

# **Agricultural Innovations: A Potential Tool to HIV Mitigation**

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## **Contextualizing AIDS Pandemic**

Since the beginning of the global pandemic AIDS has been considered a medical problem by both policymakers and the worldwide public (Collins and Rau 2000). As no vaccine or cure are found yet, HIV prevention efforts mainly focus on changing individual behavior through awareness creation (Airhihenbuwa and Oregon 2000). However, in Africa many of these interventions have failed and still fail: countless surveys on people's knowledge, attitudes and practices conducted since the mid-1980s up until now show that there is little correlation between increased knowledge of HIV and AIDS and changes in high-risk behavior (Freudenthal 2001; Ngwira *et al* 2001; Nguyen and Stovel 2004; Schoepf 2001). Meanwhile the number of people living with and dying of HIV and AIDS continues to rise (UNAIDS 2006). A different, more informed and contextualized approach to HIV and AIDS is urgently needed.

Contextualizing the AIDS pandemic reveals that it has struck most severely in nations with economies in crisis: of all HIV-infected people worldwide 95 percent live in developing countries (UNAIDS 2006). The hardest hit region globally is sub-Saharan Africa, inhabited by little over 10 percent of the world population, but home to two thirds of all HIV-infected people (UNAIDS 2006). Although infection rates are still highest in the urban areas, the rates increase fastest in the rural areas (FAO 2003; UNDP 2005). Women are disproportionately affected. In sub-Saharan Africa they currently account for 59 percent of all infected people, and this share continues to increase (UNAIDS 2006). When contextualizing the pandemic in this way, it becomes evident that AIDS is not simply a medical health problem equally threatening all human beings. Its uneven distribution calls for an in-depth understanding of the dynamics that facilitate the spread of HIV.

## **Economic Disempowerment and HIV Prevalence**

In the 1980s AIDS started out as mainly striking among the urban educated - those who traveled, socialized, could afford extra-marital relationships. By now, however, the total amount of poor and rural infected in sub-Saharan Africa far outnumbers the urban infected (Bryceson and Fonseca 2005; Müller 2005). It appears that the magnitude of the AIDS pandemic in sub-Sahara Africa is increasingly linked to the inability of a part of the population to achieve or keep up a sustainable livelihood. Indeed, malnourished bodies are more susceptible to illnesses and infections, including sexually transmitted ones (and once HIV-infected, the onset of AIDS is likely to be quickened by

malnutrition, repeated infection and unsanitary living conditions) (Tomkins and Watson 1993; Chopra 2005; Collins and Rau 2001; FAO 2003). Related factors facilitating the spread of AIDS are the little access impoverished people often have to health care and education. In addition, poverty and food insecurity push individuals to resort to practices that increase their chances of contracting and spreading HIV. For example, many, especially men, migrate in search of paid employment (CHGA 2004). The links between mobility and HIV transmission have been well documented (see Collins and Rau 2001:8-12 for review). Long-distance labor contracts often imply that workers leave behind their families for extended periods of time, turning to casual sexual encounters and commercial sex workers for their satisfaction. Both these workers as well as the women often have multiple partners, enhancing the risk of HIV-infection (Bryceson *et al* 2004; CHGA 2004; Drimie 2002; Epstein 2002; Freudenthal 2001; Garbus 2003; Marcus 1993; Ngwira *et al* 2001). When the workers return home, many bring with them the deadly virus. Concurrently, male migration may push left behind wives to engage in transactional sex to supplement their incomes<sup>1</sup> (Garbus 2003; Marcus 1993). As rural women generally have little or no education, few waged jobs are available to them (Schoepf 1988). Furthermore, for women access to land, assets or credit is often restricted. For many poor women, having little or no alternative sources of income, exchanging sexual favors for material support serves as a basic survival strategy (elaborated upon in Van den Borne 2005 and Schoepf 1988; mentioned in Bryceson *et al* 2004; Collins and Rau 2000; Drimie 2002; Epstein 2002; Freudenthal 2001; Gillespie and Kadiyala 2005; Jayne *et al* 2006; Marcus 1993; Rimal *et al* 2004; Zuniga 2004).

### **Gender Constructs and HIV Prevalence**

Biologically, women are found to be most susceptible to HIV infection as the tissue of female genitals is easier torn than that of male genitals, semen contains higher concentrates of the virus and comes in larger quantity than vaginal secretion. This, however, is the case worldwide. It becomes especially problematic when combined with severe gender inequality, as this inhibits women to negotiate the conditions under which sex occurs. For one, when a woman has to engage in sexual intercourse without being aroused, the risk of tissue tearing and thus infection becomes much higher. Secondly, abstinence and condom use can often not be demanded by women who are culturally and economically dependent on men (Ackermann and De Klerk 2002; Marcus 1993; Lawson 1999; NAC 2003; Schoepf 1988; Tallis 2002; Van den Borne 2005).

### **Misgivings of Conventional Approaches**

Condoms could avoid many new infections in Africa, because here HIV is mainly transmitted through unprotected heterosexual intercourse<sup>2</sup> (UNAIDS 2006). However,

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<sup>1</sup> Which is not to say that left behind women only engage in sex to supplement their income; physical and psychological needs may be other important reasons for this.

<sup>2</sup> Contrary to for example Asia, where most new infections are caused by needle sharing among drug users (UNAIDS 2006).

condoms often are associated with ‘casual sex’, prostitution, promiscuity, and mistrust, and are therefore perceived as inappropriate in the context of a long-term relationship (Bryceson *et al* 2004; Marcus 1993; Van den Borne 2005). Many women engaged in transactional survival sex would prefer and aim for a lasting relationship (*idem*). In order to turn casual sexual encounters at least into the *form* of a relationship, and so disassociate oneself from disrespectful prostitution and increase one’s chances on the relationship to last, condom use is not brought up. For women to demand or even suggest condom use within a relationship would be perceived by her partner as accusing him of infidelity, as proof for her own infidelity or depriving him of sexual pleasure, hence putting her at risk of physical violence or economic abandonment (Garbus 2003; Marcus 1993; Lawson 1999; NAC 2003; Schoepf 1988). More generally, it is perceived inappropriate for a woman to demand anything from a man, as both men and women are raised to believe in male superiority and generally accept the consequent power imbalance as natural and indisputable.

### **Differential Economic Power: Women Disadvantaged**

Women in direct need for support do not feel positioned to negotiate the conditions under which sex occurs. When immediate survival is in question, the risk of dying from AIDS in the future can seem irrelevant. In a study of low-income women in long-term relationships in India the women expressed their belief that the economic consequences of leaving a relationship that they perceived as risky were far worse than the risk of contracting HIV (Gupta 2000). Marcus (1993) tells of female market traders, cultivators, waitresses and barmaids in Uganda who supplement their income with occasional sex with customers when times are particularly hard, and who rationalized: ‘If we fear AIDS, what shall we eat?’ (Nakuti *et al* 1992, in Marcus 1993:3). Because of their poverty, many poor women, married and single, knowingly engage in high risk behavior that facilitates the spread of HIV. So, ironically, what used to be a common survival strategy for poor women, now all too often leads them to an early death.

It may be clear by now why conventional AIDS interventions (the so-called “ABC” = Abstain, Be faithful or use a Condom) have been barely effective in many underdeveloped countries. These recommendations are based on the assumption that women have control over their own sexuality, as well as the sexual activities of their partners – which, unfortunately, most do not. Unfavorable economic, socio-cultural and political conditions put millions of people at increased risk of infection, and whether they are aware of this risk or not, many - especially poor women - simply have few options to decrease their susceptibility.

### **Addressing Key Drivers of HIV/AIDS**

As poverty and food insecurity are found to be key drivers of the AIDS pandemic in southern Africa, it follows that these need to be addressed in order to bring the pandemic under control and mitigate its devastating impacts. Because most of the extreme poor in

southern Africa (83%) are in the rural areas, and 85 per cent of all poor in this region depend on agriculture for their livelihood (IFAD 2002), investment in agricultural development is of particular importance when trying to alleviate poverty in this region. More secure livelihoods for rural women – thus reducing their dependence on men - could help to prevent hazardous survival sex and exploitative power relations that increase their risk of becoming infected with and spreading HIV. Improved agricultural technologies that are economically viable, technologically feasible and socially acceptable to women can diminish rural food insecurity, and, if well targeted, diminish gender inequality.

So far, women farmers have benefited very little from improved agricultural technologies. Kaaria and Ashby (2001) critically reviewed the impacts of technological innovation in agriculture on rural women's welfare and found that the bulk of interventions even exacerbated gender inequality by further eroding women's economic security and social status (also Booth 1999; Bryceson 1995; Doss 1999; Grieco and Apt 1998). Formal agricultural research and extension services mainly target men, in so neglecting female farmers, who in southern Africa are responsible for most food securing activities (Freeman *et al* 2002; Jayne *et al* 2006; Mayoux 2002). Mayoux (2002) writes:

In many parts of Africa colonialism undermined many indigenous ... women's rights. Male colonial administrators imposed household models and stereotypes of women derived from their own countries. These Western models and stereotypes persisted in the so-called 'development programs' following independence (Rogers 1982). These have not only excluded women through gender discrimination but even further eroded women's traditional rights through their focus on channeling all productive interventions through male 'household heads'; rather than recognizing and supporting women's productive role. (Mayoux 2002:14)<sup>3</sup>

### **Business *not* as Usual Approaches Needed**

While men benefit from the new technologies, women are excluded from training and technology transfer activities either because they are not considered as users, or they can not participate because of their heavy workload, illiteracy or other socio-economic or cultural constraints. Information is expected to trickle down from men receiving extension services, to women. This, however, has proven to be a misassumption (Booth 1999). According to Kaaria and Ashly (2001:2) the widespread assumption that technologies and extension services are "gender-neutral" is a key factor in explaining women's inability to benefit from them. As women are disproportionately affected by the AIDS pandemic, partly *because* of their low economic insecurity and low social status, effectively targeting them with relevant technologies is ever more urgent (Gillespie and Kadiyala 2005; ICAD 2004; Kim and Watts 2005; Mutangadura 2005).

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<sup>3</sup> See also Freeman *et al* 2002; Jayne *et al* 2006; Quisumbing and Meinzen-Dick 2001.

## **Realizing Agriculture's Contribution to Mitigating AIDS Pandemic: Policy Options**

So far, attention within the field of agriculture and AIDS has mainly focused at identifying and mitigating the impacts of AIDS on food security. While it is of undeniable importance to mitigate the devastating impacts of AIDS, this should not overshadow efforts to mitigate the pandemic itself. To reverse the downward spiral of AIDS and livelihood insecurity a shift of perspective is needed urgently. More attention has to be directed towards understanding how insecure livelihoods fuel the pandemic by facilitating the spread HIV and accelerating the onset of AIDS. Only when the root causes of the pandemic are recognized and better understood can we start to address them.

The first crucial step for policy makers is thus to recognize that agricultural interventions can play a critical role in mitigating the spread of HIV in underdeveloped regions like southern Africa. To realize this potential a focus on women farmers is essential as these are most vulnerable to HIV infection, are responsible for most food-securing activities and have benefited least from agricultural innovations. Attention needs to be directed at understanding the specific constraints, needs and priorities of vulnerable women smallholder farmers in relation to intra-household dynamics so that appropriate technologies and extension strategies can be developed. Kaaria and Ashby (2001) found that agricultural interventions which impacted positively on rural women's welfare all began with such analyses. Other strategies they identified as important if women are to benefit from technical change include involving women in all phases of a project cycle; improving the productivity of women's labor while addressing the constraints that result from drudgery; integrating both pre- and post harvest activities; ensuring women's access to and control over the new technology and its resulting benefits; and organizing women's groups to increase their bargaining power.

## **References**

- Ackermann L and de Klerk G, 2002.** Social Factors that make South African Women Vulnerable to HIV Infection. In: *Health Care for Women International*, 23:163-172.
- Airhihenbuwa C and Oregon R, 2000.** A Critical Assessment of Theories/Models Used in Health Communication for HIV/AIDS. In: *Journal of Health Communication*, Vol.5 (Supplement), pp. 5-15.
- Booth G, 1999.** The Economic Role of Women in Agriculture and Development: Promoting Income-generating Activities. Summary report of CTA seminar, Greece. CTA.
- Bryceson D, 1995.** Wishful thinking: Theory and Practice of Western Donor Efforts to Raise Women's Status in Rural Africa. In: Bryceson (ed.), *Women wielding the hoe: Lessons from rural Africa for feminist theory and development practice*. Cross-cultural perspectives on women Vol.16. Oxford: Berg Publishers.
- Bryceson D and Fonseca J, 2005.** Risking Death for Survival: Peasant Responses to Hunger and HIV/AIDS in Malawi. Paper presented at the International Conference on HIV/AIDS, Food and Nutrition Security organized by IFPRI, Durban.

**Bryceson D, Fonseca J and Kadzandira J, 2004.** Social Pathways from the HIV/AIDS Deadlock of Disease, Denial and Desperation in Rural Malawi. CARE/RENEWAL.

**Chopra M, 2004.** Food Security, Rural Development and Health Equity in Southern Africa. Regional Network for Equity in Health in Southern Africa (EQUINET) Discussion Paper Nr.22.

**CHGA [Commission in HIV/AIDS and Governance in Africa], 2004.** Globalised Inequalities and HIV/AIDS. Index No. CHGA-B-11-0002, UNECA.

**Collins J and Rau B, 2000.** AIDS in the Context of Development. Social Policy and Development Programme Paper 4, United Nations Research Institute for Social Development: Geneva.

**Doss CR, 1999.** Twenty-five Years of Research on Women Farmers in Africa: Lessons and Implications for Agricultural Research Institutions with an Annotated Bibliography. CIMMYT Economics Program Paper No. 99-02, Mexico D.F.

**Drimie S, 2002.** The Impact of HIV/AIDS on Rural Households and Land Issues in Southern and Eastern Africa. Background paper prepared for FAO: Rome.

**Epstein H, 2002.** The Hidden Cause of AIDS. In: The New York Review of Books, Vol. 49, No. 8.

**FAO [Food and Agriculture Organization of UN], 2003.** Food Security and HIV/AIDS: An Update. Paper prepared for the 29<sup>th</sup> session of the Committee on World Food Security: Rome.

**Freeman A, Rohrbach D and Ackello-Ogutu C, 2002.** New Priorities for Agricultural Research in Africa. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) Policy Brief No 2.

**Freudenthal S, 2001** A Review of Social Science Research on HIV/AIDS. Paper prepared for Sida/SAREC.

**Garbus L, 2003.** HIV/AIDS in Malawi: Country AIDS Policy Analysis Project.

**Gillespie S (ed), 2006.** *AIDS, Poverty and Hunger: Challenges and Responses*, International Food Policy Research Institute (IFPRI), Washington D.C.

**Gillespie S and Kadiyala S, 2005.** *HIV/AIDS and Food and Nutrition Security: From Evidence to Action*. Food Policy Review 7. International Food Policy Research Institute (IFPRI): Washington DC.

**Grieco M and Apt N, 1998.** Gender and Agriculture in Africa: The 'expert' neglect of local practice. Paper delivered at the International Sociological association Conference, Montreal.

**Gupta G, 2000.** Gender, Sexuality, and HIV/AIDS: The What, the Why and the How. Speech held at the 13<sup>th</sup> International AIDS Conference, Durban, South Africa./ Plenary address prepared for the XIIIth International AIDS Conference organized by the International Center for Research on Women, Durban

**ICAD [Interagency Coalition on AIDS and Development], 2004.** *HIV/AIDS, Gender Inequality and the Agricultural Sector: Guidelines for incorporating HIV/AIDS and gender considerations into agricultural programming in high incidence countries*. ICAD, Ottawa.

**IFAD [International Fund of Agricultural Development], 2002.** Assessment of Rural Poverty: Eastern and Southern Africa. Rome.

**Jayne T, Villareal M, Pingali P and Hemrich G, 2006.** HIV/AIDS and the Agricultural Sector in Eastern and Southern Africa: Anticipating the Consequences. In: Gillespie (ed), *AIDS, Poverty and Hunger: Challenges and Responses*, International Food Policy Research Institute (IFPRI), Washington D.C.

**Kaaria S and Ashby A, 2001.** An Approach to Technological Innovation that Benefits Rural Women: The Resource-to-Consumption System. Working document CGIAR Systemwide Program on Participatory Research and Gender Analysis No.13: Colombia.

**Kim J and Watts C, 2005.** Gaining a Foothold: Tackling poverty, gender inequality, and HIV in Africa. In: *BMJ*, Vol.331, p.769-772.

**Lawson A, 1999.** Women and AIDS in Africa: Sociocultural Dimensions of the HIV/AIDS Epidemic. In: *International Social Science Journal*, Vol.161. UNESCO: Oxford.

**Marcus R, 1993.** Gender and HIV/AIDS in Sub-Saharan Africa: The Cases of Uganda and Malawi. Report prepared for Centre for Development Studies, No.13.

**Mayoux L, 2002.** Women's Empowerment or Feminization of Debt? Towards a New Agenda in African Microfinance. Report based on a One World Action conference, London.

**Müller T, 2005.** *HIV/AIDS and Human Development in sub-Saharan Africa: Impact Mitigation through Agricultural Interventions. An Overview and Annotated Bibliography.* African Women Leaders in Agriculture and the Environment (AWLAE) series No.3, Wageningen Academic Publishers.

**Mutangadura G, 2005.** Gender, HIV/AIDS and Rural Livelihoods in Southern Africa: Addressing the Challenges. In: *JENDA: A Journal of Culture and African Women Studies*: No. 7.

**NAC [Malawi National AIDS Committee], 2003.** HIV/AIDS in Malawi: Estimates of the Prevalence of Infection and the Implications. NAC: Lilongwe.

**Nguyen V and Stovel K, 2004.** The Social Science of HIV/AIDS: A Critical Review and Priorities for Action. Social Science Research Council Working Group on HIV/AIDS: Washington DC.

**Ngwira N, Bota S and Loevinsohn M, 2001.** HIV/AIDS, Agriculture and Food Security in Malawi: Background to Action. RENEWAL working paper No.1: Lilongwe and The Hague.

**Quisumbing A and Meinzen-Dick R (eds), 2001.** Empowering Women to Achieve Food Security. IFPRI 2020 Vision, Focus 6. International Food Policy Research Institute (IFPRI), Washington DC.

**Rimal R, Tapia M, Bose K, Brown J Joshi K and Mkwandawire G, 2004.** Exploring Community Beliefs, Attitudes and Behaviors about HIV/AIDS in Eight Malawi BRIDGE districts. Center for Communication Programs, John Hopkins University, Baltimore, MD.

**Schoepf B, 1988.** Women, AIDS and Economic Crisis in Central Africa. In: *Canadian Journal of African Studies* 1988 Vol.22 No.3.

----- **2001.** International AIDS Research in Anthropology: Taking a Critical Perspective on the Crisis. In: *Annual Review of Anthropology*, Vol 30: 335-361.

**Tallis V, 2002.** Gender and HIV/AIDS: Overview Report. Bridge Cutting Edge Pack, Institute of Development Studies: Brighton.

**Tomkins A and Watson F, 1993.** Malnutrition and Infection. United Nations Administrative Committee on Coordination/Sub-Committee on Nutrition (ACC/SCN) State-of-the-Art Nutrition Policy Discussion Paper No.5: Geneva.

**UNAIDS, 2006.** Report on the Global AIDS Epidemic. UNAIDS: Geneva.

**UNDP 2005.** Malawi Human Development Report. UNDP: Lilongwe.

**Van den Borne F, 2005.** *Trying to Survive in Times of Poverty and AIDS: Women and Multiple Partner Sex in Malawi.* Het Spinhuis Publishers: Amsterdam.

**Zuniga M, 2004.** The Feminization of AIDS. In: The Soroptimist of the Americas magazine, April 2004.