

ASSESSMENT OF THE CORN INDUSTRY IN NUEVA ECIJA

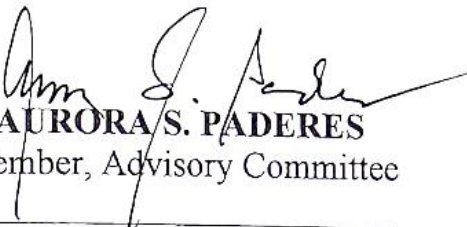
JENNIFER VERA TRINIDAD-DOMINGO

A thesis submitted to the faculty of the Institute of Graduate Studies,
Central Luzon State University, Science City of Muñoz,
Nueva Ecija, Philippines, in partial fulfillment
of the requirements for the degree

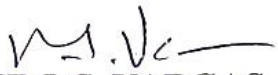
MASTER OF SCIENCE
(Rural Development)

NOVEMBER 2007

This thesis entitled, **ASSESSMENT OF THE CORN INDUSTRY IN NUEVA ECIJA**, prepared and submitted by **JENNIFER VERA TRINIDAD-DOMINGO** in partial fulfillment of the requirements for the degree of **MASTER OF SCIENCE (Rural Development)**, is hereby accepted.


AURORA S. PADERES
Member, Advisory Committee

Date Signed



DANILO S. VARGAS
Member, Advisory Committee

Date Signed

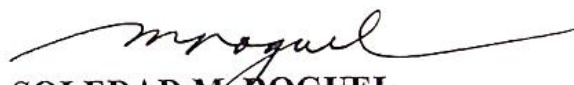

PASTORA S. COLOMA
Chair, Advisory Committee

Date Signed

Accepted as partial fulfillment of the requirements for the degree of **MASTER OF SCIENCE (Rural Development)**.


AURORA S. PADERES
Chairperson, Department of Rural Development
and Development Communication

Date Signed


SOLEDAD M. ROGUEL
Dean

Date Signed

BIOGRAPHICAL SKETCH

The author is the eldest of four children of Lusanto De Leon Trinidad and Melania Villaseñor Vera. She was born on October 31, 1977 in Dolores, Sto. Domingo Nueva Ecija. She is happily married to Melvin Palomo Domingo, a veterinary sales representative from Carranglan, Nueva Ecija.

She finished her elementary education with honors from Calaocan Elementary School in San Jose City. She completed her secondary education at Constancio Padilla National High School. Subsequently, she obtained her Bachelor of Arts in Social Science from the Central Luzon State University.

Her past work experiences include instructor of Psychology at the former San Jose Colleges, now San Jose Christian Colleges; human resource officer for Hotel Tierra and Restaurant, and secretary of bids and awards committee of the Bureau of Postharvest Research and Extension. She also worked as part time instructor of the CLSU NEPG.

At present, she is a professor of social sciences at the Eduardo L. Joson Memorial College in Palayan City, Nueva Ecija. She is designated as chairperson of the Department of Social Sciences.

ACKNOWLEDGMENT

Above all, the author is greatly indebted to her creator, the Almighty God for the life, good health, understanding, supportive, caring and loving family and friends. Without these, nothing could have been accomplished.

The author wishes to express her profound appreciation, gratitude and heartfelt thanks to:

her adviser, Dr. Pastora S. Coloma, for her guidance and motivation which made her work better for the completion of this study; Dr. Danilo S. Vargas and Dr. Aurora S. Paderes who served as members of the advisory committee, for their valuable comments and suggestions during the course of this study;

Dr. Fe L. Porciuncula and Dr. Nenita R. Carbonel, chairperson and member of the examining committee, respectively, for their critical inputs and advice to finish this work; the provincial corn coordinator, municipal corn coordinator of Aliaga and Cuyapo and farmer-respondents, for their tireless efforts in providing data needed for this study and for giving a deeper insight in understanding the Nueva Ecija corn situation;

Dr. Estefania W. Kollin and Dr. Elaida R. Fiegalan for editing this manuscript; Gilbert, Greg, Joan and Tin-Tin, for patiently helping her throughout the conceptualization and realization of this manuscript;

her parents, Nonie and Mely, brother Erick and sisters Jinky and Joy, and her cute niece, Maren, for their faith and unconditional love;

Finally, to her one great love, Melvin, for his unfailing love, his faithfulness, his presence and for seeing the best in her, and always letting her feel that she is the most beautiful woman in the world.

JENNIFER VERA TRINIDAD-DOMINGO

TABLE OF CONTENTS

	PAGE
LIST OF TABLES	ix
LIST OF FIGURES	xi
ABSTRACT	xii
INTRODUCTION	1
Statement of the Problem	2
Objectives of the Study	3
Assumptions of the Study	4
Significance of the Study	4
Scope and Limitations of the Study	5
REVIEW OF LITERATURE	7
Corn Production in the Philippines	7
Nueva Ecija's Potential for Agriculture	8
Agriculture Situation of Nueva Ecija	9
National Program for the Corn Industry	13
Nueva Ecija's Potential in the Corn Industry	15
Requirements for Corn Production	17
Climate	17
Low Fertilizer Application Rates	18
Industry Analysis	18
The Importance of Industry Analysis	19
METHODOLOGY	21
Theoretical Framework	21
Conceptual Framework	23
Operational Definition of Terms	25
Research Design	27
Locale of the Study	28
Population and Sampling Procedure	30
Data Gathering Procedures	31
Research Instrument	32
Unit of Analysis	33

	PAGE
RESULTS AND DISCUSSION	34
Nueva Ecija Corn Industry Situation Production	34
Climate and Temperature	34
Soil Fertility	34
Water Resources, Drainage, Tributary Patterns and Catchment Areas	35
Production trends	35
Corn Production Situation of Aliaga and Cuyapo	37
Production System	40
Processing	41
Support Services	43
Farm Machines and Transport	44
National Programs in Corn Implemented in Nueva Ecija	47
Irrigation	48
Post Harvest Development Services	48
Marketing Development Services	49
Extension Support, Education and Training Services	50
Credit Facilitation Services	51
Infrastructure Services	52
Technical Services	52
Stakeholders	53
Socio-economic Characteristics of Corn Farmers and Producers	53
Cooperatives and Associations	55
Funding Institutions	66
Technology Transfer Agency	68
Research and Development Agency	71
Marketing	72
Practices (Pricing, Promotion and Packaging)	75
Problems in Corn Production	78
SWOT Analysis of the Corn Industry	81
 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	 85
Summary	85
Conclusions	88
Recommendations	91
 LITERATURE CITED	 93

	PAGE
APPENDICES	95
A. Holistic and Integrated Corn Development Program	96
B. Interview Guide for Corn Farmers	100
C. Focus Group Discussion Guide for Corn Farmers	105
D. Questionnaire for Key Informant (Cooperatives/Associations)	108
E. Questionnaire for Key Informant (Corn Coordinators)	110
F. Questionnaire for Key Informant (Funding Institutions)	112
G. Questionnaire for Key Informant (R and D Agencies)	113
H. Corn Program Accomplishment Report from 2004-2006	114
I. List of BAI-Registered Commercial Mixed Feed Manufacturers	115
J. Documentation	121

LIST OF TABLES

TABLE		PAGE
1	Distribution of respondents according to locale of the study	31
2	Area planted, total production and average production of corn from 2000-2006	36
3	Corn production of Aliaga and Cuyapo	39
4	Contribution (%) of Cuyapo and Aliaga to the total production of corn in Nueva Ecija from 2000-2006	40
5	Number of hybrid seeds subsidy distributed to beneficiaries per municipality in Nueva Ecija from 2004-2006	45
6	Agri-support agencies that provided assistance to corn producers	46
7	Number of farmers who own or rent farm machines and transport	46
8	List of farm machinery equipment and post harvest facilities distributed under the GMA corn program to the province of Nueva Ecija	47
9	Socio-economic characteristics of the respondents	54
10	Recommended and actual cultural management practices in corn farming	56
11	Scheme of services offered by BELMAP Kaunlaran sa Kabukiran	64
12	Scheme of services offered by BMEMC	66
13	Loan scheme services offered by ASKI	67
14	Corn technologies disseminated by BPRE	72
15	List of existing commercial mixed feed manufacturers in Nueva Ecija	75
16	Farm gate prices of corn from 2000-2006	76

TABLE		PAGE
17	Problems encountered by the farmer-respondents in corn farming and the frequency of farmers experiencing the problems.	80
18	SWOT analysis of the corn industry	83

LIST OF FIGURES

FIGURE		PAGE
1	Modified Easton's framework of the systems theory used to analyze the corn industry	23
2	Conceptual paradigm of the study	26
3	Map of Nueva Ecija showing the study areas	29
4	Average production of corn in Nueva Ecija from 2000-2006	37
5	Market flow of corn produce as described by the corn farmers and corn coordinators	78

ABSTRACT

DOMINGO, JENNIFER VERA TRINIDAD. Institute of Graduate Studies,
Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines.
November 2007. **ASSESSMENT OF THE CORN INDUSTRY IN NUEVA ECIJA**

Adviser: **DR. PASTORA S. COLOMA**

This study aimed to analyze the current status of the corn industry in Nueva Ecija, its potential for growth, the directions of the current policies and programs, and the problems that should be looked into. The assessment was focused on the situation of the corn industry in Nueva Ecija in terms of production, processing, stakeholders, support services and marketing involved in the industry.

The findings of the study showed that the strongest subsystems in corn were production and stakeholders subsystems. The weakest subsystems were processing and marketing subsystems.

In the production subsystem, many farm lands in Nueva Ecija are suitable for corn farming. Those may be maximized by developing the rest for corn farming. With regard to the farmer-producers, they have positive attitude toward corn production although they have inadequate corn farming inputs despite support from different government and private sectors. Moreover, funding institutions and cooperatives have been established to strengthen and boost corn farmers in their needs. R and D agencies are also present in the province to generate new technologies particularly on harvest and post-harvest to help the corn industry to attain its optimum growth.

However, the corn industry in Nueva Ecija is weakest in processing and marketing. Corn processing is done mostly outside of Nueva Ecija implying that the demand (from manufacturers) for raw materials (corn) comes from the processors or manufacturers of feeds, corn oil, corn starch and corn chips located outside Nueva Ecija. Demands for corn produce come mostly from the traders and buyers from surrounding provinces even though the supply of corn produce comes from 28 towns of the province.

High competition between corn farmers and traders was noted. The price of corn produce is controlled and dictated by outside traders and buyers. This leaves the farmers no choice but to sell their harvest even if the price is too low.

The corn industry in Nueva Ecija suffers from different problems and constraints that directly affect its growth. The problems cited by the farmers were: (1) occurrences of calamities; (2) high input cost; (3) credit institutions' requirements for loaning; (4) traders control of price; (5) inadequate infrastructure for corn growers; (6) inadequate information dissemination regarding corn technology; (7) farmers' traditional attitude toward corn farming; and (8) weak management and operation of cooperatives.

The following recommendations were suggested by the farmer-respondents: (1) The Department of Agriculture should strengthen the GMA Corn Program and increase its seeds and fertilizers subsidies; (2) The provincial government specifically the Office of the Provincial Agriculturist should draft and establish realistic and holistic policy programs and institutional support for the corn industry of Nueva Ecija with corresponding adequate funds; (3) Investors/Businessmen should be encouraged to

establish feed mills to create demand and improve accessibility for marketing of corn;
and (4) Marketing network with both local and outside traders should also be established.

LITERATURE CITED

- ABS-CBN INTERACTIVE. 2006. Corn introduced in Nueva Ecija. Retrieved 12 September 2007 from www.abs-cbnnews.com/storypage.aspx?storyId=43356
- ASIAN NGO COALITION FOR AGRARIAN REFORM AND RURAL DEVELOPMENT. 2005. Participatory policy development for the lowland rainfed rice-based farming systems towards sustainable agriculture and rural development: a case study of Nueva Ecija, Philippines. Retrieved 2 September 2007 from www.fao.org/sard/common/ecg/2315/en/FINAL_SARDFSE_STUDY_August_2005layout11.pdf
- BUREAU OF AGRICULTURAL STATISTICS. 2003. Performance of Philippine Agriculture. Retrieved 25 July 2007 from www.bas.gov.ph/perfperiod.php?id=3
- BUREAU OF POSTHARVEST RESEARCH AND EXTENSION. 2005. Postharvest management. Retrieved 28 September 2007 from www.bpre.gov.ph/publications/news/200701%20phnew.PDF
- DELA CRUZ, R. S. 2003. Evaluation of the mechanization and consolidation of farmers among clustered coast projects in Quirino and Isabela, unpublished dissertation.
- DEPARTMENT OF AGRICULTURE. 2002. Corn: relative monthly distribution, calendar year 1991-2001 by region and provinces. Retrieved 2 September 2007 from www.da.gov.ph/cornprogram/profile/AreaProd/TProvmain.html
- GALANG, A. 2006. Onion farmers turn to rice, corn. Retrieved 28 July 2007 from www.manilatimes.net/national/2006/july/04/yehey/prov/20060704pro2.html
- GMA CORN PROGRAM. 2004. Retrieved 15 August 2007 from www.da.gov.ph/cornprogram/r_frame.html
- GROLIER ENCYCLOPEDIA. 1995. Danbury C.T: Grolier Educational Corporation.
- MALENAB, V.L., S.S. SALACUP, L.G.C. RANIT, JR., S.R. MATE, M.F.M. FERNANDO, E.G. MABAL, M.T.D. VIERNES, R.F. PEDRO, D.G. ESQUILLO, G.R. GUZMAN, M.A. QUIMBO, and M.M. DOMINGO. Undated. The Corn Marketing System: A Rapid Marketing Appraisal in Cagayan Valley. A project of the Confederation of Grains Association, Inc. (CONFED) under the auspices of the Accelerated Agricultural Production Project of the Department of Agriculture and the United States Agency for International Development.

- PHILIPPINE COUNCIL FOR AGRICULTURE, FORESTRY AND NATURAL RESOURCES RESEARCH AND DEVELOPMENT. 1997. The Philippines recommends for corn postproduction operations. Los Baños, Laguna, Philippines.
- PROVINCIAL GOVERNMENT OF NUEVA ECIJA. 2006. Nueva Ecija Information Booklet. Nueva Ecija, Philippines.
- SMALL BUSINESS ENCYCLOPEDIA. 2007. Industry analysis. Retrieved 31 August 2007 from www.answers.com/industry+analysis?cat=biz-fin
- WIKIPEDIA. 2002. General systems theory. Retrieved 25 July 2007 from www.en.wikipedia.org/wiki/Systems_theory