under the AMLO Administration

1. Definition of a future new International Airport for Mexico.
2. Development of the isthmus region through a cargo train and fiscal facilities for business development.
3. Construction of the Mayan Train with the Cancun-Tulum-Bacalar-Calakmul-Tenosique-Palenque highway.
4. Improvements in rural roads with intensive use of labor, especially in Oaxaca.
5. Broadening internet coverage throughout the country.
6. Reconstruction of property damaged in the September 2017 earthquake.
7. Urban development in marginalized neighborhoods, including those located in the Chimalhuacan, Chalco, Valle de Chalco and Ecatepec municipalities in the state of Mexico.
8. Doubling of pensions for senior citizens.
9. Pensions for disabled people.
10. Planting one million hectares of trees for fruit and wood.
11. Scholarships of 2,400 pesos per month for university students and 3,600 pesos for business apprentices.
12. Scholarships for all high school students.
13. Opening 100 public universities in marginalized areas.
14. Support for key crops to achieve food sovereignty.
15. Rehabilitation of a publicly owned fertilizer company.
16. Establishment of a basic food basket.
17. Granting credit to cattle ranchers without collateral.
18. Free trade zone along the northern border with an 8% VAT and a 20% income tax, as well as energy prices consistent with those in the U.S. and a doubling of the current minimum wage.
19. Support for mining development.
20. Support for small and medium-scale enterprises.
21. Increase in oil and gas production and strengthening of PEMEX.
22. Modernization of the six existing refineries.
23. Construction of a refinery in Dos Bocas, Paraiso, Tabasco.
24. Development of alternative electric and energy infrastructure with support from the Federal Electricity Commission.
25. Free medical attention and medicines for the entire population.

PRIORITY PROGRAMS

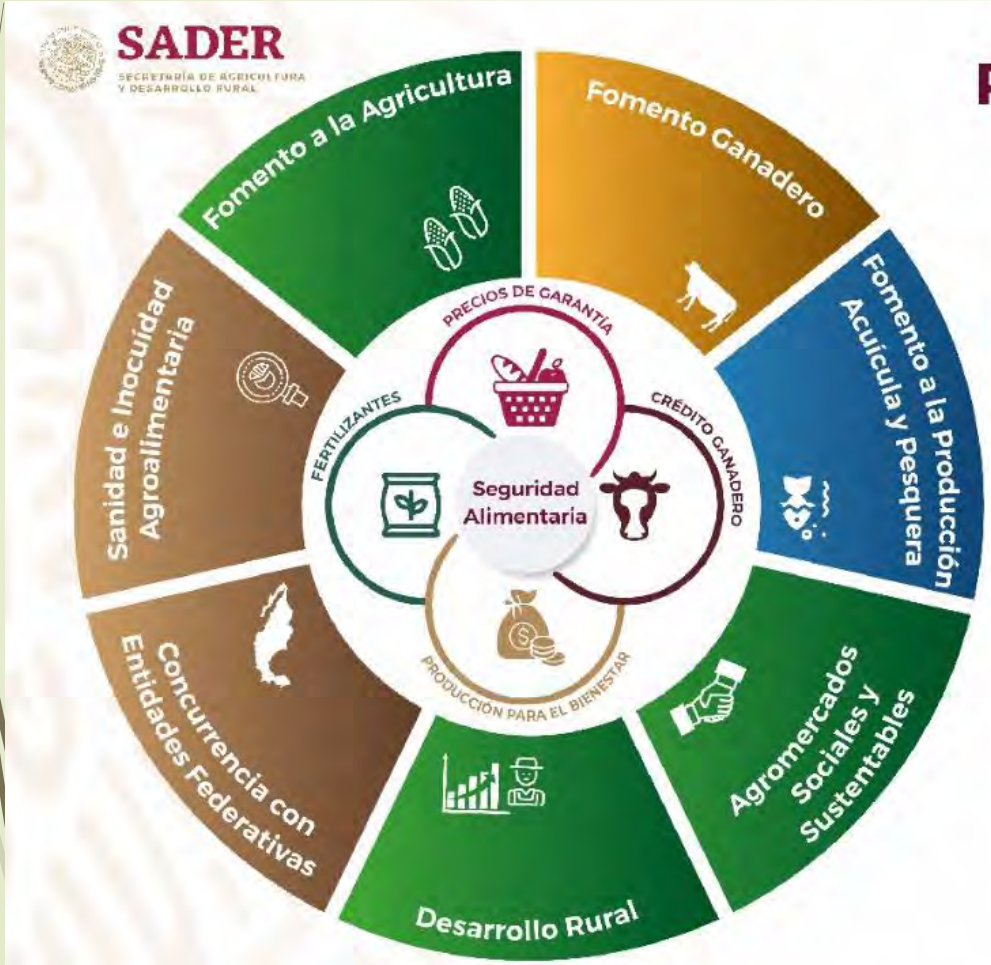
SADER
SECRETARÍA DE AGRICULTURA Y DESARROLLO RURAL

Ejes de acción para el campo.

Lograr la soberanía alimentaria, a través de:

1. **Mejorar la** productividad para una mayor producción.
2. **Mayor Inclusión** de tipos de agricultura y productores.
3. **Sustentabilidad**, para el aprovechamiento responsable de los recursos.

PRIORITY PROGRAMS



Programas SADER 2019

Haremos más con menos.

2018 → 2019

8 → 11 programas

- Concurrencia y sinergia para la aplicación de programas.
- Ahorros.
- Enfoque integral.
- Prioridad de atención a zonas de menor desarrollo.
- Balance regional.
- Eliminación de intermediarios.
- Fortalecimiento de cadenas de valor.
- Oportunidad en apoyos.
- Búsqueda de autosuficiencia y soberanía alimentaria.

SOCIAL MOVEMENTS AND THE NEW GOVERNMENT

4 pillars of the 4th Transformation

MEXICAN GOVT AMLO

MEXICAN CONGRESS

MORENA

SOCIAL MOVEMENTS

SOCIAL MOVEMENTS AND THE NEW GOVERNMENT

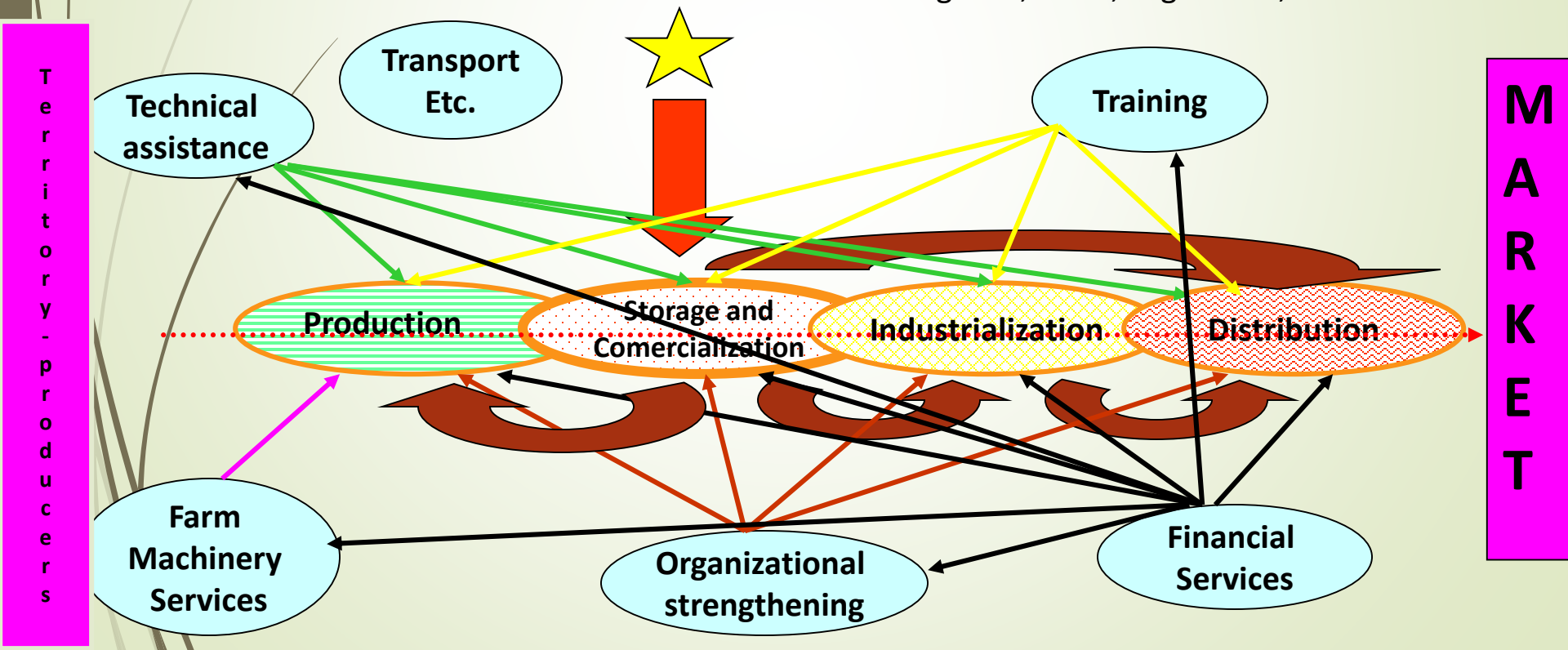
- Clarity of the current political historical context in Mexico
-Promote and radicalize our strategy of struggle and proposals.
- Strategic alliances with different movements.
-Historic opportunity to achieve goals desired for years.
-No support for intermediaries.

Allies…
-Campesino, Indigenous and Afromexican Movement "21st Centurty Plan de Ayala".
- Without Corn No Country campaign.
-Collective Action demands corn.
-Mexican Agroecology Movement.
-Valor al Campesino.
-Others

Principle axes for campesino, community and rural development. – Integrated Productive Projects

I. Principal productive theme*:
reinforce positioning and advance in the construction of the network of value from the strongest link (for us) and on the basis of the 4 pillars: productivity, competitiveness, profitability and sustainability.

*Basic grains, fruits, vegetables, etc.



Seeking an alternative model of sustainable agriculture: small and medium scale, high productivity, low carbon emission and high climatic resilience

- After 30 years of abandonment of peasant agriculture and following the global food crisis of 2008/09, national governments and international organizations recognize the need to achieve food self-sufficiency based mainly on the **revaluation and productive development of small and medium agri-food production units.**
- Reasons: New paradigm in international agricultural markets:

1) High prices and *great volatility*.

   Main cause: subordination of agricultural markets to financial and hydrocarbon markets (food crops→feed crops→*fuel crops*);

2) Global climate change;
3) Planetary demographic growth and the demand from the BRICs;
4) Drop in international agricultural productivity/depletion of the green revolution model.
5) Oligopolization of international agricultural markets.

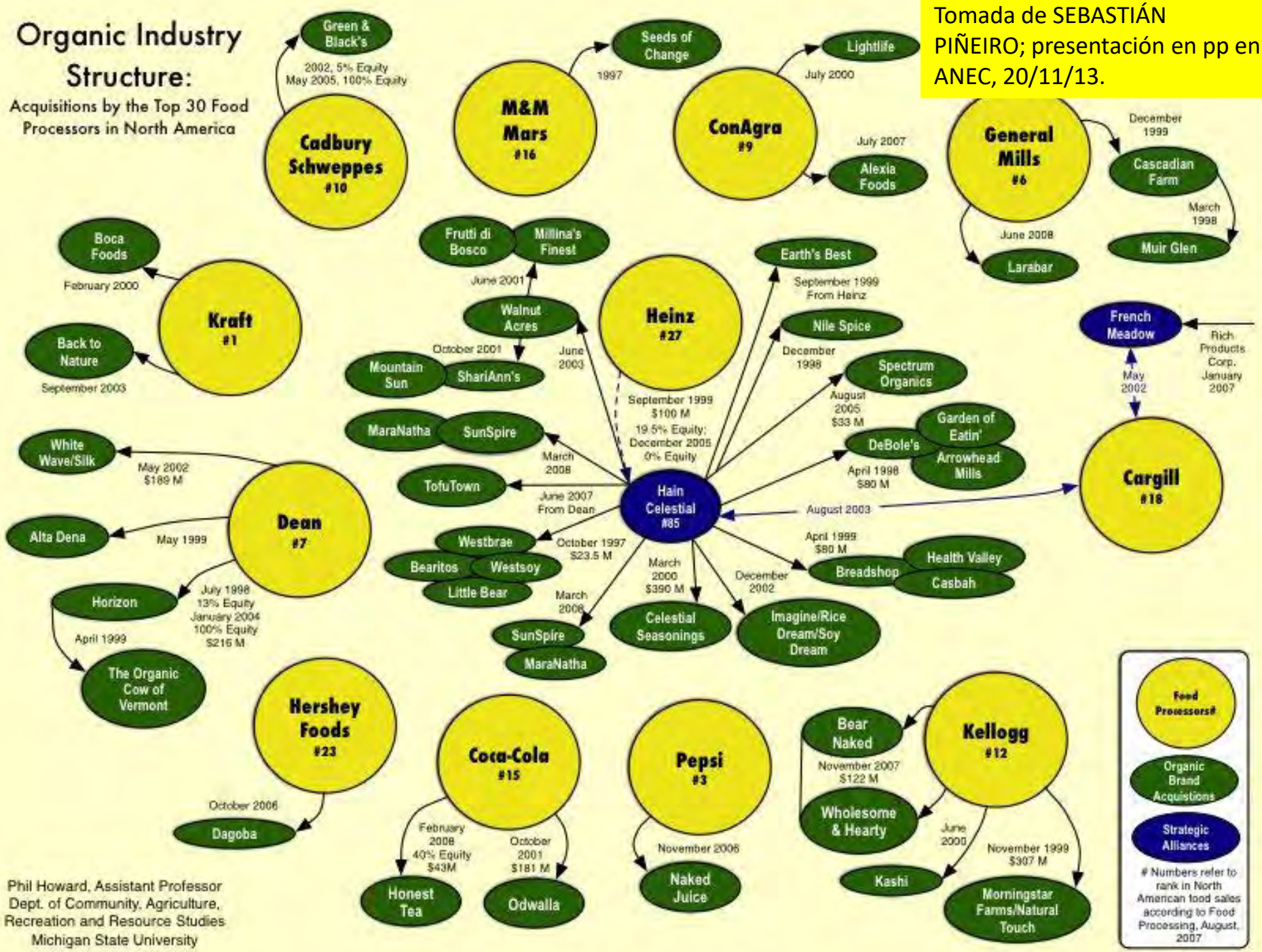
Exhaustion of the green revolution and contributions / limits of organic agriculture

- **We need an alternative model** to the model of industrial agriculture/green revolution: it is exhausted, it is unsustainable, it is counterproductive, it is pernicious.
- **Organic agriculture has made many contributions**, but has limits that need to be overco

The current organic agriculture model is:

- **Closed -** organic technological *package* - subject to external certification and high cost.
- **Exclusive:** organic products for a first world elite and hyperindustrialized foods, conventional, junk low nutritional content for organic producers and their families, and for the rest of the population.
- **Stagnant:**
  a) It has not incorporated the scientific and technological advances of the last century;
  b) It has not faced the problem of low productivity and income of small and medium producers; and
  c) It has not dealt with the impacts of global climate change.
- **Refunctionalized:** the majority of organic agriculture (and its certifiers) has been refunctionalized and increasingly controlled by large corporations.

Tomada de SEBASTIÁN PIÑEIRO; presentación en pp en ANEC, 20/11/13.



Model of Campesino Agriculture of Integrated Knowledge in Complex Processes (ACCI)

- A paradigmatic change in the model of agriculture is required, within the framework of the **construction of a new agri-food and nutritional system**.
- And a **new long-term public policy based on the principles of: i) food sovereignty; ii) sustainability; iii) productivity; iv) profitability; v) low carbon emissions; and vi) high climate resilience**.
- It is necessary to move from **"an agriculture of inputs"** to an **"agriculture of knowledge integrated in complex processes"** based on small and medium-sized units of rural production.
- It is a true technological and social revolution: the only way to achieve self-sufficiency and food security and a dignified life for the country's campesinos and rural communities.

Challenges

With the new technological revolution it is possible to achieve multiple results in the short and medium term:

1. *Significantly* boost sustainable agricultural productivity in the short term.
2. Drastically reduce production costs and increase profitability.
3. Regenerate the soil, protect natural resources and promote agriculture that is low in carbon emissions.
4. Produce healthy foods with higher nutritional quality for local consumption and the national market.
5. Revalue peasant work and rural ways of life.
6. Reactivate the agricultural and rural economy.
7. Rebuild social cohesion on family, community and ethnic levels.
8. Provide decent employment and income opportunities for rural youth.
9. Lessen the negative impacts of climate change, and provide the best strategies for adaptation to it.
10. And above all, ensure self-determination **in the country's food, economic and** technological and long-term food security.

New Technological Revolution for the Productivity, Sustainability and Resilience of Crops

From an Agriculture of Agrochemicals to a Campesino Agriculture of Integrated Knowledge

Principles of the Campesino Integrated Knowledge Model (ACCI)

P1. Campesino women and men are productive actors, subjects of rights and carriers of relevant agricultural knowledge.

P2. The self-managed campesino organization is the collective subject of the new technological revolution.

P3. *Integrated knowledge* in the service of a new model of sustainable agriculture.

P4. Campesino self-detemination.

P5. Training/continuous professionalization from “farmer to farmer" and from "scientist to farmer and from farmer to scientist".

P6. Local production of quality bio-inputs.

P7. Need for a revolution of conscience, values and attitudes.

P8. Sovereignty and Public Policy to build a different agri-food and nutrition systemSoberanía y Política de Estado para construir otro sistema agroalimentario y nutricional.

Roots of the Campesino Integrated Knowledge Model (ACCI)

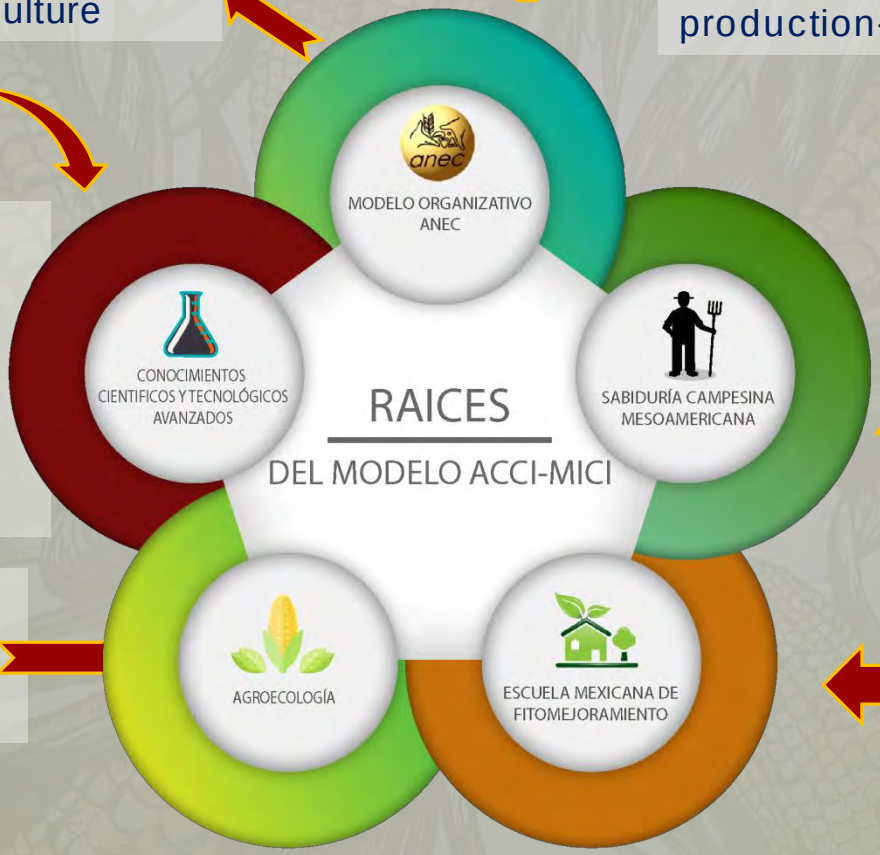
Integration of social, economic, environmental and cultural objectives

Centered on defense of campesino agriculture

Model of technology transfer and campesino professionalization

Comprehensive services in the production-marketing chain

Science applied to campesino agriculture with social & nationalist commitment in the field (use of new technologies)



Studied, made visible and valued masterfully by the teacher Efraím Hernández Xolocotzi

Management of agricultural ecosystems

Great contributions to productivity and adaptation of food crops with countless world-class geneticists

Integrated Management of Induced Crops (MICI)

I. Continuous analysis of soil, water, tissues (physical-chemical-microbiological)

II.Soil cultivation / Re-establishment of physical-chemical-biological equilibrium (MOO)

Soil oxygenation, Organic Matter Enrichment MO, Inoculation of MOO consortia / invasive dose / selective dose

III. Cultivation practices

Soil preparation, Crop association, Crop rotation, Cover crops

IV. Plant nutrition

Pre-seeding: lumbricompost, efficient MOO, macro fertilization / chemical microelements, foliar fertilization (leachate).

V. Plant Resistance to Stresses

Integrated management of pests and diseases, Management of abiotic stresses

VI. Induction of productive and vegetative development

Inducers to increase production via acceleration / delay / increase in cell division, maturation

VII.Knowledge and use of climate climatological information at the local level

Local weather stations, weather information regional / national, and meteor forecast and prevention

VIII. Protection and improvement of seeds

Mass selection of native seeds, Local production of hybrid and synthetic seeds, Selection and treatment of seeds

IX. Local Production of Bio-inputs and Knowledge

Biofactories, Lumbicompost modules, Meteorological stations

Organizational ModelANEC – ACCI – MICI
Local Level

HUMAN RESOURCES

PRODUCER

FULL TIME FIELD TECHNICIAN

LOCAL ORGANIZATION

TEAMS

MULTIPARAMÉTRIC

MICROSCOPIC

WEATHER STATION

PRODUCTION OF INPUTS

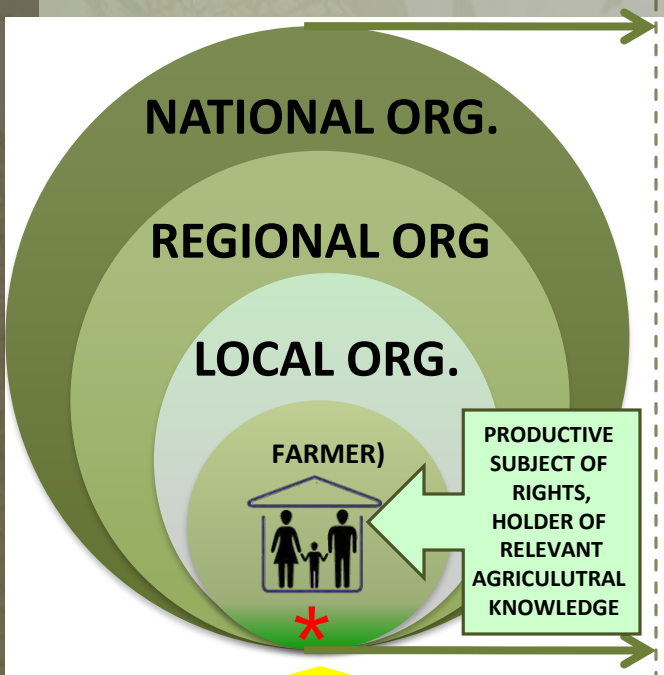
LUMBRICOMPOST Y LIXIVIADOS

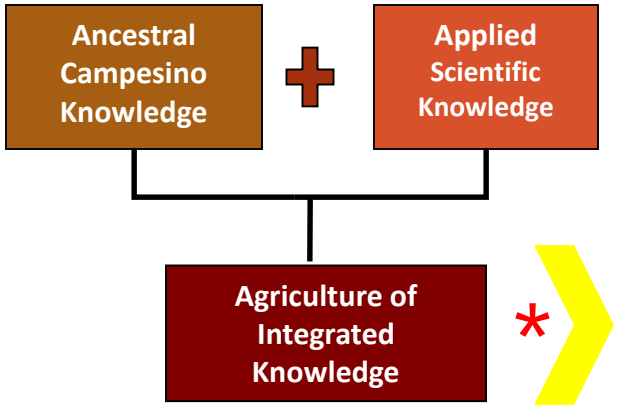
REPRODUCTION OF MICROORGANISMS AND PRODUCTION OF VEGETABLE BIOLES AND EXTRACTS

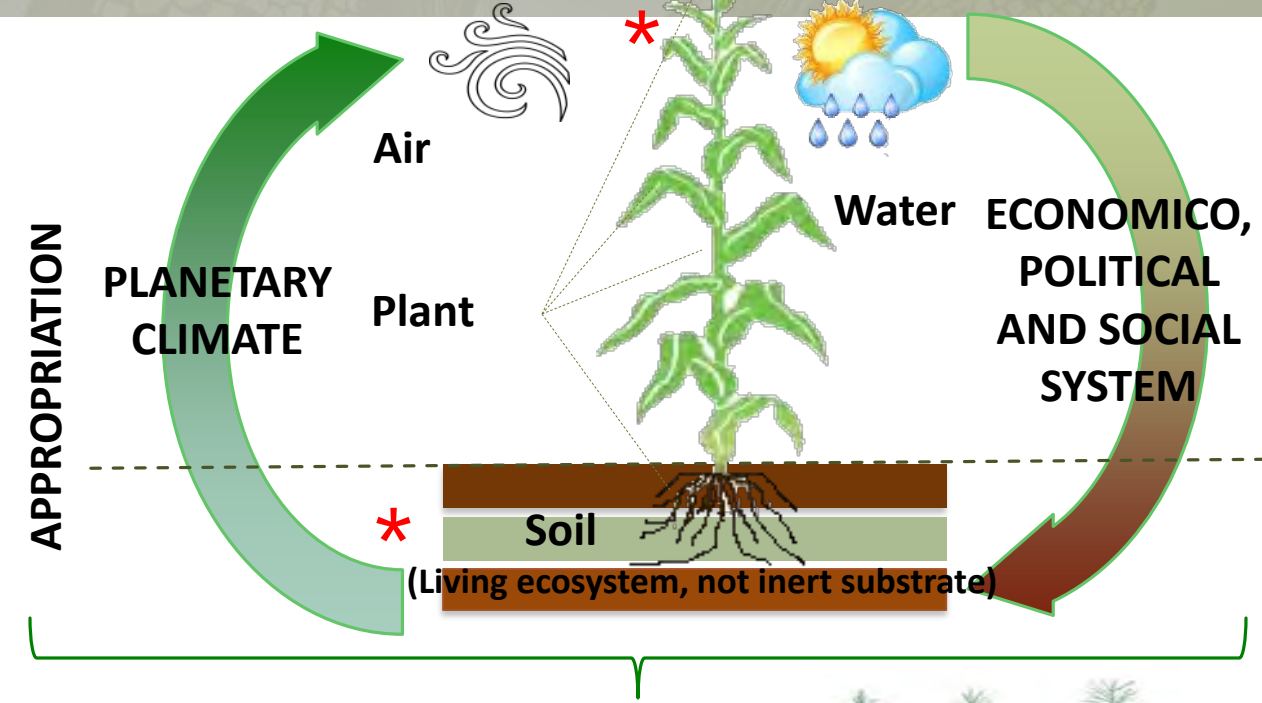
SEED PRODUCTION

Technological revolution *with* campesinos y *without* GMOs:

from agriculture of inputs to agriculture of knowledge integrated into complex systems *

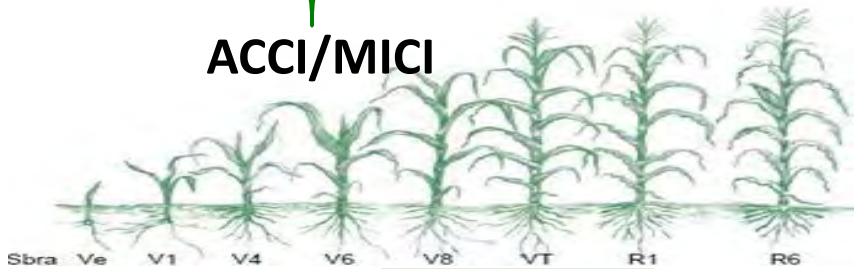






ACCI/MICI

Dynamic cycles



1. BIOLOGICAL	NUTRITION	MICRO-BIOLOGY	PLANT RESISTENCE	EDAPHOLOGY
2. ECONOMIC	PRODUCTION	COMERCIALIZATION	CONSUMPTION	
3. ORGANIZATION	GOVERNANCE	INTEGRATED SERVICICES	SISTEMS OF CONTROL	

Paradigm Change/4 pillars*

Model of training and socialization of capacities in the ACCI-MICI model.

Personal technical assistance

Farmer and Farm

Training workshops

Specialized Technical Assistance

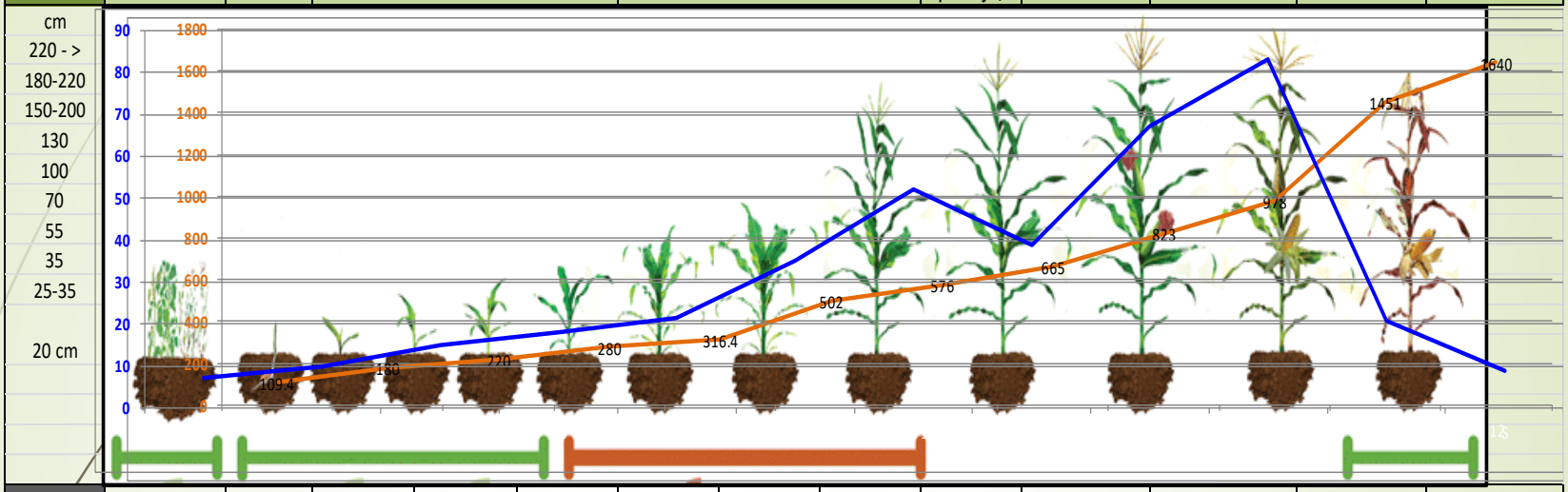
Observation visits

Demonstration events

Showcases

Crop phenology/Integrated management practices

Altura de Planta	Tratamiento de la semilla	Emergencia	Crecimiento Vegetativo lento	Crecimiento Vegetativo rapido	Emisión de panoja,	Desarrollo de mazorca	Crecimiento de mazorca	Maduración	Senecencia

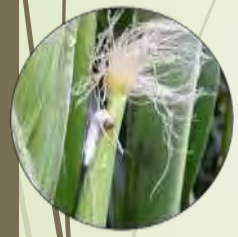


Etapas Fenológicas		Ve	V1	V2	V3	V4	V5-V6	V7-V10	VT	R1-R2	R3-R4	R5-R6	S
Unidadades Calor		109.4	180	220	280	316.4	502	576	665	823	978	1451	1640
Consumo de Agua (mm)		7.1	10	15	18	21.6	35	52.2	39	67	83	20.8	8.9
Fecha	jun-16	02-jul-16	08/07/2016	14/07/2016	20/07/2016	01-ago-16	14-ago-16	26-ago-16	01/09/2016	21-sep-16			
Actividades	Oxigenadores de Suelo. Inoculación de la semilla yAplicación de Microorganismos, fijadores y solubilizadores de Nutrientes	Monitoreo de Plagas y Enfermedades y micoorganismos enrraizadores	Supermagro, lixiviado y microorganismos enrraizadores	Nutrición balanceada en drench y fertilización foliar lixiviado. 1er cultivo	Aplicación de resistencia vegetal1 y promotores de crecimiento 1. y 2do cultivo	Promotores de crecimiento 2 y nutrición balanceada en drench	Nutrición balanceada en drench y resistencia vegetal 2	3a Nutrición balanceada 2a. Aplicación de Inductores de Resistencia Vegetal y promotores de crecimiento	Aplicación de microorganismos entomopatogenos	3a Nutrición balanceada 2a. Aplicación de Inductores de Resistencia Vegetal y promotores de crecimiento		Estimación de rendimiento	Cosecha

Insumos requeridos en el Modelo ACCI - MICI

Etapa	Insumos
Preparación del Suelo	Aplicación de oxigenadores sólidos
	Aplicación de oxigenadores líquidos
	Microorganismos degradadores de materia orgánica
	Aplicación de Microorganismos Fijadores de Nitrógeno
	Aplicación de Microorganismos antagónicos y solubilizadores de nutrientes
	Aplicación de Microorganismos entomopatógenos
	Microorganismos promotores de crecimiento
Nutrición Foliar	Lixiviados enriquecidos
	Supermagro
Resistencia Vegetal	Inductores de Resistencia Vegetal
Productividad	Fitohormonas
Manejo Fitosanitario	Fermonas (trampas)
	Microorganismos antagónicos y entomopatógenos
	Extractos vegetales

Role of Microorganisms utilized in the ACCI – MICI model



Domain	Genus	Species	Functions				
			Nutrition		Phytosantitary Management		Growth Promotor
			Fixative	Solubilizer	Entomopathogen	Antagonist	
Bacteria	*Bacillus*	*subtillis*				XXX	X
Fungus	*Trichoderma*	*sp*				XXX	
Bacteria	*Azospirillum*	*sp*	N	PO3, K+, Mn,Mg			X
Fungus	*Micorrizas*	*sp*	N	P, K, Ca, Zn, Cu,	x	x	x
Fungus	*Beauberia*	*bassiana*			XXX		
Fungus	*Metarhizium*	*sp*			XXX		
Bacteria	*Bacillus*	*thuringiensis*			XXX		
Bacteria	*Pseudomonas*	*fluorescens*		P y K		XX	X
Fungus	*Lecanicillium*	*lecanii*			XXX	X	
Fungus	*Paecilomyces*	*lilacinus*			XXX		
Bacteria	*Rhizobium*	*sp*	N				
Bacteria	*Pseudomona*	*putida* X					

Production of Inputs: In our Biofactories

Produces:

- Seeds
- Compost
- Lumbricompost
- Lixiviados
- Bioles
- Sulfocalcium Broths, Cupric Sulphate
- Plant extracts

Reproduces:

- Microorganisms (Fungi y bacteria)

Prepares:

- Formulas of Plant Resistance to biotic events (pests and diseases and abiotic diseases (drought, excess humidity, hail, excessive radiation, lack of cold hours, frost)
- Rock flours

Seeds: Native or hybrid materials

1.Selection

2.Identification and caracteriza-tion

3.Improvement

The diversity of native maize in the region has a high potential in:

- Increase in yield through selection and participatory improvement in white maize (Tuxpeño, Rocamey, 507, Chapín, Zapatista).
- Harvesting and improvement of yellow corn (Olotillo amarillo, Oro, Olotillo –Vandeño).
- Differentiated markets for special-purpose corn (Olotillo negro, Napalú).

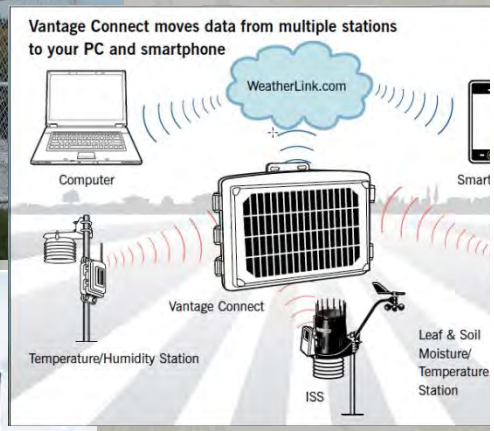
1. Maíz 507; 2. Taxa; 3 y 9. Tuxpeño; 4. Zapatista; 5. Jarocho; 6. Olotillo amarillo; 7. Chapín; 8. O. negro; 10 Oro; 11. Napalú; 12 Olotillo

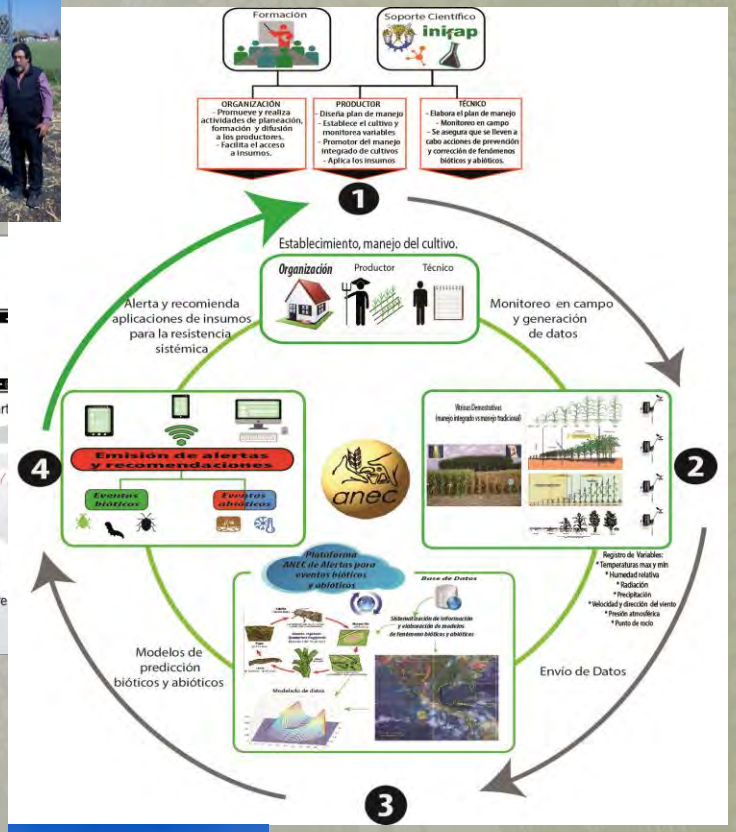
Platform for alerts of biotic and abiotic events

Variables:
1. Relative humidity(%)
2. Average máximum , mínimum temperature (ºC)
3. Precipitation (mm)
4. Solar radiation (W/m2)
5. Barometric pressure (hPa/mb)
6. Ultraviolet radiation
7. Wind direction and velocity
8. Lunar phases

Calculations
9. Dew point (ºC)
10. Evapotranspiration (mm)

Variables in the soil:
11. Humidity (%)
12. Temperature (ºC)





Equipos de Medición de Variables climatológicas

UNIVERSO
8 ESTADOS
20 MUNICIPIOS
23 MODULOS

NAYARIT
TECUALA
SAN PEDRO LAGUNILLAS
SANTA MARIA DEL ORO

JALISCO
ETZATLAN
AMECA
UNION DE TULA

MICHOACAN
IXTLAN
CHAVINDA
VILLAMAR
ZINAPECUARO

MORELOS
YECPIXTLA

PUEBLA
TECAMACHALCO

GUERRERO
AZOYU
OMETEPEC

CHIAPAS
(MUNICIPIOS)
VILLA DE LAS FLORES
EL PARRAL
VENUSTIANO CARRANZA
LA CONCORDIA

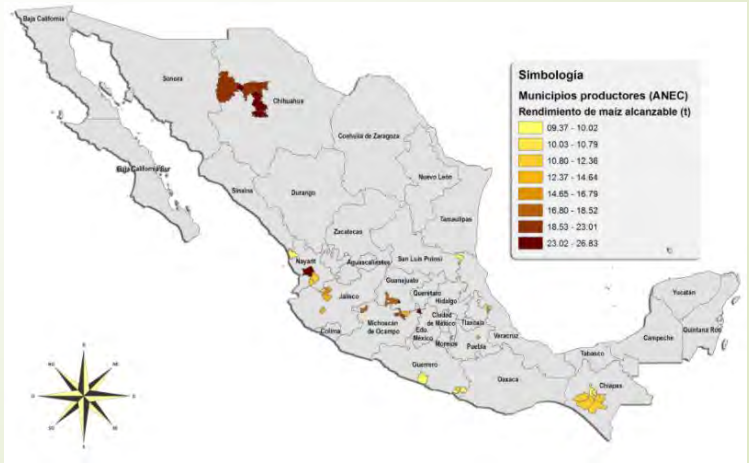
Plataforma de Alertas de eventos bióticos y abióticos

Portal de Inicio

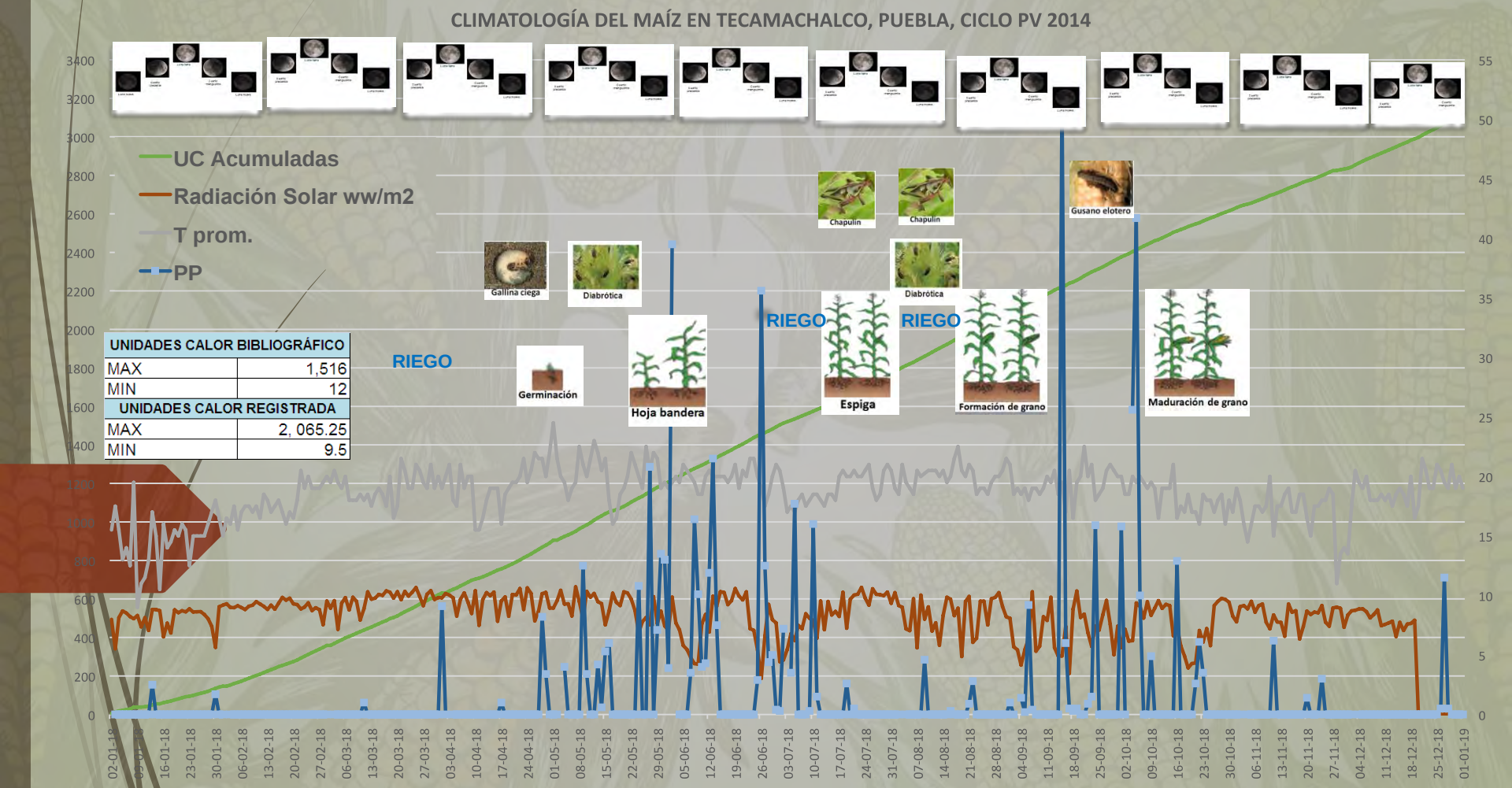
Mapas de Riesgo

Prevención y Cont

Potencial Productivo



Elaboration of Management Plans with the integration of Information and records



UNIDADES CALOR BIBLIOGRÁFICO	
MAX	1,516
MIN	12
UNIDADES CALOR REGISTRADA	
MAX	2, 065.25
MIN	9.5

Some results

Technological transfer taking as reference the Campesino Model of Integrated Knowledge (ACCI)/ Induced Management of Induced Crops (MICI).

- Attention to **600** producers of **cane, sorghum and corn** and **1,725** hectares of land.
- **23 Moduleos, 1 technician** per module.
- Management Plans and report of visit to properties (logbook).
- **Knowledge and specific attention of each crop to attend (nutrition, phenology, pests, diseases, etc**.) and application of technological innovations to be transferred.
- **Field visits** with specialists**.**

Hybrid Corn

Production measured in yield (tons per hectare)

444 Producers

1,284 Hectares

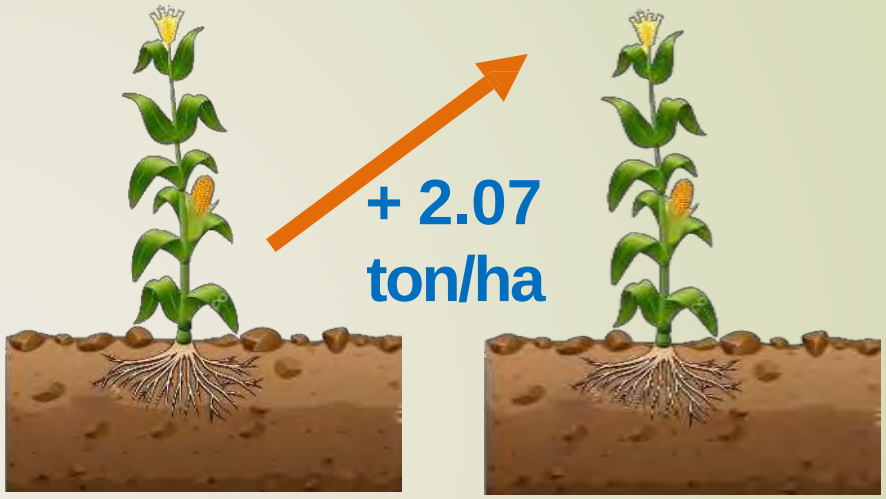
Profitability measured in cost per ton produced (pesos per ton)

Increase

31%

6.59 ton/ha

8.66 ton/ha



Conventional

ACCI - MICI

Decrease

30%

$2,912.71 per ton.

-$912.57 Pesos/ton

$2,000.14 per ton.

Creole or native corn nativo

Production measured in Yield (tons per hectare)

32 Producers

89 Hectares

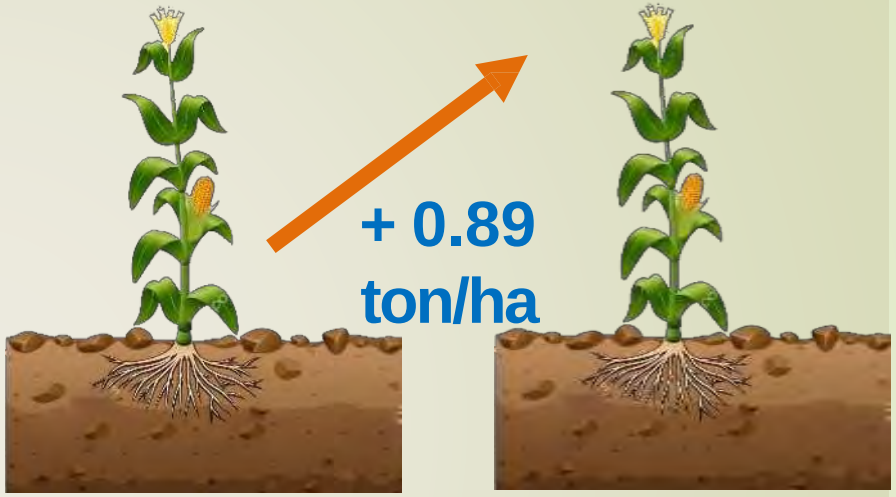
Profitability measured in cost per ton produced (pesos per ton)

Increase

27%

3.23 ton/ha

4.12 ton/ha



Conventinal

ACCI-MICI

Reduction

11%

$3,334.00 per ton.

-$393.00 Pesos/ton

$2,941.33 per ton.

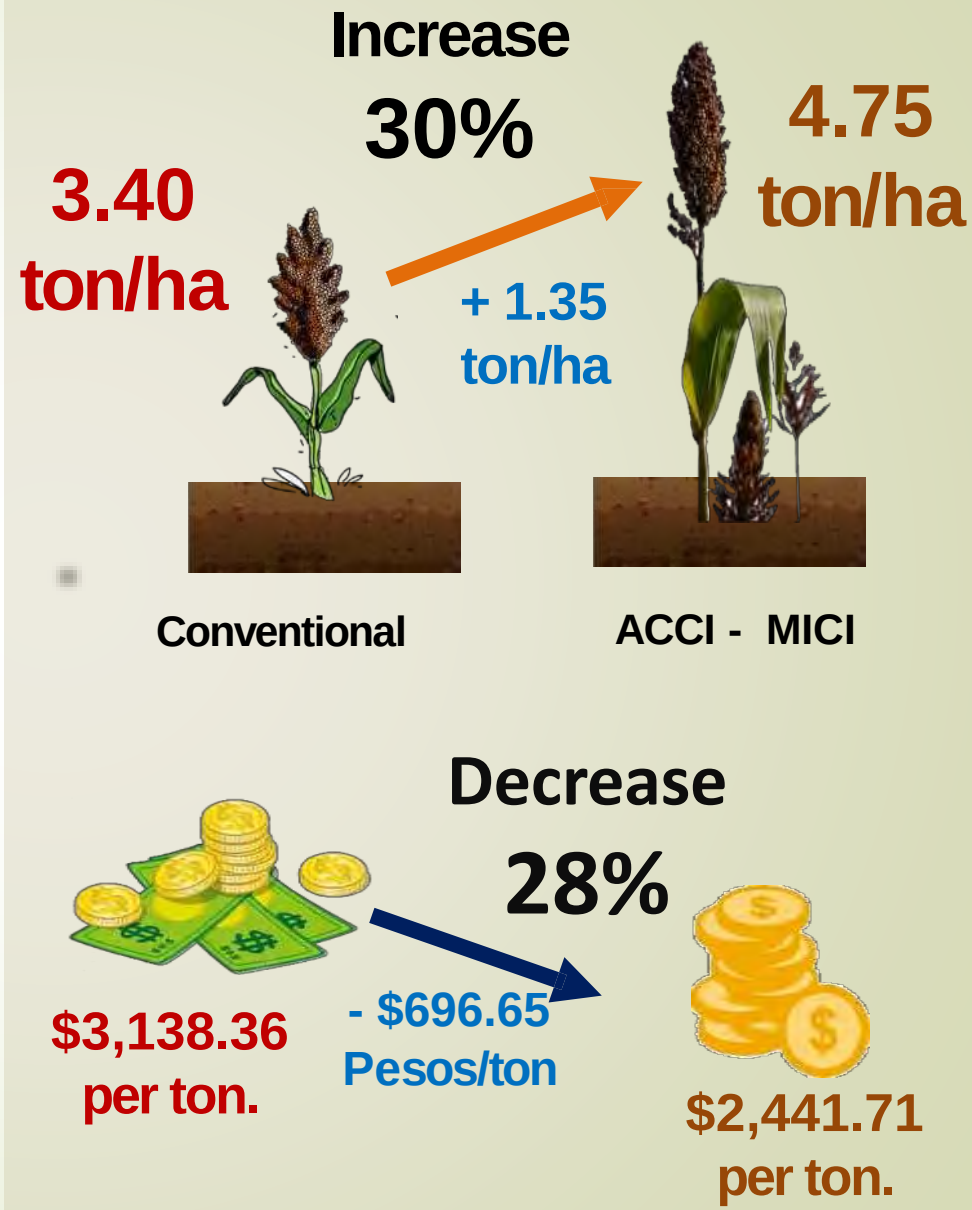
Sorghum

Production measured in Yield (tons per hectare)

66 Producers

170 Hectares

Profitability measured in cost per ton produced (pesos per ton)



Sugar cane

Production measured in Yield (tons per hectare)

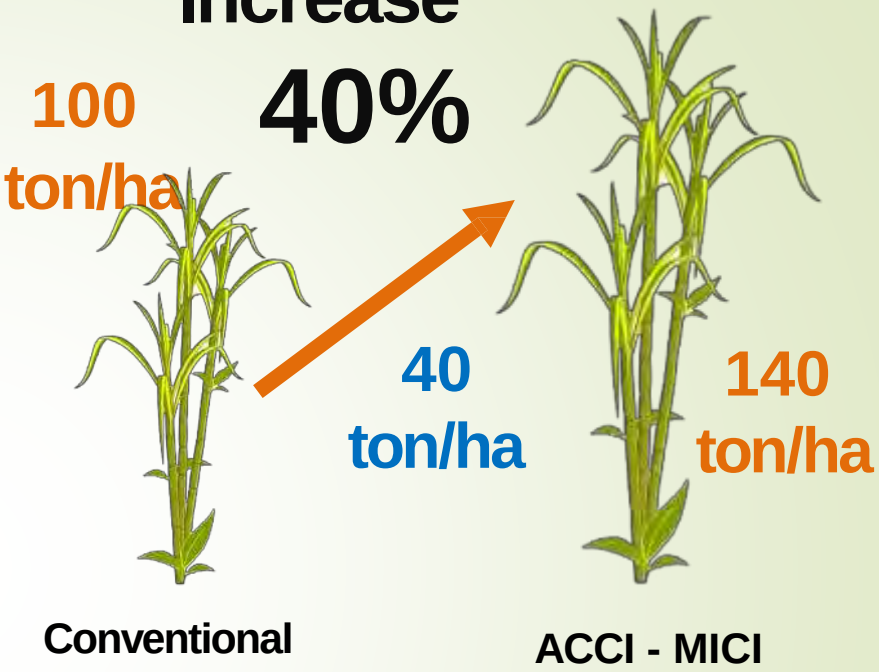
58 Producers

181 Hectares

Profitability measured in cost per ton produced (pesos per tonda)

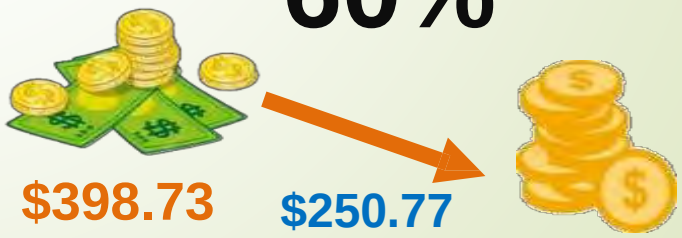
Increase

40%



Decrease

60%



$398.73 per ton.

$250.77 Pesos/ton

$147.96 per ton.

Conclusions

- There are alternatives. They are in our hands.
- There are no shortcuts or simple solutions.
- It is a matter of rights and sovereignty.
- We must invest 90% of public resources in campesino agriculture and alternative models such as the ACCI model.
- We can and must recover the splendor of Mesoamerican agriculture and civilization in the face of a globalized 21st century.

THANK YOU!!

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