# Report of the Ethnographic Field School in Belize (Summer 2019)

Center for Applied Anthropology, Northern Kentucky University

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**Acknowledgements**

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We also appreciate the aid of Sarah Hume for editing drafts of this report, although any errors still contained within are our own.

## Introduction

This report documents the findings of the Ethnographic Field School in Belize organized by the Center for Applied Anthropology (CfAA) at Northern Kentucky University (NKU) in Orange Walk District, Belize, during summer 2019. Ethnographic interviews were conducted within the communities of San Lazaro, San Pablo, and Yo Creek in cooperation with the Sugar Industry Research and Development Institute (SIRDI), Belize Sugar Cane Farmers Association (BSCFA), Progressive Sugar Cane Producers Association (PSCPA), and the three communities within which interviews took place. This field season's research focused on the following topics: child labor, traditional medicine and health concerns, drop in price of sugar cane, fair trade community investment, climate change, organizations, and networks of information sharing. This report presents the preliminary findings of the 2019 field season and recommends what research questions should be pursued in the next field season.

## Background

While the educational aim of the ethnographic field school is to train students in basic ethnographic methods, the applied purpose of the field school is to collect and analyze data that can then be used by SIRDI, BSCFA, PSCPA, and community members in the development of programs for betterment of the sugarcane farming communities in northern Belize. As posted on the field school's web site (CfAA 2021):

> This course immerses students in Belizean culture and trains them in contemporary anthropological field methods. Students will gain valuable research skills (e.g., ethnographic interviewing and qualitative data analysis) to apply anthropology in their future careers (e.g., applied anthropology or other social/behavioral discipline), an appreciation for Belizean cultural diversity, and further their personal growth. While in Belize, students will be primarily engaged in guided applied ethnographic fieldwork. Students will learn about the local culture by doing participant-observation and conducting ethnographic interviews in a community-based research project. Students will learn research ethics, unobtrusive observation, participant observation, field note writing and coding, ethnographic and life history interviewing, ethnolinguistic data collection, community mapping, rapid assessment procedures, qualitative data analysis, and other ethnographic methods in addition to basic ethnographic writing. After successful completion of this course, students will have:
>
> - developed a basic understanding of Belizean culture,
> - formulated an understanding of ethical and validity issues in ethnographic research,
> - practiced skills in research design and ethnographic methods of data collection,
> - applied basic ethnographic research methods in a non-western culture,
> - engaged in a community-based research project, and
> - analyzed ethnographic data resulting in an ethnographic monograph.

Since the literature review was written for last season's report (Hume et al. 2019), there have been several scholarly publications related to this field school's research. Several articles have been written on social and cultural factors in environmental conservation: 1) the environmental impact of milpa farming on forested areas (Dexler 2020), 2) the impacts of highway construction on community infrastructure and environment (Haines 2018), 3) the impacts that climate change will have on agricultural practices (Haines 2019; Requena, Garcia, and Vasquez 2020), and 4) the relationship between wildlife conservation and farmers (Shapiro, Willcox, Tate, and Wilcox 2020). Research has also been published on family involvement in their elementary school children's education (Garbacz, Hall, Young, Lee, Youngblom, and Houlihan 2019) and how urban life may be contrasted with village life (Troccoli 2019). Two articles examined the pact of tourism, on issues of race and gender (Johnson 2020) and the other on coastal development (Vitous and Zarger 2020). In response to the recent Zika virus, Gray and Mishtal (2019) examined government interventions and community responses to the epidemic. Finally, Chibnik (2020) used his experience in Belize to discuss issues of ethics in participatory research.

**Methods**

As in previous field seasons, upon arrival in the villages of San Lazaro, San Pablo, and Yo Creek, Antonio Novelo (Jungle River Tours) introduced the field school members to village council representatives and assisted Douglas Hume in explaining our collaborative research project to gain local approval for our presence in the community. Each village council gave their permission and was supportive of our efforts. We presented printed copies of last year's report to the councils of San Estevan, San Lazaro, San Pablo, and Yo Creek (Hume et al. 2019).

Participants of the field school (Abigail Burbank, Miranda Kaplan, Musseit M'Bareck, Jordan Myers, Madalyn Roberts, and Edward Stephens) as well as the Belizean student interns (Lydia Alvarez, Julia Arzu, Christian Cansino, and Christy Valdez) conducted house-to-house interviews in a census sampling methodology. The Cooperative Center for Study Abroad hired Antonio Novelo (Jungle River Tours) as the field school's land agent. He served as both as cultural liaison and research assistant during field research. Mr. Novelo explained our general purpose and introduce students to community members. Students would then present the informed consent statement in both English (Appendix I) and Spanish (Appendix II) and upon agreement to take part, have the informant sign a copy (on file) and offer an unsigned copy for the informant's records.

Interviews were conducted on the informant's property (e.g., porch, house, et cetera) with a pair of students, one serving as the primary interviewer and the other as observer. The standard method used for this research was the ethnographic interview (Spradley 2016), which is informant centered (Levy and Hollan 1998) rather than interviewer centered. Interviews were from five minutes to an hour in length, depending upon the informant's time constraints and willingness to be interviewed by the students. Ideally the interview would flow naturally from topic to topic and would end when the interviewer or the informant

perceived a natural stopping point or when the informant no longer seemed comfortable or interested in continuing the interview (Levy and Hollan 1998).

All informants were asked about education support sources, child labor issues, traditional medicine and health concerns, sugar cane price drop, fair trade community investment, and climate change perceptions and effects (see Appendix III: Ethnographic Interview Schedule [Procedure], Part I). Self-identified sugar cane farmers were additionally asked about sugar cane organizations and networks of information sharing (see Appendix III: Ethnographic Interview Schedule [Procedure], Part I. Students digitally recorded interviews and took field notes during and directly after each interview.

Upon return from the field, data from each interview were aggregated and analyzed. After analysis, the digital audio recordings were securely erased. Douglas Hume then conducted both statistical and network analyses as well as wrote this field report.

## Community Development

### Demographics

A total of 321 informants were interviewed: 96 (29.9%) in San Lazaro, 107 (33.3%) in San Pablo, and 118 (36.8%) in Yo Creek. The median age of the informants was 40 years with a minimum age of 18 and maximum age of 85 years old. Forty-five percent of the informants were male and the remaining 55% were female. Of the 321 total informants, 65 (20.2%) self-identified as sugar cane farmers.

### Child Labor

During the prior field season, informants were asked about the appropriate age for each type of child labor collected during the preceding season (Hume et al. 2019). This field season, we asked community members if they thought children should work, what were the reasons that children worked, and what could help keep children from working. Of the 321 informants, 139 (43.3%) responded that children should never work, 103 (32.1%) responded that children should work, 63 (19.6%) responded that children should only work in certain circumstances, and 16 (5%) did not answer. For those informants that responded that children should never work, their reason was that children should stay in school because education is important. Those informants that responded that children should work explained that working would teach children responsibility and life skills that they can apply to their future careers and that working keeps children out of trouble. For those informants that responded that children may work under certain conditions most commonly listed working to support an extremely poor family or being a young father/mother and having to support children as necessary reasons for children to work. Some also suggested that safe part-time jobs during school vacations were appropriate for older children. When asked what could possibly reduce child labor, informants most

commonly suggested educational financial aid, better paying jobs for parents, and community programs to keep children busy (e.g., organized sports and clubs).

In the next field season, we will continue to have conversations with community members about child labor, with an emphasis on how families are responding to financial hardships they have suffered due to the COVID-19 pandemic.

Traditional Medicine

In previous field seasons, several informants spoke about traditional medicines that they used for kidney disease and other ailments. After a discussion with Hugo Carillo (U Chan Muul Yaax K'aax [Maya Community Museum in San Lazaro]) about the preservation of local traditional medicine knowledge preservation during the second week of the field school, we began asking informants about the traditional medicine remedies that they use. In our discussion with informants, we collected ingredients used in traditional medicine, but our collection of each use of the components resulted in unclear data. Informants have reported that the most common ingredients for traditional medicine include oregano, lime, aloe, honey, garlic, sable, and soursop. Many informants were confused by the wording of the questions about "traditional" medicinal ingredients. In the next field season, we will rephrase questions and focus on acquiring information on the medicinal use of materials not acquired through the pharmacy rather than "traditional" medicines.

The most common ailments that informants listed as treatable by traditional medicine included high blood pressure, fever, cough, pain, stomach ailments, vomiting, diabetes, kidney disease, and cuts. In comparison, informants reported that they were most concerned about dengue, diabetes, fevers, cancer, malaria, garbage, blood pressure, and access to medical care. The concern about the distance to medical care was more prominent in San Lazaro and San Pablo than it was in Yo Creek. In the coming field season, we will continue to speak with information about the ailments that they are concerned about and how these are treated.

Sugar Cane Price Drop

As with the previous three field seasons, informants were asked about their preparation for and impact of the continuing drop in prices for processed sugar cane, which results in less income for sugar cane farmers. Of the 321 informants, 76 (23.7%) reported that the drop in sugar cane prices has not affected them. A few of these informants explained that they were not affected because they were not sugar cane farmers. The remaining community members (245, 86.3%) reported that they have been affected by a drop in sugar cane prices. The most common response to decreased discretional spending is consistent with previous field seasons. Community members predict that they would buy fewer non-essential items, diversify their incomes, and would not be able to pay off loans. Though the answer has been consistent over time as the sugar cane price continues to drop, the informants are not reporting a more precise or clearer plans to mitigate what is becoming a chronic issue for the farmers. Over several years of research,

the general response has been that they will buy less, diversify their income, or stop farming all together.

In the coming field season, we will continue to ask about the impact of the dropping sugar cane price, but also explore how the COVID-19 pandemic has affected their household income as well as their response to this impact.

Fair Trade Monies

Monies acquired by those famer's associations that are fair trade certified must use a portion of their income on community development in addition to investing in farming ventures. In prior field seasons, community members have responded to questions about the farmer's associations that the associations were not doing enough for the community as a whole. This field season, community members were asked how fair trade monies should be spent. Those community members that were sugar cane farmers most commonly responded that the associations' fair trade income should be used exclusively for sugar cane farming (e.g., investments in field and equipment). Non-famers, on the other hand, most commonly responded that the monies should be spend on community development (e.g., parks, schools, and roads). As in earlier field seasons, informants did not report any knowledge of any specific investments that were made by the associations within the informants' communities.

In the coming field season, we will ask community members about specific farming and community development investments made historically and in the past year by the farmers associations as well as other sugar cane industry related groups (e.g., SIRDI and ASR/BSI).

Climate Change

In previous field seasons, community members have been asked about their perceptions of climate changes, but not specifically about the effects of climate change upon them. When asked about the effects of climate change within their community, of the 321 informants, most community members reported that there is less rain (111, 34.5%) and higher average temperatures (134, 41.7%) due to climate change. Informants reported that the effects of the decrease in rain and increase in temperature temperatures is leading to smaller yields for sugar cane, other crops and fruit, as well as increasing the amount of sickness—mostly flu and respiratory illness—within the communities that is placing hardships on people already in financial difficulty due to the falling sugar cane prices.

In the coming field season, we will continue to collect information about community perceptions and effects of climate change.

**Sugar Cane Farming**

Sixty-five of the 321 informants self-identified as sugar cane farms and were asked additional questions about their perception of sugar cane farmers' associations as

well as information sharing networks. Of those 65 farmers, 27 (41.5%) in San Lazaro, 23 (35.4%) in San Pablo, and 15 (23.1%) in Yo Creek. The median age was 53 years with a minimum age of 30 and maximum age of 85 years old with 67.3% being male and 22.7% female. The farmers were members of either the Belize Sugar Cane Producers Association (59, 90.7%) or the Progressive Sugar Cane Producers Association (6, 9.3%). There were no members of the Corozal Sugar Cane Producers Association in our informant sample.

Perceptions of Sugar Cane Farmers' Organizations

In prior field seasons, community members were asked about the roles of sugar cane farming organizations, both in open-ended questions and structured questions for each organization. During this field season, the 65 sugar cane farmers were asked about farmer's association meetings and activities. Farmers most commonly reported that they do not attend the meetings. The reasons for why they do not attend the meetings is twofold. The first barrier to attending the meetings is that the meetings are scheduled when the farmers cannot attend. This is due to the time of day, actual date, and/or the meeting is announced at the last minute. The second barrier to attending meetings is the perception of efficacy of the meeting to produce meaningful outcomes for the farmers. The farmers state that nothing productive results from the meetings. The most common perceptions of the meetings are that they are designed for top-down political talk and ideas while concerns of the individual farmers that are presented during the meeting are not taken into account and not included in any final product of the meetings. Outside of the meetings, farmers want the association to lend them equipment and provide them pesticides, herbicides, and fertilizer for their fields.

In the coming field season, we will continue to collect information about community perceptions of the farming associations, with an emphasis on what both the general community and farmers recommend that the farmers' associations do to improve their communities.

Sugar Cane Farming Knowledge Transmission

In prior field seasons, sugar cane farming knowledge concerning sugar cane varieties, fertilizers, pesticides, and herbicides was collected as well as how knowledge is shared among farmers. In other words, we sought to discover what social networks (i.e., kinship, friendship, and farming collaboratives) contribute to the intracultural variation of farming knowledge among farmers.

This field season involved the collection network data on how agricultural knowledge is shared between farmers, associations, agencies, and businesses from the perspective of the farmer. Farmers were asked who they asked for or received information from for each subject of information (e.g. fertilizer, herbicide, pesticide, and sugar cane) from each organization (farmers, Belize Sugar Cane Farmers Association [BSCFA], Corozal Sugar Cane Producers Association [CSCPA], Progressive Sugar Cane Farmers Association [PSCPA], Sugar Industry Research and Development Institute [SIRDI], store/supplier, village chairman, Belize Sugar

Industries/American Sugar Refineries [BSI/ASR], and sugar board). Data were then analyzed using UCINET (Borgatti, Everett, and Freeman 2002) and Netdraw (Borgatti 2002). Demographic variables such as age, sex, home village, and farmers association membership appear to have no effect on which sources of information farmers use. Additional characteristics of the farmers will be collected during the next field season do determine what characteristics of the farmers may affect information sharing.

The sociograms/network diagrams (Appendices V through IX) were constructed with the following parameters:

1. node and label size are by degree prestige/indegree centrality (node size is determined by the number of inbound arcs/connections where the larger node size is an indication of more connections);
2. node color indicates source of information (blue) and individual farmer (red, with anonymized informant code); and
3. layout is based on node repulsion and equal edge length bias adjusted for readability.

The following are explanations of the network diagrams (Appendices V through IX) listing the sources of information which farmers use to access information about sugar cane farming. The explanations are presented in order of frequency reported.

- Informants reported that they gain information about fertilizer from: 1) BSCFA, 2) other farmers, 3) SIRDI, 4) store/supplier, 5) sugar board, and 6) BSI/ASR with few farmers consulting their village chairman, PSCPA, or other sources (see Appendix V: Fertilizer [Degree Prestige/inDegree Centrality]). Seven farmers reported that they do not receive information about fertilizers from any source.
- Informants reported that they gain information about herbicides from: 1) BSCFA, 2) store/supplier, 3) SIRDI, 4) other farmers, and 5) the sugar board with some farmers consulting other sources (see Appendix VI: Herbicide [Degree Prestige/inDegree Centrality]). Eight Farmers reported that they do not receive information about herbicides from any source.
- Informants reported that they gain information about pesticides from: 1) BSCFA, 2) SIRDI, 3) store/supplier, 4) other farmers, and 5) the sugar board with some farmers consulting other sources (see Appendix VII: Pesticide [Degree Prestige/inDegree Centrality]). Nine Farmers reported that they do not receive information about herbicides from any source.
- Informants reported that they gain information about sugar cane varieties from: 1) BSCFA, 2) SIRDI, 3) other farmers, and 4) the sugar board with some farmers consulting other sources (see Appendix VIII: Sugar Cane [Degree Prestige/inDegree Centrality]). Seven Farmers reported that they do not receive information about herbicides from any source.
- Combing the data on the sharing of fertilizers, herbicides, pesticides, and sugar cane varieties, farmers reported that the received the most information from: 1) BSCFA, 2) other farmers, 3) SIRDI, 4) store/supplier, 5) sugar board, 6) ASR/BSI, 7) village chairman, 8) CSCPA, and 9) PSCPA (see Appendix IX: Full Model [Degree Prestige/inDegree Centrality]).

The findings from these network analyses are as follows:

1. farmers within our sample acquire the most information about sugar cane farming for each subject (i.e., fertilizers, herbicides, pesticides, and sugar cane varieties) from the Belize Sugar Cane Farmers Association;
2. both the Sugar Industry Research and Development Institute and other famers share the second most common source of information for farmers in our sample;
3. the store/supplier is more important for herbicides that it is for pesticides and fertilizer as a source of information—farmers do not seek information about sugar cane varieties from stores/suppliers;
4. the sugar board is not as prominent of a source of information as the BSCFA, SIRDI, other farmers, or stores/suppliers, but is still an important source of information for several farmers for each subject of information;
5. the village chairman, PSCPA, CSCPA, and ASR/BSI have the fewest farmers receiving information from them—during interviews it was common for a farmer who mentioned one of these people/groups to have had a long-standing relationship with that group or person (e.g., friends with the village chairman, member of PSCPA, and employee of ASR/BSI); and
6. the complexity of this problem requires further data collection and analysis.

In the next field season, farmers will again be asked who they gain information from about fertilizers, herbicides, pesticides, and sugar cane varieties allowing farmers to respond that they receive information from more than one source and that there may be additional sources of information. In addition, the farmers will be asked about their farming role (e.g., farmland owner, group leader, and/or cutter).

**Additional Topics**

As with previous field seasons, community members were asked about what topics they believe we should address in future years. Responses that could be addressed within the scope of this project fell within two categories: 1) community issues that we could ask the community about, and 2) questions about how our research was being used to assist the community (see Appendix X: Additional Topics). The first category of questions that may be addressed within local communities is the increase in both alcohol/drug use (22) as well as issues related to garbage disposal (13).

The second category of questions was about how the data we collected would be used to assist the community (11). It was initially planned that the field school would host community forums within in the next field season to discuss the findings and invite discussion. However, due to the COVID-19 pandemic, community meetings are not feasible this coming field season. Instead, as in previous years, hard-copies and digital access will be provided to all village councils, but also every community member we meet will be given access to digital copies of a summary of our prior findings as well as each individual report.

## Conclusion

This report documents the findings from the summer 2019 season of the Ethnographic Field School in Belize. This field season successfully met the goals of collecting ethnographic data on topics suggested by community members and prior research: community development (i.e., child labor, traditional medicine, sugar cane price drop, fair trade monies, and climate change) and sugar cane farming (i.e., sugar cane organization perceptions and sugar cane farming knowledge transmission). There were mixed responses to our questions about child labor, the majority of informants either not work at all or only under certain conditions and not full-time. We will continue to discuss child labor with informants in the coming field season, but with an emphasis on the financial impact of the COVID-19 pandemic. We were able to collect additional information on traditional medicine, but much of our data is unclear. In the coming field season, we will focus on non-prescribed remedies in hopes of recording knowledge that is fading from the community. While the price of sugar cane products continues to decline, the effects upon the communities have not been fully felt and both farmers and other community members are still grappling with their options for a secure future. In place of asked directly about dropping sugar incomes, we will focus on collecting the communities' financial impacts from the COVID-19 pandemic. Climate change is affecting the ability for sugar cane farmers to grow crops and also the community at large due to their loss of income. We will continue to collect the community members' perceptions of climate change in the coming field season. We collected information on why farmers do not attend association meetings as well as what aid they want from the associations. The coming field season's inquiries about farmers associations will be guided from conversations with have with the associations before community interviews begin. The documentation on how sugar cane farming knowledge is transferred to farmers, while finding clear patterns of transmission, is incomplete and based upon a small sample of farmers. In the coming field season, further data on information networks will be collected. Finally, based upon community member suggestions, we will begin collecting data on issues of alcohol/drug use and garbage disposal. In addition, we will make a concerted effort to communicate our findings from previous field seasons to individual community members, not just our institutional and association community partners.

In conclusion, this field season (June 2019) successfully collected and analyzed ethnographic data from three communities in the Orange Walk District, Belize. The collected data helped answer questions from prior research and has resulted in further questions for future field seasons. Our aim is to continue to allow data to drive future research as well as involving the communities, associations, and agencies with which we partner to guide research towards answering questions that are important for community development that will benefit all community members, regardless of whether or not they farm sugar cane or are involved with any of the agencies or associations.

# Appendix I: Informed Consent Statement – English

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INFORMED CONSENT TO PARTICIPANT IN A RESEARCH PROJECT

TITLE OF PROJECT: Ethnographic Field School

NAME OF PRINCIPAL INVESTIGATOR: Dr. Douglas Hume, Northern Kentucky University

CONTACT NAME AND PHONE NUMBER FOR QUESTIONS/PROBLEMS: Douglas Hume, Ph.D., Associate Professor of Anthropology, Northern Kentucky University, humed1@nku.edu or 859-572-5702.

PURPOSE OF RESEARCH: This research project records the way of life of sugar cane farmers in Northern Belize with the intent to share the results on the Internet, journals and conference proceedings as well as in a report to the Belize Sugar Cane Farmer's Association, Institute of Social and Cultural Research, and the Sugar Industry Research and Development Institute.

PROCEDURES/METHODS TO BE USED: The interview includes questions about your household economic behavior and sugar cane farming methods. The interview is estimated to last between five minutes to one-half hour. The audio recording of the interview will be securely stored and destroyed after it is transcribed. Data collected in this study will then be anonymous, as we are not collecting names or other identifying information. You will not be paid for being in this study.

RISKS INHERENT IN THE PROCEDURES: There are no known risks.

BENEFITS: It is hoped that the results of this research will influence how the Belize Sugar Cane Farmer's Association and the Sugar Industry Research and Development Institute develop educational programs about farming, health, and economics for sugar cane farming families in Northern Belize.

CONFIDENTIALITY: The only identifying information that we will keep on record is this signed document, which may be inspected by the Institute of Social and Cultural Research and other human protection bodies. This document will not be connected with you interview data.

LIABILITY: Neither the researchers, their agents, or you (the participant) are liable for any damages or penalties from participating in this research.

PARTICIPATION: Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled.

Your signature acknowledges that you have read the information stated and willingly sign this consent form. Your signature also acknowledges that you have received, on the date signed, a copy of this document.

| _____ | _____ | _____ |
|---|---|---|
| Participant name (printed) | Participant signature | Date |

| _____ | _____ |
|---|---|
| Witness to signature (project staff) | Date |

# Appendix II: Informed Consent Statement – Spanish

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FORMULARIO DE CONSENTIMIENTO INFORMADO PARA PARTICIPAR
EN UN PROYECTO DE INVESTIGACIÓN

TITULO DEL PROYECTO: Ethnographic Field School

INVESTIGADOR PRINCIPAL: Dr. Douglas Hume, Northern Kentucky University

CONTACTO EN CASO DE PREGUNTAS/PROBLEMAS: Douglas Hume, Ph.D., Profesor Adjunto de Antropología, Northern Kentucky University, correo electrónico: humed1@nku.edu; teléfono: 859-572-5702.

OBJETIVO DE LA INVESTIGACIÓN: Este proyecto de investigación registra el modo de vida de los cañeros en el norte de Belice con el propósito de difundir los resultados por Internet, en revistas académicas y actas de congresos, así como en un reporte a la Asociación de Cañeros de Belice, el Instituto para la Investigación Social y Cultural, y el Instituto de Desarrollo e Investigación de la Industria Azucarera.

PROCEDIMIENTOS/MÉTODOS DEL ESTUDIO: La entrevista incluye preguntas sobre la economía doméstica y los métodos empleados en el cultivo de la caña de azúcar. La entrevista durará entre cinco minutos y media hora y será grabada. La grabación se almacenará en un lugar seguro y se destruirá luego de su transcripción. La información recopilada en esta investigación es anónima, ya que no registramos nombres ni otros datos personales. No se recibirá ningún tipo de compensación económica por participar en esta investigación.

RIESGOS INHERENTES EN LOS PROCEDIMIENTOS: No hay riesgos conocidos.

BENEFICIOS: Se espera que los resultados de esta investigación tengan un impacto en cómo la Asociación de Cañeros de Belice y el Instituto de Desarrollo e Investigación de la Industria Azucarera desarrollan sus programas educativos sobre agricultura, salud y economía para las familias cañeras en el norte de Belice.

CONFIDENCIALIDAD: En cuanto a información identificatoria, sólo guardamos esta hoja con su firma, la cual puede ser inspeccionada por el Instituto para la Investigación Social y Cultural y otros organismos de protección de derechos humanos y civiles. En ningún momento este documento podrá ser emparejado con la información que Ud. comparta en la entrevista.

RESPONSABILIDAD LEGAL: Ni los investigadores, ni sus agentes ni Ud. (el/a participante) serán responsables por daños o sanciones como resultado de su participación en esta investigación.

PARTICIPACIÓN: La participación en este proyecto es voluntaria. Si decide participar en esta investigación, tiene derecho a anular este formulario y dejar de participar en cualquier momento sin sanciones o pérdida de beneficios a los que tenga derecho.

Su firma confirma que Ud. ha leído la información contenida en el mismo y que firma este formulario de consentimiento por su propia voluntad. Su firma también confirma que Ud. ha recibido una copia de este documento en la fecha indicada.

| _____ | _____ | _____ |
|---|---|---|
| Nombre del/a participante | Firma del/a participante | Fecha |

| _____ | _____ |
|---|---|
| Testigo (un miembro del equipo de investigación) | Fecha |

## Appendix III: Ethnographic Interview Schedule (Procedure), Part I

All Informants

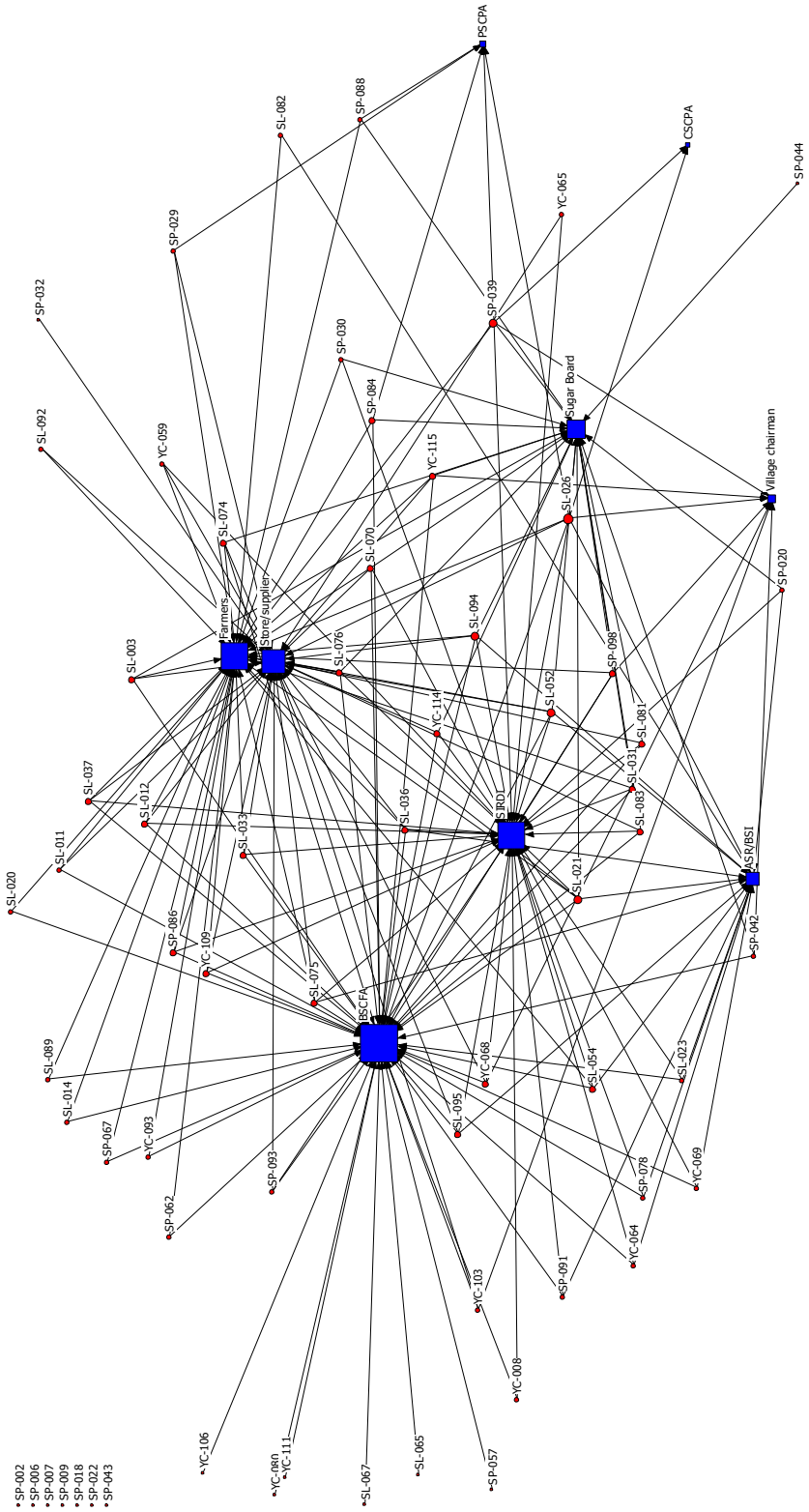
1. Note approximate age and sex
2. Educational support - Free list types and amounts
3. Child labor
    A. Should it continue?
    B. If so, under what circumstances?
    C. What support/programs would help?
4. Traditional medicine - Free list ingredients and uses
5. Community health concerns - Free list
6. Kidney disease - Free list
7. Sugar cane price drop - Free list - response and future
8. Fairtrade - Free list
9. Climate change - Free list
10. Additional topics

## Appendix IV: Ethnographic Interview Schedule (Procedure), Part II

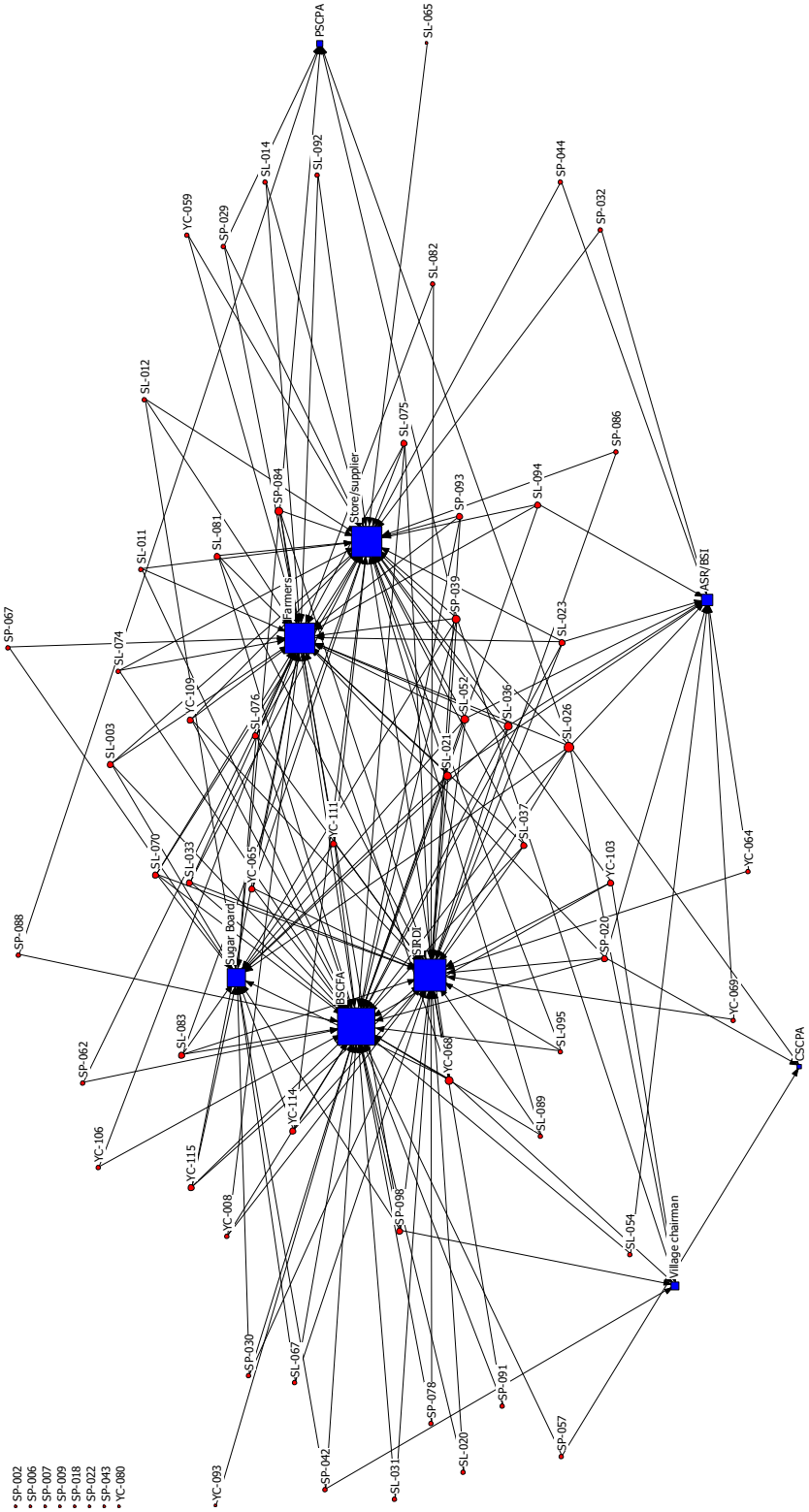
Farmers Only

1. Organizations
    A. Membership (i.e., BSCFA, CSCPA, PSCPA)
    B. Non-attendance reasons
    C. What do they want from?
2. Ego-centric information networks
    A. Sets
        i. Fertilizer
        ii. Herbicide
        iii. Pesticide
        iv. Sugar cane
    B. Entities
        i. Farmers
        ii. BSCFA - Belize Sugar Cane Farmers Association
        iii. CSCPA - Corozal Sugar Cane Producers Association
        iv. PSCPA - Progressive Sugar Cane Producers Association
        v. SIRDI - Sugar Industry Research and Development Institute
        vi. Store/supplier
        vii. Village Chairman
        viii. ASR/BSI - American Sugar Refineries/Belize Sugar Industries
        ix. Sugar Board
        x. Others?

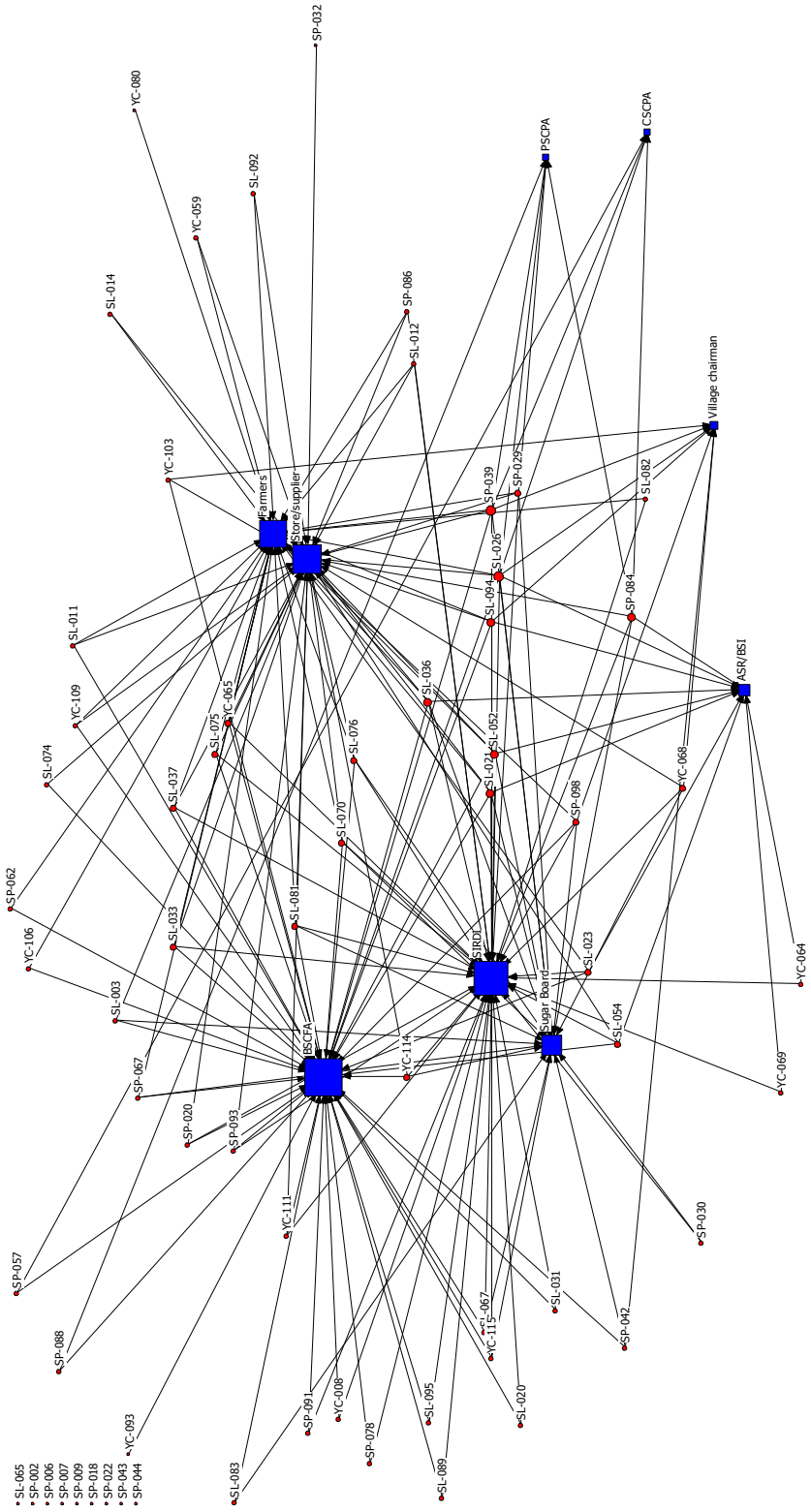
## Appendix V: Fertilizer (Degree Prestige/inDegree Centrality)



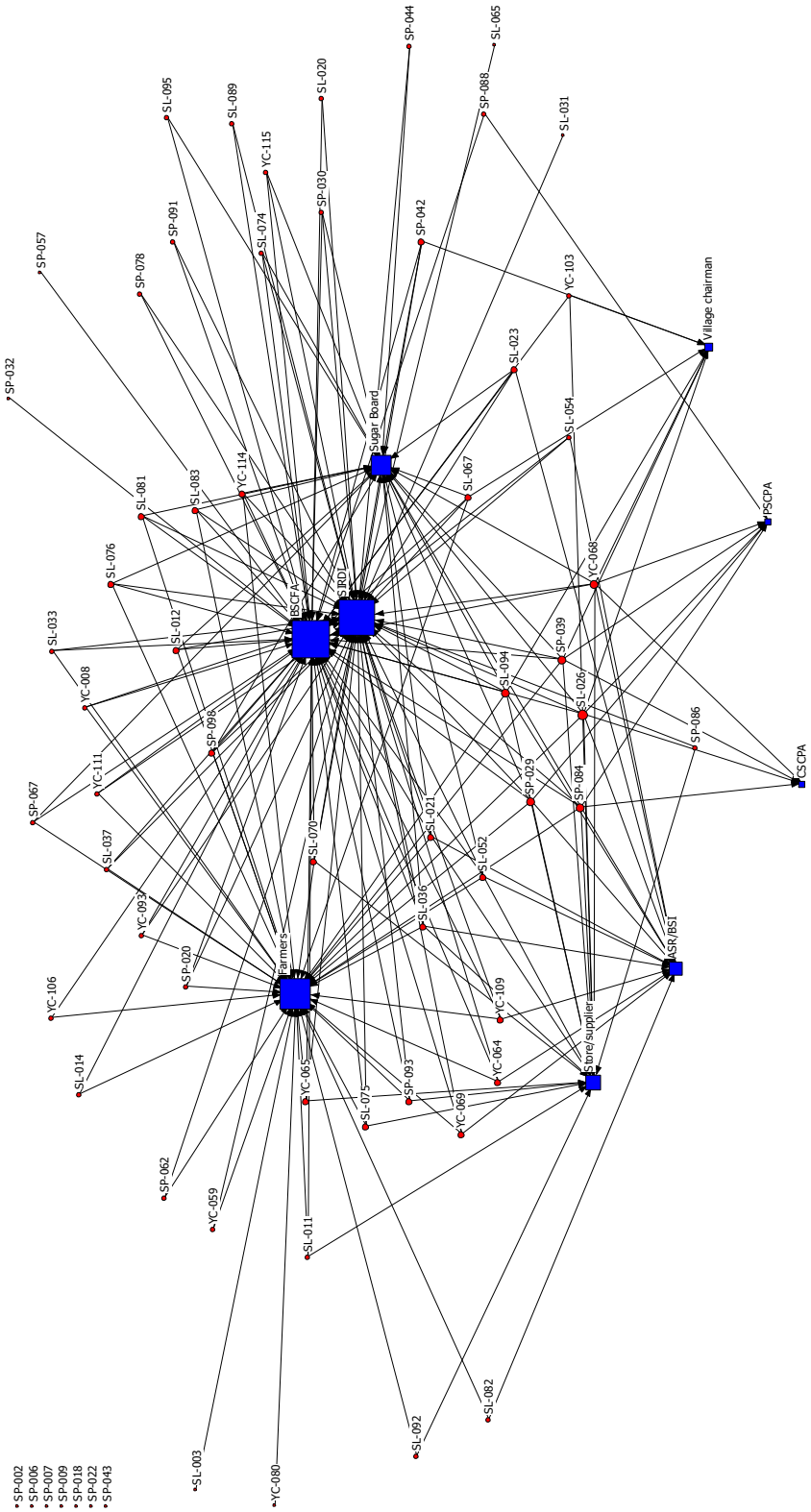
## Appendix VI: Herbicide (Degree Prestige/inDegree Centrality)



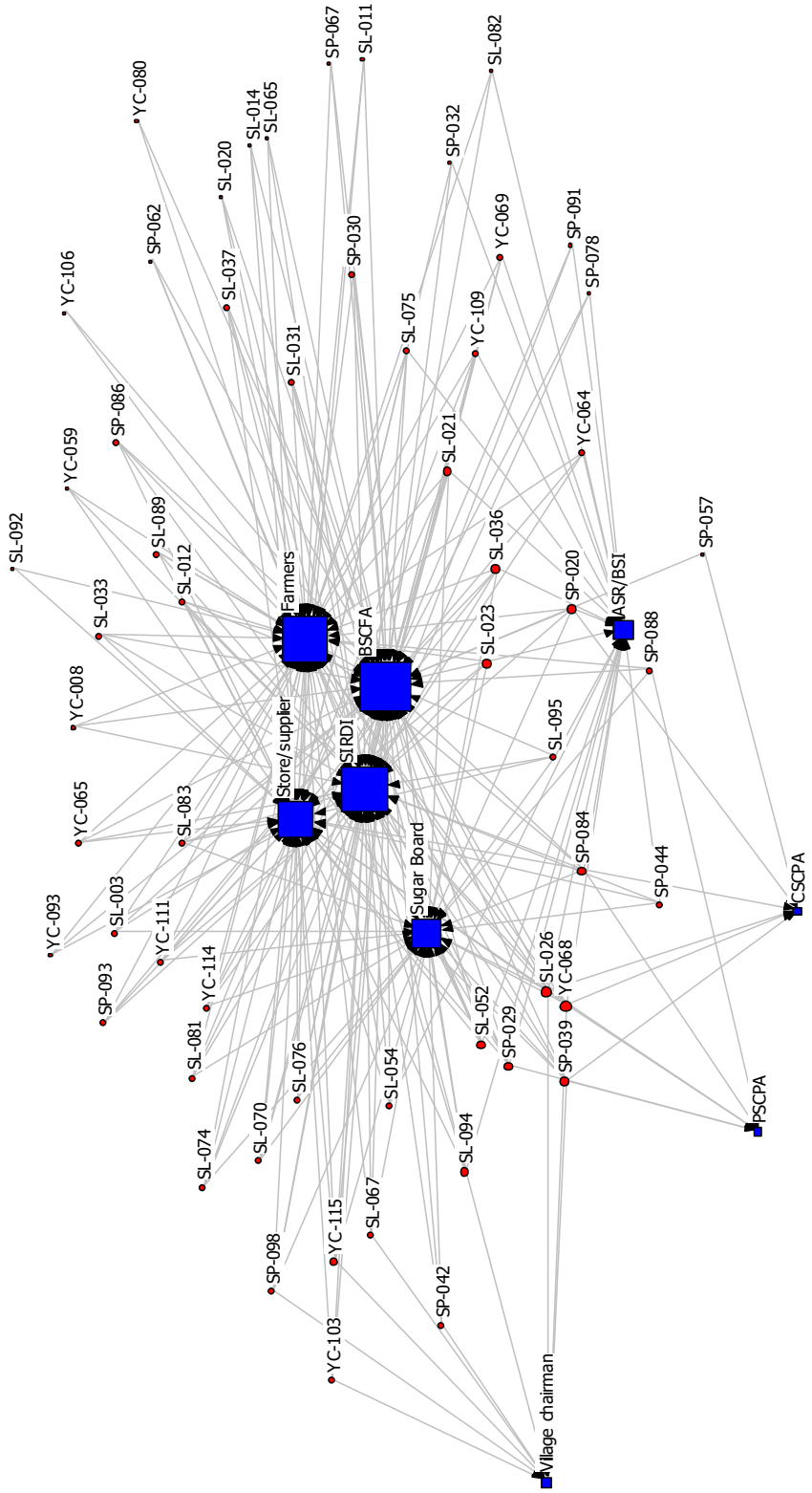
## Appendix VII: Pesticide (Degree Prestige/inDegree Centrality)



## Appendix VIII: Sugar Cane (Degree Prestige/inDegree Centrality)



## Appendix IX: Full Model (Degree Prestige/inDegree Centrality)



## Appendix X: Additional Topics

| Count | Item |
|---|---|
| 22 | Alcohol/drug use |
| 21 | Crime in village (violence, theft, and contraband) |
| 20 | Educational aid |
| 14 | Youth programs |
| 13 | Garbage disposal |
| 11 | Concerns about our data, how we help |
| 10 | Job creation |
| 10 | Road Quality |
| 10 | Water supply |
| 8 | Access to healthcare/Village clinic-doctor |
| 7 | Association politics/fair trade monies |
| 6 | Climate change/environmental conservation |

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