THE

Agriculture

Curriculum and Mainstreaming Gender and HIV & Aids:

a guide for instructors



acknowledgments

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Introduction

1. Introduction

The guide starts with a justification for mainstreaming gender in the agricultural sector and further within the agricultural curriculum. To this end, it introduces the major concepts of gender equality and gender mainstreaming. The guideline then proceeds to introduce the mechanisms i.e. the how to's of mainstreaming gender within the existing curriculum for agriculture, highlighting the necessary institutional and other frameworks for effective mainstreaming. In keeping with the critical links between gender and HIV/AIDS, it goes on to provide specific background and guidelines on integrating HIV/AIDS into the curriculum in relation to agriculture.¹

1.1 The content of the document

This guide contains two sections: section one address gender mainstreaming in agriculture curriculum while section two deals with mainstreaming HIV and AIDS in agriculture curriculum.

This work comes out of the 'Post-harvest management to improve livelihoods' Project which aims to improve the livelihood and food security in Ethiopians by i) addressing post harvest management and value added challenges (PHMVA) of the agricultural sector by focusing on reducing post harvest losses and increasing food availability and marketability, and ii) creating opportunities by adding value to agricultural products, changing waste products to resources, monitoring quality and improving products to maintain nutritional quality and achieve export-level standards. These challenges and opportunities are also recognized by the Government of Ethiopia in its Plan for Accelerated and Sustainable Development to Eradicate Poverty (PASDEP). The main goal of the program is to contribute to the Ethiopian government's priority of food security through increased availability of food and the creation of an enabling environment that supports the commercialization of agriculture. With this objective, the program intends to increase the capacity of JUCAVM to provide high-quality training, research and service in PHMVA to address the challenges of its stakeholders.

Gender mainstreaming in the Agricultural Curriculum

2.1 The need to mainstream gender in agriculture/ agricultural sector

2.1.1 Understanding gender equality

Gender refers to the socially constructed rather than the biologically defined sex roles and attributes of females and males. The 1995 Commonwealth Plan of Action on Gender and Development defines gender inter alia, as the socially defined/constructed differences between women and men that result in women's subordination and inequality in opportunity to a better life.

Gender refers to the historical and sociological relationships between women and men. If development is seen as an attempt to raise the quality of life of all people, gender in development works toward ensuring that the special needs of women as well as men are met in this process.

The advantage of a gender approach (as opposed to a women-centred approach) is that it also brings to light situations in which it is men who are at a disadvantage. An example of this is the current underachievement of young males in the educational systems of many Caribbean countries, and we might think about situations where males in Ethiopia may be disadvantaged.

Although the terms 'gender equality' and 'gender equity' are often used interchangeably, they actually have very specific meanings. Gender equality refers to sameness or uniformity in quantity, amount, value and intensity of provisions made and measures implemented for women and men. Equality can usually be legislated. For example the Ethiopian Constitution provides for equality of women and men in different aspects of life such as right to property, right to participate in political life, in family life (see article 35 and 25 of the FDRE Constitution). Gender equity refers to doing whatever is necessary to ensure equality of outcomes in the life experiences of women and

men. Equity is difficult to legislate: identical treatment may satisfy the equality criterion, but not the equity criterion. For example, giving boys and girls equal access to all the courses offered in a school may not result in girls taking advantage of this opportunity if some courses are predominantly filled with male students and have only male teachers.² In a gender equity approach then there may be a need for 'changing the landscape' by, for example, ensuring that there are female instructors or different teaching approaches.

2.1.2 Understanding gender mainstreaming

Gender Mainstreaming is a globally accepted strategy for promoting gender equality. Mainstreaming is not an end in itself but a strategy, an approach, a means to achieve the goal of gender equality.

Mainstreaming involves ensuring that gender perspectives and attention to the goal of gender equality are central to all activities – policy development, research, advocacy/ dialogue, legislation, resource allocation, and planning, implementation and monitoring of programmes and projects.

The concept of bringing gender issues into the mainstream of society was clearly established as a global strategy for promoting gender equality in the Platform for Action adopted at the United Nations Fourth World Conference on Women, held in Beijing (China) in 1995. It highlighted the necessity to ensure that gender equality is a primary goal in all area(s) of social and economic development.

"Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels. It is a strategy for making the concerns and experiences of women as well as of men an integral part of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres, so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal of mainstreaming is to achieve gender equality."

Mainstreaming includes gender-specific activities and affirmative action, whenever women or men are in a particularly disadvantageous position. Gender-specific interventions can target women exclusively, men and women together, or only men, to enable them to participate in and benefit equally from development efforts. These are necessary temporary measures designed to combat the direct and indirect consequences of past discrimination. Direct discrimination occurs when a woman or a man is denied certain rights/

² UNFPA Differences between gender equality and gender equity.

benefits on account of being a man or a woman. For example if a woman is denied job or educational opportunity because she is a woman this constitutes direct discrimination. Indirect discrimination occurs when although the criteria used for denying rights or benefits may appear neutral, such criteria would have disproportionate adverse impact on one group compared to the other. For example, the privatization of water services followed by increased tariff would disproportionately affect women who rely greatly on the availability of water to carry out their reproduction roles.

Experience shows that for gender equality to be effectively promoted in educational programs and by educational institutions, it is necessary that gender issues are addressed at all levels. In other words, gender needs to be put into the mainstream. Gender mainstreaming implies that gender is not a separate set of issues; it is an element of all issues at all levels. Most writers on gender and organizations agree that the ways organizations work mirror the ways society at large works. This means that gender inequality is as firmly embedded in the structure and culture of organizations as it is in the structure and culture of societies. Thus, intentionally or not, the dominant organizational culture of even the most progressive mixed organization is very likely to be masculine and to discriminate against women.

Gender and agriculture: Context

There are a number of factors that call for a rigorous gender-based examination of the agricultural sector. There is a special relationship between women and agriculture. In many developing and least-developed countries rural households women play dual roles as both producers and consumers of agricultural produce. In these countries, agricultural production as well as marketing systems are dominated by rural households and are characterized as gendered.³ Although there may be variations in the roles of men and women from place to place, the agricultural system tends to be gendered. In sub-Saharan Africa, for example, farming is a predominantly female activity.⁴ Women in the region are mainly responsible for the production of staple food both for consumption and for the domestic markets. The figure comes close to 80% of basic-foodstuff production in both cases.⁵ The figure from the Food and Agriculture Organization (FAO) gives a general picture of the role of women in agricultural production. FAO studies

³ S Baden 'Gender Issues in Agricultural Liberalization' (revised) BRIDGE (1998) 11 http://www.bridge.ids.ac.uk/reports/re41c.pdf 13/01/08.

⁴ As above 12.

The data regarding women and agriculture gives a general picture, showing the percentage of rural women involved in agricultural sector (90 per cent of rural women in Africa), the percentage of labour input by women in the sector (60-80 per cent), the percentage of agricultural output produced by women (about 80 per cent of basic food in Africa), and the percentage of agricultural marketing for which women are responsible (about 60 per cent). FAO 'A synthesis report of the Africa region; Women, agriculture and rural development' at http://www.fao.org/docrep/x0250e00.HTM> 14/11/2006.

indicate that women produce about two thirds of the world's food.⁶ This phenomenon is generally recognized as the 'feminization of agriculture'⁷, and highlights the need critical role that women play.

In addition to the production of food, women play an important role in the domestic trading of agricultural produce. In West Africa, for instance, women dominate the trade in staple food. In Southern Africa, particularly Zimbabwe, women dominate the marketing of fresh agricultural produce in the urban areas.⁸ Similarly, in Guinea, up to 90% of the trading in staple food is carried out by women.⁹ The trading of agricultural produce is an extension of women's role in household provisioning.¹⁰ This applies to Ethiopia as well. For example in Tigray regional state in Enderta woreda women smallholder farmers including female headed households are organized into groups and engaged in marketing of agricultural produce.

Women are the major contributors to the agricultural economy, both through their remunerative work on farms and through the unpaid work they traditionally render at home and in the community. However, despite their contribution, in many societies they are systematically excluded from access to resources, essential services, and decision making in relations to agricultural activities. This shows the need to engender agricultural policies so as to address the needs and priorities of both women and men engaged in agricultural activities in countries that are predominantly agriculture based.

2.1.3 Gender and agriculture: Ethiopian context

Although women play a significant role in agricultural production, there is a generally held belief that women in Ethiopia do not engage in farming – farming is for men.¹² At the same time, the participation of women in agricultural activity is constrained by cultural norms. A good example here is the norm, in many parts of Ethiopia, that women should not engage in plowing.¹³ This in turn has an adverse impact on their access to resources and productive inputs such as land and extension services.

- 6 As above.
- 7 As above.
- 8 Baden (note 1 above) 11.
- 9 As above 11.
- 10 As above 12.
- 11 African Development Bank Gender Checklist for Agricultural Projects, 2010.
- 12 Klaus Deininger et al. Assessing the Certification Process of Ethiopia's Rural Lands 2006, See also Stein Holden and Tewodros Tefera From Being property of Men to Becoming Equal Owners? Early Impacts of Land Registration and Certification on Women in Southern Ethiopia Final Research Report prepared for UNHABITAT, Shelter Branch, Land Tenure Property Administration and Section, 2008.
- 13 As above.

Clearly, however, women in Ethiopia are very much involved in most aspects of agricultural production. In the Ethiopian context, women's work in agricultural production include weeding, harvesting, preparing storage containers, home gardening, poultry raising, transporting farm inputs and procuring water for both household and on-farm uses. Although there may be some variations in terms of the types and extent of involvement of women in agricultural production across regions, the significant contribution of women is supported by various studies. Women are the major contributors to the agricultural workforce, either as family members or in their own right as women heading households. The involvement of women in agricultural production also extends to marketing, food procurement, and provision of household nutrition.

Gender and Enset

An example of the critical contributions of women to agricultural production that has garnered some attention is the role of women in the south and southwestern regions of Ethiopia in farming enset (Ensete ventricosum (Welw.) Cheesman). MacEntee, Thompson, and Fikreyesus (see note 15) carried out an interview study involving women and enset production. In a video documentary, Enset is a good thing: A documentary film about gender and enset they describe the varied and changing roles of women (and men) in enset farming. The hardships of enset processing with traditional and poorly maintained tools is described while also drawing attention to the benefits of enset outputs in contributing to women's autonomy in the household and security during times of financial and environmental hardship. Generally, women control the decision-making practices with regards to the planting and harvesting of crop as well as any income generated from enset outputs. While the potential of enset to contribute to the nutritional deficiencies in Ethiopian families is appreciated, this research highlights the need for agricultural developments in enset farming that take careful consideration of the gendered nature of these farming practices to ensure that women maintain autonomy in the home and community while at the same time providing more efficiently for their families.

Women in rural Ethiopia are not only the major source of labour in the agricultural sector, they are also responsible for the vital tasks of caring for children, the sick and the elderly as part of their household responsibilities. As in any other society, it is gender roles and

¹⁴ EEA/EEPRI 2006.

¹⁵ MacEntee, K., Thompson, J., & Fikreyesus, S. (2012). Enset is a Good Thing: A documentary film about gender and enset in Jimma Zone, Ethiopia. Poster session at the Post-Harvest Management and Technology for Food Security International Conference. May 21-25 Jimma, Ethiopia.

relationships that influence the division of work, the use of resources, and the sharing of the benefits of production between women and men. In most rural communities in Ethiopia, women work from dawn to dusk and, in contrast with men, have little time for leisure or socializing. In addition to working in the home and on the farm, rural women engage in a diverse range of off-farm livelihood activities. Women therefore carry double burden in terms of their productive and reproductive roles.

Despite their immense contribution to society, women's productive, domestic and community related activities tend to be undervalued, are often misunderstood and are rendered invisible from official discourse and national statistics. These unfortunate circumstances have implications not only for the question of gender equality but also may be detrimental to the long term sustainability of development initiatives. In the agricultural sector for instance, women account for about 48 percent of the agricultural labor force and 70 percent of household food production (MoA, 2011). According to a recent study¹⁶ agricultural production and productivity in Ethiopia can potentially be increased by 15-40 percent just by improving smallholder women farmers and herders' access to agricultural resources and technologies equal to those of men.

The above brief description shows that women are very intimately (and intensively) involved in agricultural activities in the country. The discussion has also highlighted that women and men have different roles and contributions in the agriculture sector and are not similarly situated or placed in terms of their access to and control over resources that are necessary (directly or indirectly) to agricultural activities. And finally women and men have different returns from their labor and other investments in agricultural activities. For example while men are able to have better access to markets and hence better prices, women due to their limited mobility cannot access big markets and get good prices for similar agricultural outputs. These differences justify the need to examine how women and men relate to agricultural activities (the agricultural sector) so as to design appropriate policies and programs that adequately respond to their different needs and interests in terms of division of labor, time use, access to and control over resources including land and other agricultural inputs. This would ultimately contribute to maximize the gains from the sector for both women and men and the development of the country at large.

2.2 The need to engender agricultural curriculum

2.2.1 Gender mainstreaming in the educational system

Gender mainstreaming in the education sector involves:

- 1. Establishing a system where by each departments and divisions would use gender as a measuring indicator to quantify their work and achievements;
- 2. Creating gender responsive environment by integrating gender in all activities: teaching, learning, research, student and staff welfare, budgeting, public space, outreach and governance, policy development, advocacy, legislation, resource allocation and planning, implementation and monitoring of programs and projects;
- 3. Organizing gender disaggregated data especially when published in official documents;
- 4. Preparation of gender guidelines to monitor gender is mainstreamed in the overall performance of planned activities (gender auditing); and representation of both sexes in the overall organizational structure.
- 5. Obtaining a clear quantitative picture of gender roles and ratios in various levels and areas of the educational system using gender disaggregated data
- 6. Identifying possible factors related to any gender gaps and inequalities identified, and planning for the elimination of these factors;
- 7. Assessing the special educational needs, immediate and practical as well as long term and strategic needs of girls and young women, boys and young men, and women and men, and planning specifically to meet these needs; and

The process of mainstreaming gender thus includes:

- questioning the underlying paradigm on which the national policy, goals and objectives have been based on joint programming with other development entities, including other government ministries and departments, intergovernmental and non-governmental organisations (IGOs and NGOs);
- aligning with other entities' priorities, activities and critical issues so as to ensure that gender equality objectives are not marginalized;

- placing gender-sensitive women (and men) in strategic positions in policy-setting and decision-making;
- making women visible in all data; and providing training in gender analysis, methodology and awareness. These are important elements in the mainstreaming of gender in education, which will be guided by overall national goals, objectives and priorities. In the Ethiopian context this would imply making women visible within the Education Sector Development program (ESDPIV);
- making explicit the importance of gender as a factor for consideration in the process of education;
- ensuring gender equity in access both generally, and in relation to studies which lead to better careers and job opportunities;
- overcoming structural barriers, whether they be legal, economic, political, or cultural which may influence the access and/or participation of either sex in educational offerings and;
- increasing the awareness of the active role which women can and do play in development; and increase the participation of women in decision-making in the management and implementation of education.

2.2.2 Gender mainstreaming and agriculture in Higher Education Institutions

As noted above, agriculture represents over 80% of Ethiopia's gross domestic product. As such education and training initiatives related to agriculture and rural development are an integral part of the country's economic growth and poverty reduction strategies.¹⁷ However, in spite of the key role of women and girls in agricultural production—subsistence farming and otherwise—evidence presents a significant gender gap in programs, training and educational institutions for both faculty and students ¹⁸ ¹⁹. As Mangheni et al (2010) note:

¹⁷ Mangheni, M., Ekirikubinza-Tibatemwa, L., and Forsythe, L. (2010). Gender issues in agricultural education within African universities. Gender background paper. Ministerial conference on higher education in agriculture in Africa.

¹⁸ Assié-Lumumba, N. (2006). Paper no. 11 Empowerment of Women in Higher Education in Africa: The Role and mission of research. Africa Gender Institute UNESCO Forum Occasional Paper. Series. Cape Town: University of Cape Town.

¹⁹ Beintema, N. and Di Marcantonia, F. (2010). Female participation in African agricultural research and higher education: New insights. Synthesis of the ASTI-AWARD Benchmaking survey on gender-disaggregated capacity indicators. IFPRI Discussion Paper 00957.

"Mainstreaming gender into agricultural higher education programs and encouraging more females to engage in agricultural sciences, research, innovations and technological development would lead to increased numbers of female agricultural professional who together with their male colleagues would be able to better understand the needs of male and female farmers". ²⁰

To date, women are underrepresented in Higher Education in Ethiopia, both as students and as instructors. While there are many strategies for addressing the issues, a starting point is to consider the curriculum itself.

2.2.3 Gender mainstreaming in the agricultural curriculum

Higher-education institutions focusing on training and research on agriculture are highly relevant for the development of the agricultural sector and the rural economy because of different factors. Firstly, higher education institutions train the experts required to effectively run the sector. These institutions are training grounds for the intermediaries that liaise/work between the institutions of higher learning and farmers. In the Ethiopian context, development agents are good example in this regard. In addition to training manpower, these institutions conduct research that serve as inputs for the design of programs and polices targeted at the agricultural sector. Such research serves as a major source of agricultural innovations for improving the agricultural production. These institutions may also engage in direct agricultural production through the practical aspect of their training and in so doing they produce good agricultural practices and products such as seeds.

Although higher educational institutions have important an role to play in the agricultural sector, their potential contributions may be undermined by the low level of gender awareness in course content and methods of delivery, as well by the low levels of participation of women (as students, as instructors and as curriculum leaders). This low level of awareness further extends to important stakeholders in policy making in the agricultural sector and generally low level of female representation in decision–making in all arenas. This results in the formulation and implementation of curricula, policies and projects that are not gender responsive and may end up excluding women.

The curriculum of higher education institutions focusing on agricultural research and training serves as a basis for the production of knowledge for policy and programs as well as experts and intermediaries. To this end, their curriculum should adequately capture and reflect the reality in terms of who does what in agricultural

activities and reflect the needs of various actors in the sector. This calls for the inclusion of gender content in agricultural courses. This is important to improve the skills of students to engage in gender analysis which in turn equips the graduates to address gender based needs and priorities of the farmers that they engage with. This makes the course content more relevant and applicable to the realities of the lives and experiences of female and male farmers. Finally, it is worth noting that a more gender sensitive curriculum and teaching/student body can also lead to gender sensitive research.

2.3 How to mainstream gender in the existing agriculture curriculum

2.3.1 Basic concepts

There are two basic concepts that are fundamental to mainstreaming gender in the curriculum.

Sex disaggregated data: Collecting sex disaggregated data refers to taking note of male/female breakdown in terms of numbers. At a basic level students need to learn to ask the question "how many men? How many women?" Gender mainstreaming is not just about counting but numbers are critical. Thus instead of saying 'Farm operators attended the workshop' it is key to do a gender breakdown and consider 'X number of women farm operators attended and X number of male farm operators attended'. Similarly in teaching and keeping track of student progress it is critical to go beyond saying 30 per cent of the class failed the test. Instead this calls for sex disaggregation of data. What percentage of males failed the test? What percentage of females failed the test? Only then can we begin to develop programs and strategies that target the issues accurately.

Gender-based analysis: Related to collecting sex disaggregated data is the idea of asking the following questions in relation to agricultural work:

- Who does what?
- What skills are required?
- What time is required?
- What resources are generated?
- Who has control over the resources generated?

These questions give a sense of who has the power and as such are essential to deepening an understanding of gender

equality and gender equity. Consider the tables below which looks at gender and agricultural production, focusing in particular on enset production and tea.²¹

Enset

Gender role in terms of the division of labor for all aspects of Enset production, processing and marketing

Activity	Responsible person	Special skill required	Remarks
Land preparation	Male/Female		
Planting material preparation and planting	Male >female	Yes	Variety selection
Weed/pest control	Female >male		
Harvesting	Female	Yes	
Decorticating of psuedostem	Female	Yes	Physically demanding (Figure 1)
Fermenting the decorticated psuedostem	Female	Yes	Time consuming
Preparing the 'Kocho'	Female	Yes	Female Children may participate
Sale of the product	Female		Time consuming



figure 1



Tea

In Ethiopia, women are centrally involved in tea manufacturing process. In the fields and factories, women play a very demanding role in the entire production process. Tea harvesting is strenuous work, as the picker has to carry a basket into which she would collect the leaves. When the basket gets full and heavy, the leaves are weighed, collected and taken to the factory for processing.

Men and women role in tea production and processing

Activity		Responsible person	Special skill required	Remarks
Seedling raising	Cutting preparation	Females		
	Media preparation	Females	Yes	
	Planting	Male/female		
	plastic covering	Male /female		
	Watering	Female		 Time and energy consuming women walk great distances to fetch water (exposes them to gender based violence)
	Shading	Male/female		
Land preparation		Male/female		
Transplanting		Male/female		
Field management		Male/female		
Plucking (harvesting)		Female		wounding by dried stub
Processing		Male/female	Yes	
Cupping (quality evaluation)		Male/female	Yes	

2.3.2 Engendering courses

There are two types of curriculum documents. The first set relates to mainstream curriculum documents. These deal with various areas of inquiry that arise in post-harvest management. These are also referred to as 'major courses'. The second category refers to a specialized course/curriculum dealing with gender issues in agriculture in general and in post harvest management in particular.

3.0 Mainstreaming gender in mainstream (major) courses

Mainstreaming gender in mainstream (major) courses involves the integration of gender in course content through analyzing course materials from a gender perspective and providing practical and easy to use examples/illustrations/case studies.

The guide advocates for mainstreaming or integrating gender issues in what are regarded as mainstream curriculum or major courses as well as the adoption of specialized course that can thoroughly introduce students to concepts of gender, analysis frameworks as applied in the agricultural sector, the existing situation in the country including policy and institutional frameworks that address gender issues in general as well as in the agricultural sector. The section that follows deals with integrating gender within the mainstream curriculum or courses.

Similar to other curriculum documents used in the country, the agriculture curriculum that is (will be) used in the program has (will have) the following components (either as module or course): module title, module description, learning outcome, module content, learning strategies, module assessment and resource content. This document (these documents are) is the basis for instructors for designing and delivering their lecture and finally for assessment. Accordingly, the guideline to mainstream gender should show the mechanisms to integrate gender in the various components of the curriculum document. In what follows, this process will be elaborated using practical examples on how to mainstream gender.

1. module title:

Instructors are expected to examine the title of the module from a gender perspective. In practical terms, this implies investigating whether the title of the module adequately reflects on the scope/reach of the module including its gender dimensions. Unless gender issues are openly addressed, it may open the door for exclusion of gender concerns.

2. module description/introduction:

The course or modular description introduces briefly the

contents of the course and the overall intended outcome of the course. Here, instructors are expected to examine if potential gender issues that arise in the matter covered by the course are adequately included. In the general context of agriculture, these issues may include; the role of women and men in agricultural activities, resources access and utilization, etc.

Example 1. Agricultural Marketing and Value Chain Management

Course description

Therole of agricultural marketing in economic development; Characteristic feature of farm products in general and perishable products in particular and their marketing problems marketing mix, marketing functions and agencies; marketing costs and margins (with emphasis to horticultural products); agricultural price determination and policies; government intervention programs; commodity markets: approaches to horticultural marketing problems; principles of agricultural marketing to improve the value chain of horticultural produce.

Examination from a gender perspective: Who produces agricultural products and who is involved in marketing in particular the production and marketing of horticultural products in the Ethiopian context has huge implications on our understanding of the role of agricultural marketing towards economic development. The majority of women smallholders are responsible for the production and marketing of horticultural products. All questions of marketing: storage/preservation of products, marketing institutions and their role, costs and margins, price policies, intervention programs targeting, availability and accessibility of markets, problems of value chain have to be seen from a gender perspective.

Storage: women small scale producers mostly lack storage facilities to preserve their produce until marketing season. What is the impact of this on agricultural marketing?

Marketing institutions/agencies: to what extent are marketing institutions responsive to the demands of women small holder producers and are these institutions accessible?

Price policies: Do women smallholder producers have adequate information on pricing? How about men farmers? Are they better placed in terms of access to pricing information?

Government interventions programs: to what extent do government intervention programs successfully target women and men farmers?

Gender aware course description: The course description should consider that there are different actors i.e. men and women farmers/ producers, with different capacity as well as access to information on markets, resources etc . This in turn would have implications on how the course content should be packaged.

Example 2. Poultry Production and Hatchery Management

Course description: Origin, classification and distribution of poultry in the world. Breeds of chickens. Poultry production systems. Poultry production in Ethiopia. The anatomy and Physiology of domestic birds. Brooding, grower, layer, breeder and broiler management. Incubation and hatchery management, methods of improvement of hatchability of eggs, factors influencing fertility and hatchability, techniques of artificial incubation, incubation environment, embryonic development and the hatching process. Chick sexing and grading. Principles of poultry nutrition ration formulation, environment and poultry housing, poultry disease and parasite control, poultry farm planning and record keeping. Poultry waste management.

Examination from a gender perspective: Poultry are generally owned and managed by women in the Ethiopian context. Children are also involved in raising poultry. Poultry are very often essential elements of female-headed households. Given this, increased knowledge and capacity gained by women and children in the management of poultry production would have significant contributions to food and income supplementation. At strategic level, the management and production of poultry would contribute to increasing the decision making power of women within the household.

Gender aware course description: the existing course description though focused on the technical aspect, talks about poultry production systems and poultry production in Ethiopia. Students are expected to work with producers of poultry products which are mainly women. Accordingly, the course should begin with an introduction on the dynamics of poultry production and management in the Ethiopian context. This is where students would be made aware of who produces poultry, under what circumstances and to the impact of the sector on gender relations in general.

3. learning outcome/objectives:

The learning objective of all courses/modules should incorporate 'gender equality objectives' as one outcome. Accordingly, instructors should examine that the learners at the end of the course are able to acquire knowledge and skills to analyze the situation of women relative to men in the particular area of inquiry under the course. This would ultimately contribute to promoting and improving the situation of women and men. The questions in this regard are:

have students acquired the skill to conduct gender analysis

to inquire and identify the needs and interests of women and men in the society

Example 1. Agricultural Marketing and Value Chain Management

Objectives:

- Identify marketing problem of horticultural products and use the solutions forecasted for the case of Ethiopia
- Apply marketing principles to improve marketing efficiency of agricultural products
- Analyze the marketing efficiency, marketing cost and marketing margin.
- Implement different approaches in studying agricultural marketing middlemen and develop a right attitude towards the role of marketing middlemen
- Suggest value chain of horticultural products to minimize the loses and satisfy both producers and consumers

Examination from a gender perspective: overall objective is to create efficiency in the marketing of horticultural products. While this is good, the objective should also extend to benefiting the producers which in this case are mainly women.

Gender awareness objective: the course objective should specifically aim to identify the needs and problems of producers of horticulture products in terms of marketing

4. module content:

The contents of the course or module determine the areas of inquiry as well as the knowledge that is transferred to students. Gender concerns should be adequately integrated in the course content. This entails asking questions that serve to frame a gender-based analysis as part of the gender-agriculture discourse:²²

- Which agricultural tasks are carried out by which member of the household, and how rigid is the gender division of labor?
- What are the daily and seasonal variations in labor availability?



- Who within the household has responsibility for which household chores?
- Who has access to and control over productive resources, such as land, capital, human capital resources (such as education, information and knowledge, training opportunities, extension services), and markets?
- What are the constraints and implications arising out of lack of control over or access to productive resources, for those who lack such control and access?
- Which decisions in the agricultural household and in the community do men and women typically make?
- How do men and women differ in the constraints they face, and how do these differences affect their work, productivity, and access to benefits?
- Who controls production in the agricultural household and in the community?
- To what extent do women and men have access to or own:
 - ✓ land, water equipment, livestock, poultry, fish, trees, homestead site?
 - capital, credit, savings in cash or in kind (including money obtained from informal sources such as from the sale of crafts)?
 - ✓ labor (children, spouse, other kin, informal work group, hired labor) and draught power?
 - ✓ implements for production, postharvest uses, household tasks?
 - √ agricultural inputs (fertilizer, seeds, vaccines)?
- Do women and men have in principle or in reality access to:
 - ✓ extension services?
 - √ formal credit, savings, and banking services?
 - ✓ informal savings, credit, insurance and services/ organizations?
 - ✓ skills training?

- ✓ processing facilities?
- √ marketing?
- ✓ cooperatives or similar government or nongovernment associations (as full members in their own name, with voting rights)?
- ✓ information networks and communication media?
- Do women and men in principle or in fact have access to:
 - ✓ health care?
 - ✓ water and sanitation?
 - √ basic social skills training?
 - ✓ education and literacy/numeracy programs?
- What material and nonmaterial benefits do women and men derive from the production processes?
 - √ wages (in cash/kind);
 - ✓ income from the sale of goods:
 - ✓ income from the sale of services;
 - ✓ other consumables (e.g., crop by-products);

Example 1. Agricultural Marketing and Value Chain Management

Module content: Course outline

1. Introduction (4 hrs)

- 1.1. Definition of Agricultural marketing
- 1.2. Growth of Agricultural marketing
- 1.3. Importance of Agricultural Marketing (Macro & Micro)
- 1.4. Marketing and other disciplines
- 1.5. Purposes of studying Agricultural Marketing
- 1.6. The Agricultural marketing processes

2. Approaches to the study of Agricultural marketing (6 hrs)

- 2.1. Functional Approach
 - 2.1.1. Exchange Function
 - 2.1.2. Physical Function
 - 2.1.3. Facilitating Function
- 2.2. Institutional Approach
 - 2.2.1. Merchant Middlemen (Retailers and Whole salers)
 - 2.2.2. Agent Middle men
 - 2.2.3. Speculative middle men
 - 2.2.4. Processors and manufacturers
 - 2.2.5. Facilitating middlemen
 - 2.2.6. Marketing channel
- 2.2.7. Marketing integration and implication to the food industry
- 2.3. The commodity approach

3. Characteristics of Agricultural products & marketing Problem (4 hrs)

- 3.1 Interrelation of Agricultural production and marketing
- 3.2 Inadequate transport and communication
- 3.3 Inadequate storage facilities
- 3.4 Poor Handling Packing and processing
- 3.5 Inadequate standards and grading
- 3.6 Inadequate Market information
- 3.7 Credit and interest Rates

4. Demand and supply of Agricultural Products (4 hrs)

1.1 Demand and Supply equilibrium

- 1.2 Determinants of Demand and supply
- 1.3 Price elasticity of demand
 - 1.3.1 Determinants of price elasticity of demand
 - 1.3.2 Price elasticity and Total revenue
- 1.4 Price discrimination
- 1.5Price ceiling and floors
- 1.6 Spatial equilibrium in a competitive economy

5. The concept of supply, product and value chain management (6 hrs)

6. What are marketing costs and marketing efficiency (6 hrs)

- 6.1. Produce preparation and Packaging costs
- 6.2. Handling costs
- 6.3. Transport costs
- 6.4. Product losses
- 6.5. Storage costs
- 6.6. Processing costs
- 6.7. Capital costs
- 6.8. A marketing cost calculation
- 6.9. Marketing Margins

7. Common Mistakes in Horticultural Marketing (4 hrs)

- 7.1. Fixed price buying by Government
- 7.2. Food processing to Utilize Surplus
- 7.3. Mechanized Grading
- 7.4. National Grading Standards for the domestic market
- 7.5. Storage of produce to exploit price rise

7.6. Government-run trading operation

Examination from a gender perspective: the module content describes the issues/problems that arise in marketing of agricultural produce. However, the problems/issues are not similar to women and men producers/farmers. For instance, women farmers face difficulty in terms of accessing information about prices as well as support programs from government institutions. They may not be able to travel long distance to market their produce because of limitations in mobility in many parts of Ethiopia. Accordingly, the contents dealing with access to information, resources, market space should adequately consider these differences.

Gender awareness course content: There are differences along gender lines in terms of who produces what and for what purpose? Who has access to what market? Who has information about prices? The benefit of marketing of agricultural produce for whom? Marketing at what level – individuals, as cooperatives, the issue of middle men in marketing? Do price policies take into account who produces what with what input? Government intervention programs targeting who? Who is considered a producer of agricultural products? Marketing problems in horticultural products – who is the main producer? Problems of producers? What are the problems of women in value chain – where are the women in the value chain? These questions should be evaluated along the gender division of labour lines and addressed in the course content.

Learning strategies:

Learning strategies mainly refer to the methods of delivery of the module or course. In order to effectively integrate and address gender related concerns that may arise in the area of inquiry of the course/module, various methods of delivery may be employed. Classroom lectures may be instrumental to do a thorough analysis of theories. However the style of lecturing and even the types of examples may privilege one sex over another. Lectures should be complemented by group discussions. These can sometimes be single sex groupings so that females students may be less intimidated, or they may be mixed sex groupings depending on the issues. A good instructor will vary these. Small group work helps to draw on the lived experiences of students. Further field level exercise where students get the chance to evaluate the experiences of those engaged in agricultural activities at different levels and in different capacities is ideal to do a thorough situation analysis. Independent work by students is also ideal.

Participative teaching methodologies such as small group work, role play and simulations will give equal opportunities

for male and female students to participate in class, and provide opportunities for female students to actively participate. It is also important to include case studies that document and portray the situation of women and men farmers in the area (Jimma) as well as in the areas that students have come from.

Example 1. Agricultural Marketing and Value Chain Management

Method of delivery: Lecture, video/slide show and visits

Examination from a gender perspective: the method of delivery does not say much about whether it is participatory and hence gives equal opportunities to both male and female students. It is silent on whether case studies that portray the situation of women and men farmers engaged in horticulture products marketing will be documented through field visits and analysed

Gender aware method of delivery: field visits to female and male farmers engaged in the production and marketing of horticulture products, group work consisting of female and male students to get the opportunity to reflect on lived experiences in terms of division of labour in production and marketing of horticulture products, access to information, mobility etc.

Module assessment:

In terms of assessment methods, one of the issues is the extent to which assessment methods allow students to appreciate and investigate the position of women and men in relation to agriculture from the perspective of the area of inquiry of the course/module. There are various options that serve as ideal entry points for gender based inquiry such as personal reflections, field observations, oral/conversational questions and even written tests. In essence, if gender is to be legitimately integrated into the curriculum it must also be assessed. Otherwise the gestures will be tokenistic.

Example 1. Entrepreneurship and Small Business Management

Assessment: Assignments	.10%
Project	20%
Midterm exam	30%
Final Exam	40%

Gender aware assessment: An example would be ask for the development of business plan through field observation targeted at women and men entrepreneurs. The business plan should include comparative assessment of the problems in business development from the perspective of female entrepreneurs vs. male entrepreneurs

Resource content:

The issue here is to what extent are the resource materials identified for the course inclusive of gender related materials. This is critical because additional resource material can help to keep core material up-to-date. Sometimes it is not always possible to replace textbooks, but it is always possible to supplement the curriculum with gender-sensitive resource materials.

Example 1. Agricultural Marketing and Value Chain Management

References Jain, S C. 2001. International marketing, 6th ed., New Delhi

Kotler, P. 1999. Marketing management, 9th ed, New Delhi

Kohals, R.L. and Joseph N. 1990. Marketing of Agricultural Products, New York

Kohals, R.L 1955. Marketing of Agricultural Products, New York

Gender aware references

A reference material on gender and agricultural marketing and value chain analysis should be included in the list.

For example:

The World Bank, Gender in Agriculture Sourcebook, 2009.

The Commonwealth Secretariat, Gender Mainstreaming in Agriculture and Rural Development: A Reference Manual for Government and other Stakeholders. 2001.

(Both of these materials can easily be downloaded from the internet)

2.3.3 Specialized gender course: a specialized gender course that equips students with the basic gender concepts and the major tools of conducting gender analysis;

These gender concepts can be applied to various courses. Accordingly, instructors can rely on these general and introductory concepts to clarify gender issues that arise in their respective courses and further can use these concepts to give examples and illustrate points for instance regarding gender division

of labour in agriculture, access to productive resources and how it is impacted by gender, how access to input relates to gender etc.

- a. Gender concepts and terminology: understanding the definitions of gender concepts and terminologies
 - Gender and Sex
 - Gender Equality and Equity
 - Gender Discrimination
 - Gender division of Labor
 - Gender Roles
 - Gender Needs
 - Patriarchy
 - Women Empowerment
 - Assertiveness
 - Sex disaggregated data
 - Gender disaggregated data
- b. Policy and institutional frameworks on gender equality in Ethiopia
 - · The National Policy on Women,
 - Ethiopian women change and development package
 - The Ethiopian Constitution and subsidiary legislation such as the family law, labour law, land law
 - Gender machinery at federal and regional levels
- c. Gender profile: with a focus on major challenges or gaps in Ethiopia
 - ✓ Socio-cultural gap

- Gender-based violence
- Negative attitude and Harmful traditional practice
- Educational gap
- ✓ Economic and political gap
 - Access and control over resources
 - Decision making/power relation
- d. The connection between gender and development
 - Overview of gender and development
- e. Gender analysis tools
- f. Gender and the agriculture sector: general overview and the situation in Ethiopia

The Gender and Development specialized course developed by the Federal Ministry of Agriculture can serve as a good example of a specialised course on gender. This can be used as a common course which all students may take or parts of the course can be adapted to fit into various specialized course.

2.3.4 Challenges in Mainstreaming

- ✓ Awareness on the values and benefits of gender equality: the limited level of awareness on the benefits of advancing for gender equality is an obstacle to integrate gender issues in plans and programs
- Attitudinal problems: the widely held view that women are inferior beings which ultimately results in lower levels of investment towards women may be an obstacle to adopt gender equality objectives

in plans and programs

- ✓ Lack of/limited gender disaggregated data: the lack of (limited) gender disaggregated data in the field of agriculture such as women's land ownership, access to inputs such as fertilizers, pesticides, extension services etc may result in lack of information regarding the status quo. This is in turn affects gender sensitive planning and implementation of programs.
- ✓ Limited attention to gender in agricultural and educational policies: this may be an obstacle to articulate and integrate gender equality objectives in subsequent plans and specific programs.
- Lack of institutional structures: the absence of dedicated institutional structures to coordinate and monitor the design of plans and programs from a gender perspective and the subsequent implementation of such programs is a challenge.
- ✓ Limited gender expertise: the lack of or limited gender experts working in the coordination and monitoring of plans and programs from using gender sensitive indicators is a challenge in mainstreaming gender.

If the second HIV and AIDS in the Mainstreaming in the

Agricultural curriculum

3.2 The need to mainstream HIV and AIDS in agriculture/ agricultural sector

3.2.1 Understanding HIV/AIDS mainstreaming

UNAIDS has recently proposed the following working definition of mainstreaming HIV and AIDS:

Mainstreaming HIV and AIDS is a process that enables development actors to address the causes and effects of HIV and AIDS in an effective and sustained manner, both through their usual work and within their workplace. Mainstreaming HIV and AIDS means realising that we all work in a context more or less affected by the HIV and AIDS epidemic and analysing whether consequently we need to adapt our activities to this reality.

In a similar note, mainstreaming and HIV and AIDS is defined as a process which enables development actors to strengthen the way in which they address the causes and consequences of HIV/AIDS, through adapting and improving both their existing work and their workplace practices.²³

Two areas of action are highlighted in the mainstreaming of HIV and AIDS. These are: the internal and external areas of action. The internal refers to the very domain of the organization/institution and includes the employees, and internal procedures of operation.²⁴ This answers the question of how HIV and AIDS affect the work of the organization/institution in question. The external domain refers to the mandate and the usual work of the organization or institution

²³ Sue Holden Mainstreaming HIV and AIDS: A briefing paper 2005.

²⁴ As above.

in question.²⁵In this respect the focus is on how HIV and AIDS affect the people that the organization works with, what it can do to contribute towards minimizing the impacts of the problem and how it can contribute to lessen vulnerability of people towards HIV and AIDS.

Mainstreaming addresses both the direct and indirect aspects of HIV and AIDS within the context of the normal functions of an organization or community. It is essentially a process whereby a sector analyses how HIV and AIDS can impact it now and in the future, and considers how sectoral policies, decisions and actions might influence the long-term development of the epidemic and the sector.

To respond effectively to the epidemic, it requires exceptional responses that demonstrate timeliness, scale, inclusiveness, partnerships, innovation and responsiveness. In other words, to stay on top of the rapidly evolving epidemics, actions need to be incorporated into sectors' normal operations while simultaneously continue seeking innovations and extending new partnerships.

3.2.2 Gender and HIV/AIDS: general context²⁶

In most societies, gender relations are characterized by an unequal balance of power between men and women, with women having fewer legal rights and less access to education, health services, training, income-generating activities and property. This situation affects both their access to information about HIV and AIDS and the steps to be taken to prevent transmission. Women in particular have limited access to information about HIV and AIDS and reproductive health, because of social pressures and cultural norms which stress that women should not openly discuss these issues and seek information. Cultural beliefs and expectations tend to make men responsible for deciding when, where and how sex will take place, while women generally lack control over sex and reproduction. This heightens not only women's but also men's vulnerability to HIV and other sexually transmitted infections (STIs).

The feminization of poverty has meant that women and girls increasingly have to exchange sex for money, food, shelter or other needs, though much of this sex is unsafe. They are also vulnerable to being trafficked into sexual slavery.

The cultural expectation that women will be the prime or only caregivers to their infected family members creates disproportionate social and economic burdens. The costs of medicines and treatments

²⁵ As above.

²⁶ This section heavily draws from The Commonwealth Secretariat Gender Mainstreaming in HIV/AIDS: Taking a Multisectoral Approach New Gender Mainstreaming Series on Gender Issues, 2002.

are very high and reduce the families' abilities to pay for education and other services. Sickness and death cause labour shortages and to increase food insecurity.

There are also harmful traditional and customary practices that make women and girls more vulnerable to HIV infection. These include early marriage, wife inheritance, abduction and female genital mutilation (FGM) and gender-based violence.

In many of the heavily affected countries, young people are the most rapidly growing group of new HIV/AIDS infections, with girls far outnumbering boys partially attributed to poverty, lack of information, lack of economic and social empowerment and lack of availability of protective methods.

3.2.3 Gender and HIV/AIDS: Ethiopian context²⁷

The gender context in Ethiopia is characterized by disparities in the economic, social, cultural and political positions and conditions of women. These disparities make women more vulnerable to HIV and AIDS infection. There is no adequate information on the national level picture of the HIV and IADS prevalence and associated problems. However, the discriminatory practices and the low status of women indicate that women are more exposed to HIV and AIDS than men.

Ethiopian women are exposed to different forms of sexual violence such as abduction, rape and forced sex within marriage. Abduction is widely practiced with an occurrence rate of 69 percent at a national level.²⁸ Marriage by abduction occurs in almost all regions of Ethiopia (very high in SNNPR). Rape is a common occurrence in both urban and rural areas. It is traditionally tolerated to the extent that most women who have been violated do not report the incident. In a study conducted among adolescents from six semi-urban centers of the country, 9% of sexually active women reported to have been raped, while 74% reported sexual harassment.²⁹

Harmful traditional practices enhancing HIV infection are commonly practiced in every part of the country. "Women, from infancy to adulthood and children of both sexes suffer most from the effects of harmful traditional practices, ranging from the allocation of family food resources and nutritional taboos to other harmful practices such as FGM, early marriage, marriage by abduction, uvulectomy and milk

²⁷ This section is heavily draws from Miz-Hasab Research Center Gender and HIV Aids in Ethiopia, 2004.

NCTPE, Baseline Survey on Harmful Traditional Practices, 1998. See also the Follow Up Survey on Harmful Traditional Practices, 2008.

²⁹ OSSA and German Foundation for World Population, 1999.

tooth extraction.³⁰ The most common and painful harmful practice for women is FGM which is practiced by 73% of Ethiopians (NCPTE, 2003). The main reason of FGM is to subdue the sexual feeling of a woman in order not to exhibit sexual needs before marriage and after marriage.

Women in Ethiopia currently are not able to exercise their sexual rights. Children, particularly girls, are socialized not to discuss issues on sexuality and HIV/AIDS, even with their mother. Findings of a study on attitudes and practices of female students in a high school in Adigrat of the Tigray region revealed that 80% of the students never discuss these issues with their parents. Reasons given were culture, fear of being labeled as promiscuous and respect for parents. These students also perceived AIDS as an act of the devil.³¹.

Women are often unable to negotiate safe sex (e.g condom use) partly due to their socialization that makes them to be ignorant of sex and subservient to men. This may also be exacerbated by gender-based violence. The practice of unsafe sex is common in the rural and urban areas.³² The prevailing sexual behavior exposes women to HIV and the STI infection.

3.2 The need to mainstream HIV and AIDS in agricultural curriculum

3.2.1 HIV and AIDS mainstreaming in educational system³³

HIV and AIDS have adverse impacts on the core business of institutions of higher education. This necessitates the need to mainstream HIV and AIDS in the education sector with a particular focus on higher education.

In the African context, the main mode of transmission of HIV and AIDS is heterosexual sex. People aged 19-24 are sexually active, and are precisely the immediate targets of higher education. Higher Education Institutions provide the forum, in a sense, for easy interaction among this age group, thereby facilitating the spread of the disease. This indicates that Higher Education Institutions provide a special environment for HIV and AIDS. Another important point is that relationships are not stable as school sessions interchange with holidays. Moreover, depending on the settings of higher education

³⁰ As note 5 above.

³¹ Hadas Woldegiorgis (2001). Interim Poverty Reduction Strategy (I-PRSP) of Ethiopia: Glimpse from A Gender Perspective: In Reflections -Documentation of the Gender Forum. Number 5, July 2001.

³² Gebre, Solomon. 1990. Sexual Behavior and Knowledge of AIDS and other STDs; A Survey of

Senior High School Students. Ethiopian Journal of Health Development, Vol. 4, No. 2, Addis Ababa, Ethiopia.

³³ This section is informed by "The HIV/AIDS Challenge in African Higher Educational Institutions" An AAU Competency Based Training in Management and Leadership For African Higher Educational Institutions.

institutions, there may be a possibility of dynamic interaction between the institutions and the surrounding communities. This is particularly true in the Ethiopian context where there may not be sufficient oncampus accommodation and hence students are forced to rent hostels and the like.

At the same time, it must also be noted that this age group, especially those at universities, is constituted as a captive population which is easier to reach in terms of interventions. Universities and other higher education institutions can confront the challenge of HIV/AIDS by dealing with the problem on campus.

Higher education institutions must be involved in the fight against HIV/AIDS for several reasons. For one thing HIV/AIDS affects human resource development, the raison d'etre of higher education institutions. Further, university based researchers generate and disseminate new knowledge on HIV/AIDS on a global scale. Creating knowledge is a major mandate of universities. Medical research is key but other types of research are also important at this stage. These include research related to nutrition and leadership. It is clear that the universities and other higher education institutions can make a difference and the clear place to begin is with the institution itself and then move into the community.

3.2.2 HIV and AIDS mainstreaming in the Agricultural Curriculum

Although traditional agricultural education programmes do not cover the subject of health, the impact of HIV/AIDS on agriculture is now changing the way we think. In the same way that instructors need to update their courses because of other scientific developments, the curriculum needs to take into consideration the changing social landscape. It is becoming increasingly clear that agricultural education cannot ignore health and social issues, and could provide important leadership in dealing with the HIV scourge. Accordingly, it is imperative to integrate HIV and AIDS in the curriculum of agricultural. This should be done for several reasons. First, it is vital to raise the level of understanding and analysis for graduates of agriculture so that they can protect themselves against HIV/AIDS infection and if infected, to reduce the progression of infection to disease by applying lifeprolonging strategies. Second, it is important to build up the capacity of agricultural graduates to help communities with appropriate combinations of agriculture and health innovations and advice programmes. A third reason is to effectively utilize limited resources for agriculture in an environment of the HIV/AIDS pandemic. Finally, it is important that the curriculum enable agricultural graduates to diagnose and address societal problems associated with agriculture and HIV/AIDS, and hence to develop or link up with appropriate remedial/support.

3.2.3 Curriculum integration, HIV/AIDS and types of knowledge³⁴

There are at least 3 different types of instructors that might consider critical in curriculum integration: (1) Personal knowledge and keeping students alive; (2) disciplinary knowledge; and (3) workplace knowledge.

Personal knowledge and "keeping students alive". Given the age group of students attending university, personal knowledge is without doubt the most important. As one female instructor from an Agricultural faculty in South Africa put it, "how can I possibly teach just about poultry when my students are coming to me about testing positive? My first concern is to help them stay alive!" Another instructor at the same institution and working in the area of waste management similarly comments:

This year they are dropping out ... you can see. You will find that most of the students are raised by grand parents, they don't have parents any more. Most of them they have sick mothers so they are not able to attend because they have to take care of their siblings. Their mothers are constantly sick in hospital, they can't walk so they don't have money to come to school. So these are the issues, to be honest, that I only found out about this year. I was not aware.

Disciplinary knowledge and HIV/AIDS: Disciplinary knowledge relates to the actual discipline-specific content in relation to the subject area. An instructor in Waste Management in South Africa talked about how he addresses HIV/AIDS in the curriculum:

In South Africa when we talk of waste management they think about hospital waste without expanding, without thinking that waste is generated every day everywhere. Where there are people there is waste and chances are that there is medical waste and a lot of people are infected, you know, so you will find that nothing is safe anymore, so any waste generated is a cause for concern.

A lecturer in poultry production spoke about the ways in which the idea of 'virus' can be a cross cutting concept, appropriate to talk about the HI virus as well as the various viruses affecting poultry:

For me like it is actually go because the course that I am lecturing...if it is poultry it has got to do with physiology and all these things, you deal with viruses, you have to explain to the

³⁴ Much of the work in this section was informed by HEAIDS, 2010. Creating space for HIV and AIDS in the curriculum – A RapidAssessment of curricular responses in South African Higher Education Institutions. Pretoria: Higher Education South Africa

students what is a virus, what is bacteria and how does it work and why do you need a vaccine, how does the vaccine work and all that? So every time when I lecture let's say we are talking about a vaccine you are always going to make a reference to HIV and all those thing and why we don't have a vaccine yet or why we don't have a cure for the virus and all of those things. So it is easy, so what I do, I don't have a lecture that says that I will put actually aside to say that this is for HIV and AIDS. We were told to actually do something like that but for me it will actually discourage students to actually attend.

Another lecturer also working in agriculture spoke about the ways in which HIV/AIDS has even influenced the development of and teaching about technologies:

We have realised that most of the projects like gardening where there are people who are HIV positive it is actually difficult for them to actually plough and use the hand hoe and all that...so what we really tried to introduce was the mechanical hand hoe, that one that you push and all that... And this should carry over into areas like engineering. I think even in engineering everything can be integrated if you actually understand your course, you can actually integrate it anywhere, because even the thing that I was telling you about [the hoe]...it was really the people from engineering who did this...because these people who are affected and they don't have energy so what can you come up with from the engineering side. So you have all these sectors.

Workplace knowledge and HIV/AIDS: Workplace knowledge refers to the specific set of topics and skills that will be needed once the student graduates and begins to work in the particular work setting: (eg the chemical industry, schools, hospitals, pharmacies, engineering sites so on). Given the professional nature of the training students are receiving in their specific programs (eg. Rural Extension, Education, Commerce and so on), how does their training include information on what they would need in the actual workplace (working with colleagues, nature of interaction with the public and so on)? Workplace knowledge was poignantly presented by a lecturer who prepares Rural Extension workers:

I focus more in extension on integration on educating rural people how to raise poultry. And then explain to the students that they need to go out and educate people because poultry is a good source of protein for people living with HIV and AIDS. They have a course that deals with community development, it's the extension, it used to be called agricultural extension so that is where I do a lot of integration because the students that we train in extension...after completion they go out and work with the communities and advise the communities on the issues of being able to plant vegetables properly,

plant any other crops...or engage in many activities like nutrition that will help to boost their income in income generating projects which at the same time helped me to mitigate against AIDS, HIV and AIDS. And then the other course that I integrate HIV and AIDS in is the basic science. Our students are from disadvantaged backgrounds so we introduce them more to basic sciences and in basic sciences there is a section that deals with sexual reproduction and birth control. That is where I also fit it in because it fits properly into that section. So and then I give them some assignments and tests with some questions related to HIV and AIDS so as to test their level of understanding in terms of HIV and AIDS...HIV/AIDS is a very sensitive issue. That is why we have these technical courses like poultry, crop production, animals...a person can have all these technical skills but without people skills it will be like... you cannot expect them...they can go out there and fail to convey the message because they do not have the skill of working with people.

In some cases instructors focused on only one type of knowledge, although in most cases there was a combination of two or a blend of all three. A good example can be seen in the case of the female instructor working in Waste Management noted above. Her opening comments in the interview were not about her disciplinary area at all. Rather she went right to the point that she realized how serious the impact of HIV/AIDS was on her students. So many of the students were coming to her to report their HIV positive status. She also discovered that many of them were caring for sick parents and that there was very little food in the families. She saw herself placed in a counselor role. It was only well into the interview that she began to talk about her own disciplinary area of Waste Management and the ways that she has integrated HIV/AIDS into her teaching, research and community outreach. As she noted:

This is such a serious issue in this country. No one is checking on what is happening to syringes and needles outside of hospitals. And what about all the waste from schools and universities... sanitary towels...and in home-based care? We train all these home based care workers to go into homes of HIV positive patients and they change dressings. What do they do with the dressings? Does anyone know? What is happening at landfill sites where we know there are scavengers?

Another instructor made a point of distinguishing between personal knowledge and disciplinary knowledge, noting the following:

You know I think you were asking earlier about it becoming a professional course and kind of what happens there and stuff and I think the important thing to me and the way we have designed it is around recognising that students are not only here about gaining knowledge that we have an opportunity and

a responsibility to actually educate beyond just kind of filling them with books and knowledge. There is so much more that we can do. And I believe that people that we graduate from... certainly from health sciences should be well rounded and able to cope and so it is about of course they must go away with good knowledge but they also need to be empathic people who can actually work in relationships and that if they can't do that they are not going to be good with their patients or their clients and that they also need to be reflective in what they do so everything we do is around a model that we call the integrated health professional and it is those three aspects pulled together sort of saying you know, in order to be effective you need to be all of those things, not just thinking that if I know the stuff in the textbook I am fine but if you can't relate to someone or you are not constantly thinking how does this, you know what is happening in my life impact on how I am going to be with people, then you are not going to be effective in what you do. Because I think the idea that medicine or physiotherapy or whatever it is, is anything other than a caring profession is wrong, I mean that is exactly what they are. It is about the people, it is more than...I mean you can access the knowledge on the internet but it is how you are going to give that across and how you are going to interpret it for people.

The narratives above, all based on interviews with lecturers in Higher Education Institutions give a good sense of the challenges of curriculum integration but also the rewards.

3.3 How to mainstream HIV/AIDS in the existing agriculture curriculum: various approaches to mainstreaming HIV&AIDS different curriculum models

The first category of approaches relates to dealing with various areas of inquiry that arise in agriculture (including post-harvest management) referred to as 'major courses'. This guide advocates for a focus on external domains in mainstreaming HIV and AIDS, when it comes to the major courses or modules. What does this mean in practice? Major courses or modules attempt to equip students with the knowledge/expertise in regards to a particular field of agriculture. Upon graduation, the students are then expected to implement the expertise they have acquired on the ground – interact with the primary stakeholders such as policy makers, farmers, farmers groups, entrepreneurs etc. The focus of mainstreaming in this connection should be to assess the impact of HIV and AIDS on these various stakeholders that students and graduates would ultimately interact with on a daily basis. The main questions to be looked into are the following:

- How does HIV/AIDS affect the people (farmers, policy makers, entrepreneurs etc) that we work with, particularly in relation to the work that we do with them?
- How does it help the people with whom we work to become less susceptible to HIV infection and less vulnerable to the impacts of AIDS?
- Where does our comparative advantage lie in responding to these effects?

The second category refers to a specialized course/curriculum dealing with HIV and AIDS issues in agriculture in general and in post harvest management in particular. In a specialized course dealing with HIV and AIDS, both domains/aspects i.e. the internal and external domains can be integrated in such a course. Accordingly, a specialized course will look into the internal factors such as employees and students of higher educational institutions, working procedures, institutional set and the like to answer the fundamental question: How does HIV/AIDS affect our university and its ability to work effectively, now and in the future? In addition, it attempts to acquaint students with most basic knowledge on HIV and AIDS so as to equip them with the know how in terms of how to interact with vulnerable or most affected sections of the society.

3.3.1 Mainstreaming HIV/AIDS in mainstream (major) courses: integrating HIV/AIDS issues in course contents through providing practical and easy to use examples/illustrations/case studies

The guide advocates for mainstreaming or integrating HIV and AIDS issues in what are regarded as mainstream curriculum or major courses as well as the adoption of specialized course that can thoroughly introduce students to concepts of HIV and AIDS as applied in the agricultural sector, the existing situation in the country including policy and institutional frameworks that address HIV and AIDS in general as well as in the agricultural sector. The section that follows deals with integrating HIV and AIDS within the mainstream curriculum or courses.

Similar to other curriculum documents used in the country, the agriculture curriculum that is (will be) used in the program has (will have) the following components (either as module or course): module title, module description, learning outcome, module content, learning strategies, module assessment and resource content. This document (these documents are) is the basis for instructors for designing and delivering their lecture and finally for assessment. Accordingly, the guideline to mainstream HIV and AIDS would have a particular focus on module content and attempts to show through various examples the mechanisms to integrate HIV and AIDS in the course or module in question.

Module content: The contents of the course or module determine the areas of inquiry as well as the knowledge that is transferred to students. HIV and AIDS concerns should be adequately integrated in the course content. How?

Example 1.35 Agricultural production and HIV and AIDS

The impact of HIV/AIDS is most severe on smallholder agriculture-the primary economic sector and engine of growth of many sub-Saharan African countries including Ethiopia. The adverse effect is seen through its effects at the household level. Smallholder agriculture relies almost exclusively on family labor-often the only productive resource poor people have. In terms of household food security, HIV and AIDS impacts on the productive capacity of farm households, thus influencing availability, access and utilization of food in the following ways:

a) Adverse effects on agricultural productivity

Household labour quality and quantity are reduced, first in terms of productivity, when HIV-infected persons fall sick. There will be declines in the supply of household labor because of patient care (this burden falls mostly on the women who are also the main food producers) and death. For example, in one village in Tanzania, in households with an AIDS patient, nearly 30% of household labor was spent on AIDS-related matters (including care of the patient and funeral duties). If two people were devoted to nursing the patient, as was the case in 66% of recorded cases, the total labor loss was 43% on average.

The impact of HIV/AIDS morbidity and mortality not only affects labor inputs to farm production, but, more significantly, it disrupts the household production-domestic labor interface by diverting women's labor from regular caring activities to caring for persons living with HIV/AIDS. This can have severe repercussions not only on food production but also on food and livelihood security, health, education (children are often taken out of school), nutrition and family welfare. The illness and death of a young adult woman could have a dramatic effect on the household, given that women provide up to 80-90% of labor and managerial services and are the primary care givers at the rural household level.

In the case of crop production, FAO research in Eastern and Western Africa in the early 1990s shows that the impact of HIV/AIDS resulted in one or more of the following consequences:

- Reduction in the area of land under cultivation;
- Changes in cropping patterns/shift from cash crops to

³⁵ FAO Addressing Impacts of HIV and AIDS on Ministries of Agriculture: Focus on Eastern and Southern Africa 2000.

subsistence production;

- Decline in the range of crops cultivated;
- Decline in the ability to control pests;
- Loss of soil fertility;
- Decline in crop yields; and
- Loss of crop and farm management skills.

Recent evidence from Eastern Africa shows that these early trends continue to prevail. According to the MAAIF of Uganda, in severely affected districts like Rakai and Masaka, up to 25% of households are cultivating less land as a result of the HIV epidemic. A decline in cash crop production, and particularly coffee, which is labor intensive, is also being observed.

b) Decline in on - and off-farm disposable household income

HIV/AIDS greatly increases household expenditures and has adverse effects on – and off-farm income, and especially the availability of disposable cash which largely determines the amount and quality of food that could be purchased. Household income declines due to:

- Increased expenditures for special foods, medication and treatment, transport to and from health care facilities and funerals. According to a simulation study conducted in Kenya, costs of AIDS represented 78% of household income during the first year of AIDS impact (with one adult death) and 167% the second year;
- The loss of the income of the HIV patient (either in the form of labor or remittances);
- HIV/AIDS stigmatization that may prevent persons with HIV from continuing to exercise their trade; etc.

c) Erosion of household resource and asset

In Uganda, reports indicate that many affected households sell their food crops in order to cover hospital expenses. Some households even sell off their land to raise money for medical care. In fact, it has been argued that it is becoming increasingly common for some hospitals and clinics to encourage terminally ill patients to surrender land titles as security for medical bills. A World Bank study reported that asset ownership declined when an HIV positive household member died, but remained stable when the death was not related to HIV/AIDS. The erosion of the household resource base deprives families of the essential means to sustain them. Surviving widows and their children

often have great difficulties in retaining family land and other assets which tend to revert to the late husband's family.

d) Erosion of knowledge base and skills for agricultural production

Agricultural work is becoming increasingly less attractive in rural areas even among youths who have been brought up in farming households. Conversely, urban centres have been identified with physically less demanding work as well as with higher wages. Given that rural youths spend most of their time in school, their participation in farm work is limited to the peak season. A combination of these factors is contributing to a situation whereby youths are less inclined to make a living off the land and are losing essential skills needed for agricultural production. This is further compounded by HIV/AIDS which has left behind more than 12 million orphans to date in sub-Saharan Africa.

The death of one or both parents to HIV/AIDS often means that younger members of the family may not have the necessary knowledge, experience and management skills to run the farm of the household. Similarly, if one parent dies, it may be that the surviving parent does not have the skills in farming and/or marketing certain crops.

3.3.2 Evaluating the different curriculum models

There are 3 main 'models' of mainstreaming HIV/AIDS into the curriculum:

- Mainstreaming across all courses, so that every course includes some HIV/AIDS content
- Designing a carrier subject in a program and where the content lends itself to integration
- A stand-alone course as part of the sector program

There is no one perfect way for carrying out the mainstreaming of HIV/AIDS and 'no one size fits all'. Some universities such as the University of Namibia also have a 'stand alone' course that all first year students take regardless of their program of study. This first year course which typically aims to keep young people alive through knowledge of HIV/AIDS is not the same as mainstreaming curricular content and has different purposes.

Strengths and weaknesses of mainstreaming HIV/AIDS across the curriculum

The least effective way of including life skills-based HIV prevention education is when it is integrated into all, or many, existing subjects and delivered by regular classroom teachers.

Strengths	Weaknesses
 A whole school approach can be taken. It utilizes structures that are already in place and is often more acceptable than a separate course of family life education or sex education. Many teachers are involved, even those not normally involved in teaching HIV education. High potential for reinforcement. 	 The issues can be lost among the higher status elements of the subjects. Teachers may maintain a heavy information bias in content and methods applied, as is the case with most subjects. The logic of HIV prevention is lost. Very costly and time consuming to access all teachers and change teaching materials. Some teachers do not see the relevance of the issue to their subject. Difficulty in ensuring the consistency of message across subjects and the logic required for HIV prevention. Potential for reinforcement seldom realized due to other barriers.

Strengths and weaknesses of the approach of one 'carrier' subject or separate course

Strengths	Weaknesses
Teachers of the carrier subject are likely to see the relevance of the topic to other aspects of the subject.	Risk of an inappropriate carrier subject being selected.
Teachers of the carrier subject are likely to be more open to the teaching methods and issues being discussed due to their subject experience.	Integration in biology would focus on biomedical knowledge, while health education or civic education would permit a more holistic approach involving social and personal issues.
Cheaper and faster to integrate the components into materials of one subject than to infuse across all.	Integration may be marginal addition.

Clarke, David J. (2008) Heroes and Villains: teachers in the education response to HIV. Paris: International Institute for Educational Planning, 89. Retrieved 15 May 2009 from http://www.iiep.unesco.org/fileadmin/user_upload/Info_Services_Publications/pdf/2009/HIV_CLARKE.pdf

3.3.3 specialized stand-alone module or HIV/AIDS course: a specialized HIV/AIDS course that equips students with the basic understanding of HIV/AIDS concepts and its manifestations and impacts on the sector

A specialized 'stand alone' course is a course that equips students with the basic understanding of HIV/AIDS concepts and its manifestations and impacts on the sector. In addition to offering students with a basic understanding of HIV/AIDS from a medical and social perspective, it will look into the internal factors such as employees and students of higher educational institutions, working procedures, institutional set and the like to answer the fundamental question of "How does HIV/AIDS affect our university and its ability to work effectively, now and in the future?" It will attempt to acquaint students with most basic knowledge on HIV and AIDS so as to equip them with the know how in terms of how to interact with vulnerable or most affected sections of society.

List of Potential topics

Topic 1: An introduction to Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS)

Topic 2: HIV Transmission, spread and prevention

- Topic 3: Opportunistic diseases commonly associated with HIV/AIDS
- Topic 4: Impact of HIV/AIDS on livelihood
- Topic 5: Treatment and counseling
- Topic 6: Agricultural solutions to HIV/AIDS problems
- Topic 7: Policy and institutional aspects
- Topic 8: Stigma, discrimination and exclusion pertaining to PLWA

Strengths and weaknesses of this approach

Strengths	Weaknesses
Likely to have teachers who are focused on the issues, and can be specifically trained	The subject may be accorded very low status and not seen as important, especially if not examinable.
Most likely to have congruence between the content and teaching methods in the subject, rather than shortcutting which may occur through 'infusion' or 'carrier subject' approaches	Requires additional time to be found in already overloaded curriculum if not already included. Other teachers may make no effort to promote HIV education within their teaching.

Clarke, David J. (2008) Heroes and Villains: teachers in the education response to HIV. Paris: International Institute for Educational Planning, 89. Retrieved 15 May 2009 from http://www.iiep.unesco.org/fileadmin/user_upload/Info_Services_Publications/pdf/2009/HIV_CLARKE.pdf

3.4 Some challenging in integrating HIV&AIDS into the curriculum of HEIs³⁶

- ✓ Lack of trained human resource has been observed as a key factor hindering the abilities of Higher Educational institutions to respond effectively to the threat posed by HIV/AIDS to the institutions
- ✓ The tendency towards of viewing HIV/AIDS as a health issues rather than multi-faceted issue



³⁶ This section is informed by "The HIV/AIDS Challenge in African Higher Educational Institutions" An AAU Competency Based Training in Management and Leadership For African Higher Educational Institutions.

- the culture of silence and denial that needs to be changed; and
- ✓ HIV and AIDS fatigue syndrome

3.5 Some tips on integrating HIV/AIDS into the curriculum

- Clearly this work is not just about sex and sexuality. You need not mention condoms or sex to be addressing some aspects of HIV/AIDS. Transmission is fuelled by many issues related to topics such as those listed below. If you educate to address some of the factors that fuel transmission, you will be contributing to curbing the pandemic and helping graduates to create a world where issues related to HIV & AIDS are addressed in a humane, practical and effective manner
- Gender inequality
- poverty/economic development
- Mobility (bridging populations)
- Discriminatory attitudes and stigma
- Human rights
 - ✓ Start small. See how you can work HIV/AIDS into just one topic or section of a learning area, and then consider how you might expand, rather than feeling that you have to redesign your whole curriculum.
 - ✓ Be sensitive to the únexpected when you create a space for students to explore their understandings of HIV/AIDS. You may, for example, find that some students may want to bring up issues that are more personal. Be prepared to take on this role. Know where to refer them for counseling.
 - ✓ Network with other staff members who are working in integration. You should gain the support and collaboration of colleagues or a 'like-minded' team to discuss integration possibilities.

so it is important that you keep yourself informed and in touch with other colleagues working in areas such as gender and HIV/AIDS medical research.

3.6 The link between HIV/AIDS and gender relations 37

It is likely that the AIDS epidemic will cause a major agricultural labour shortage in many countries, with 7 million agricultural workers already lost and at least 16 million more who could die before 2020 in sub-Saharan Africa. A study conducted by FAO in Namibia showed that for all types of rural households death due to AIDS meant the "loss of productive resources through the sale of livestock (to pay for sickness, mourning and funeral expenses) and sharp decline in crop production". Sickness also contributes to the scarcity of labor because of both the incapacity of workers and the time others have to devote to looking after the sick. If a family member is sick with AIDS, women may be unable to perform such labor-intensive and significant tasks as watering, planting, fertilizing, weeding, harvesting and marketing. In many rural areas, women account for 70 per cent of the agricultural labor force and 80 per cent of food production. With lost labor, nutritious leafy crops and fruits may be replaced by starchy root crops, while the sale of livestock means less milk, eggs and meat.

Chronic food insecurity could result, together with high levels of malnutrition which in turn compromises with the immune systems. In addition, the death of farmers, extension workers and teachers from AIDS can undermine the transmission of knowledge and know-how and the local capacity to absorb technology transfers. Since men have more access to productive resources such as land, credit and technology, their widows may be left without such access and women's livelihood may be threatened. HIV/AIDS is also reducing investment in irrigation, soil enhancement and other capital improvement.

Institutional mechanisms necessary for effective mainstreaming of gender and HIV/AIDS in curriculum

There are certain necessary preconditions or an enabling environment that should obtain for adequate mainstreaming of gender and HIV and AIDS in the agricultural curriculum. These conditions relate more with the institutional frameworks and human resource. Some of these are mentioned below:

4.1 Institutional structure to support gender and HIV/AIDS mainstreaming: such as gender and HIV/AIDS office

Institutional reform that supports the implementation of mainstreaming in the curriculum including the strengthening of the gender office to coordinate gender related activities in the program. This may result in (as it is already the case in higher educational institutions in the country) the opening and/or strengthening of gender and HIV and AIDS offices and clubs.

The offices would form part of the institutional structure of the higher educational institutions. As such it will be assigned with the required human resource, should be allocated sufficient budget to plan and implement programs.

Clubs on the other hand may operate at the level of students and/or teachers or a combination of both. In many of the higher educational institutions in particular in TVETS, there are strongly operating gender and HIV and AIDS clubs that engage in various activities: awareness creation session, support to victims of GBV as well as students with HIV and AIDS, etc.

4.2 Gender and HIV/AIDS skills training for instructors

Sensitization of academic staff to the gender dimensions of teaching and learning: these can be done through short seminars and workshops that may be continually given within each institution (for example gender clubs in various higher educational institutions provide workshop programs to familiarize staff members about gender and HIV issues in general as well as the prevailing situation within the respective institutions).

Gender skills training for academic staff: on the job training for instructors on the basic concepts of gender and HIV and AIDS; short courses during break sessions in other (higher) educational institutions that provide courses on gender and HIV and AIDS; work visits to institutional structures with the mandate to work on gender and HIV AIDS issues such as the Ministry of Women Youth and Children Affairs as well as regional bureaus, and Federal and regional level HIV Prevention Offices.

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