

# AIDS and agriculture in Africa: can agricultural policy make a difference?

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**H**uman immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) is frequently perceived as an individual health problem or as an epidemic with effects on morbidity or mortality, health care and costs. From such a perspective, the "AIDS epidemic" emerges as a series of more or less clearly defined epidemics, each with characteristics of the subsystem in which it occurs and, together, forming a pandemic. Traditionally, such epidemics have tended to be identified with particular population groups, and have been distinguished as heterosexual, intravenous drug use (IDU), homosexual or based on blood transfusion. These aspects are very important, but they are not the only possible dimensions of the epidemic (see Box 1).

## FAO AND HIV/AIDS

As recognition of the impact of HIV/AIDS on agriculture and food security is growing, the working relations between FAO and the Joint United Nations Programme on AIDS (UNAIDS) are developing and a Cooperation Framework between the two organizations, focusing on their respective areas of comparative strength, was signed in July 1999.

## UNAIDS partnership

UNAIDS was established in 1995. It is an innovative joint venture within the UN family of organizations. The global mission of UNAIDS, as the main advocate for worldwide action against HIV/AIDS, is to lead, strengthen and support an expanded response to the epidemic. This response has four goals:

- to prevent the spread of HIV;
- to provide care and support for those infected and affected by the disease;
- to reduce the vulnerability of individuals and communities to HIV/AIDS;
- to alleviate the socio-economic and human impact of the epidemic.

UNAIDS is guided by a programme coordinating board with representatives of 22 governments from all geographic regions and the UNAIDS cosponsors: the United Nations Children's Fund (UNICEF), the United Nations Development

## BOX 1

### ESTIMATING AND MONITORING HIV/AIDS PREVALENCE

For many countries, no data on the prevalence of HIV are published; for many others studies are unevenly distributed. There is a tendency for prevalence to be monitored in large urban centres, but such centres often comprise a minority of a nation's population. The true extent of HIV could only be estimated with a diverse set of urban and rural samples. There is no reason to believe that the relationship between urban and rural prevalences will be in any way fixed in terms of place and time, so extrapolation from urban prevalence to rural prevalence and then to national prevalence should be done with extreme care.

Despite these problems, global HIV surveillance has, because of ethical, financial and logistic constraints, had to concentrate on sentinel surveillance of convenience samples. To understand changes in incidence and prevalence within a population, detailed stratification of that population by age, sex, education, socio-economic status and geography can help identify particular patterns of change within population subgroups which may not emerge when only a general sample of the population is taken. Such stratification into groups makes studies more difficult to carry out because samples need to be large enough to permit accurate detection of changes in particular subgroups.

*Source:* Extracted from UNAIDS, 1999b.

Programme (UNDP), the United Nations Population Fund (UNFPA), the United Nations International Drug Control Programme (UNDCP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO) and the World Bank. In addition, an Inter-Agency Advisory Group (IAAG), composed of the cosponsors and other UN bodies and organizations (including FAO), also provides advice to UNAIDS (UNAIDS, 1999a).

## FAO's approach

FAO has conducted a number of analyses which have concentrated on the impact of the pandemic on agricultural production and household food security (see Box 2). These FAO studies focused on the development dimension of HIV/AIDS using a system approach; the farm household and/or the

commercial farm are viewed as systems that form a good basis for studies of agricultural development and food security.

Each of the two systems is of a different nature. Thus, the farm household system can be considered as forming the first level, which is embedded within the second-level higher farming system, itself defined by its climate, soil, etc. Such systems should be seen as providing an environment that can influence, rather than determine, the behaviour of their members, in particular in terms of vulnerability and/or resistance to external shocks.

The characteristics and vulnerability of this two-tiered system are embedded in the culture of the community concerned and interrelate with the demographic strategies and behaviour of household members, whether these involve rural-urban migration (e.g. temporary during agricultural slack seasons or more permanent owing to drought) or sexual behaviour (ranging from the demand for children to vulnerability to casual or commercial sex). The resulting possible infections by HIV, sickness and death from AIDS have an impact on agricultural production and food security.

This article highlights some of the effects of the HIV/AIDS pandemic on farm households and discusses some policy issues from the perspective of agriculture. The focus is on sub-Saharan Africa, where the epidemic has spread rapidly over the past 15 years (see Figure 1).

#### IMPACT ON FARM HOUSEHOLDS

The farm household is a complex system dependent on human capital and remittances (see Figure 2). The household interacts with the production unit. However, nowadays there are also interactions with off-farm units, especially in urban areas, and these are included in the system. HIV/AIDS depletes both the human capital base, through reducing the availability of labour skills and time, and the capital available through remittances or savings, which may disappear or be diverted to cover costs related to sickness and death.

The resulting impacts of these effects have been found in the FAO studies to take a number of forms (FAO, 1995; FAO, 1997). The following factors can be observed in various combinations and degrees and the list is not exhaustive.

#### Impact on agricultural production

**Reduction in area of land under cultivation.** Land is often allocated by community authorities to families on the basis of their size. The sickness and death of an adult can result in the inability of the household to cultivate all the land at its disposal. Tending for the sick can take a considerable amount of time, which is no longer available for agriculture. Thus, more remote fields tend to be left fallow and the total output of the agricultural unit consequently declines.

#### BOX 2

##### SELECTED FAO DOCUMENTS ON HIV/AIDS, PUBLISHED SINCE 1994

**FAO.** 1994. *What has AIDS to do with agriculture?* Rome.

**FAO.** 1995. *The effects of HIV/AIDS on farming systems in Eastern Africa.* Rome.

**FAO.** 1995. *Report of a Workshop on the Relevance of HIV/AIDS to the Work of FAO*, by G. Hemrich, July 1995, Rome.

**FAO.** 1995. AIDS: the future of the pandemic. Statement by J.M. Mann on World AIDS Day, Rome, December 1995.

**FAO.** 1997. *The impact of HIV/AIDS on rural households/communities and the need for multisectoral prevention and mitigation strategies to combat the epidemic in rural areas (with special emphasis on Africa)*, by E. Baier, Rome, January 1997. (in English and French)\*

**FAO.** 1997. *Impact du VIH/SIDA sur les systèmes d'exploitations agricoles en Afrique de l'Ouest.* Rome, November 1997.\*

**FAO.** 1997. *The rural people of Africa confronted with AIDS: a challenge to development*, summary of FAO studies on AIDS. Rome, December 1997. (in English and French)

**FAO.** 1998. *The implications of HIV/AIDS for rural development policy and programming: focus on sub-Saharan Africa*, by D. Topouzis, Rome, June 1998. Also published with same title as HIV and Development Programme Study Paper No. 6, New York, UNDP.\*

**FAO.** 1998. Rural children living in farm systems affected by HIV/AIDS: some issues for the rights of the child on the basis of FAO HIV/AIDS studies in Africa. Paper presented by J. du Guerny at the UNHCHR Committee on the Rights of the Child: day of discussion on Children living in a world with AIDS, Geneva, 5 October 1998.\*

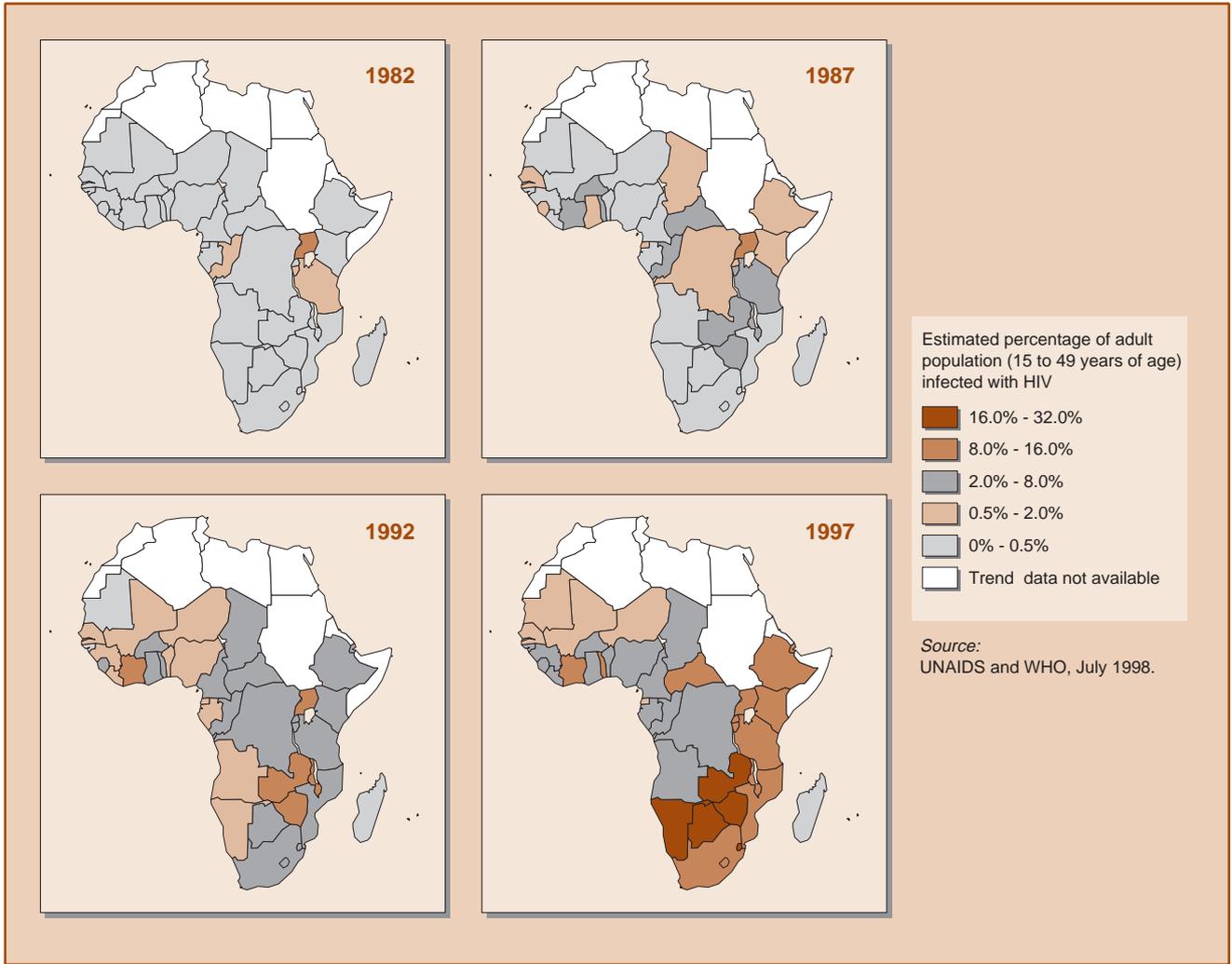
**FAO.** 1998. *FAO and the socio-economic impact of HIV/AIDS on agriculture*, updated version. Rome, October 1998.

**FAO.** 1999. *HIV/AIDS and the commercial agricultural sector of Kenya – impact, vulnerability, susceptibility and coping strategies*, by G. Rugalema with S. Weigang and J. Mbwika. FAO/UNDP.\*

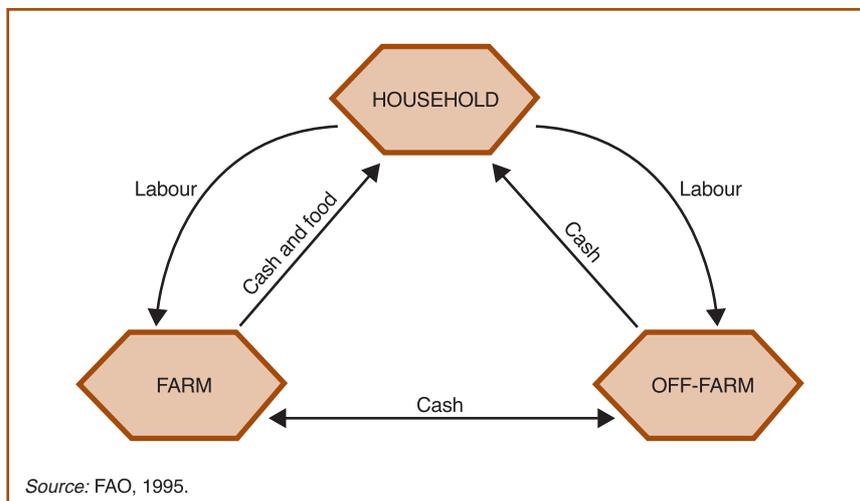
**FAO.** 1999. *Sustainable agricultural/rural development and vulnerability to HIV/AIDS*, by D. Topouzis and J. du Guerny. FAO/UNAIDS.

\* Publications marked with an asterisk are available on the Internet at: [www.undp.org/popin/fao/faohome.htm](http://www.undp.org/popin/fao/faohome.htm)  
Also available in printed form (limited number).

**Declining yields.** These are less immediately visible but important and are caused by a variety of factors, in addition to the ones mentioned above, including delays or poor timing in such essential farming operations as tillage,



**1**  
**Spread of HIV in sub-Saharan Africa, 1982-1997**



**2**  
**A farm household system**

planting and weeding. Delays occur because of sickness or dependency on outside labour which is not always available when needed (e.g. relatives who assist through solidarity first care for their own fields). It also seems that the fertility of the soil is affected negatively owing to the priority given to immediate survival concerns over longer-term land conservation measures.

***Decline in crop variety and changes in cropping patterns.***

Cash crops are often abandoned owing to the inability to maintain enough labour for both cash and subsistence crops. Switching from labour-intensive crops, to less labour-intensive ones, is observed. This could have an impact on the nutritional quality of the diet.

***Decline in livestock production.*** Livestock serves multiple functions, and also frequently represents a form of savings. The medical costs incurred by those affected by HIV/AIDS often require the sale, gift or sacrifice of livestock as payment for traditional forms of medicine.

***Loss of agricultural skills.*** In many areas, the usual way for children to learn the required agricultural skills is by working with their parents. Given the AIDS pandemic, this is often no longer possible and, owing to the gender division of labour and knowledge, the surviving parent is not always able to transfer the skills of the deceased one.

**Impact on food security**

As is clear from the preceding points, a decline in the quality and quantity of food can often be expected. The incidence of stunting increases among orphans, and the food consumption of all surviving household members often declines when an adult dies. As well as these effects, which are owing to the loss of labour, household food security can also be reduced through an increase in the number of mouths to feed arising from the fostering of children or the hosting and caring for sick relatives.

**Other impacts**

HIV/AIDS, as is known, undermines households over time through diverting labour and resources to care. Households end up with their resources depleted and disinvestments in the production unit. The process is often compounded by the clustering of infected people within certain households owing to interspouse infection and/or mother-to-child transmission. The household's coping mechanisms also involve trade-offs between resolving immediate problems and the longer-term future. It is in such a context that the future education of children can be mortgaged and sacrificed to immediate

concerns. When such a phenomenon occurs on a large scale, it can have negative human and socio-economic consequences for national development.

Migration is another issue that is often overlooked. When infected migrants return to their home areas, not only is the flow of remittances stopped and caring costs incurred, but there can also be a shift of the burden from the relatively better-off areas that migrants are returning from towards the poorer regions they originally came from and, therefore, a widening in socio-economic gaps among geographic areas.

**POLICY CONSIDERATIONS**

The sickness and death of members of a farm household system, whatever the cause – from malaria or cholera, for example – represent shocks to the system. Their impact depends on the resilience of the system and its coping strategies. Epidemics – and disease generally – disproportionately affect the weakest in society (infants and the elderly, or the poorest in the community) and coping strategies have been established over centuries (e.g. replacement of dead children, levirate and countless forms of kin and community solidarity). What makes the HIV/AIDS pandemic unique is, *inter alia*, the scale of resource depletion it produces when the prevalence levels are high. In the case of HIV/AIDS, the sick and dead are generally found in the most active age groups, and many traditional coping mechanisms, which made good sense within the context in which they were originally developed, are less effective than normally observed, or are even counterproductive, for example, the practice of “widow cleansing”.

In view of the facts that demographic behaviour can be influenced by what happens to the farm household within the farming system and that both of these units can suffer from the impact of the HIV/AIDS pandemic, the issue of the vulnerability of this two-tiered system could be important. As an illustration, three levels (low, medium and high) can be used to measure the vulnerability of the farm households and farming systems to the impact of HIV/AIDS.

		Farming system vulnerability		
		Low	Medium	High
Farm household system vulnerability	Low			
	Medium			
	High			

3

**Analytical tool to assess vulnerability to HIV/AIDS**

A farm household, depending on its demographic characteristics and assets, can absorb more or less well the various implications of AIDS-related sickness and death; for example, a wealthy household can hire casual labour. In a similar manner, a farming system centred on commercial crops or subsistence agriculture and comprising the individual farm households is, itself, more or less vulnerable to drought, cold, etc. The combined vulnerabilities can be analysed simply, as shown in Figure 3.

### Agricultural policies

Although agricultural policies are not designed with the HIV/AIDS epidemics in mind, they can have indirect effects through increasing or reducing the vulnerability of the farm household (e.g. through the price of fertilizers) and/or the farming system (e.g. through the price of coffee). By explicitly taking the HIV/AIDS factor into account, agricultural policies would attempt not only to achieve their usual objectives (increase in yield, commercial crop outputs, etc.), but also to reduce one or both types of vulnerability and move from the higher (High x High in the Table) combinations towards the lower ones (optimally Low x Low).

A word of caution is necessary. Vulnerability reduction focuses on the background environment in which risk behaviour takes place. It influences the risk, but does not eliminate it. Policies to reduce vulnerability do not replace policies to reduce risk, but should create positive synergies.

In such a context, the following questions can be raised with the aim of reducing vulnerability to the pandemic:

- Can agricultural policies have a significant impact either on the spread and level of the HIV/AIDS pandemic or on mitigating its impacts?
- If yes, should national agricultural policies and programmes be used to combat the pandemic actively?
- If yes, what policy instruments would be effective in the field of agriculture?

Such questions have not yet really been explored, and it is understandable that a sectoral ministry might be reluctant to involve itself in an area that it would feel ill-equipped to deal with and that could be defined as coming under the exclusive authority of the Ministry of Health. It should be clear that no one is proposing that a Ministry of Agriculture be transformed into a health one, but there might be some measures, policies and programmes in its normal sphere of competence that could contribute to the national effort in combating the pandemic.

The first question would need to be studied systematically, but it seems likely that the answer would be positive and that the agriculture sector can play a role in modifying the environment in which the pandemic takes place, thereby also

modifying some of the factors that influence its course and impact. There is also a need for policies to protect rural institutions from losing their staff and their skills.

The second question can only be answered by the countries concerned, but international organizations also play a role as facilitators in defining possible issues for consideration and in exploring the terms and consequences of the debate.

As to the third question, it can be observed that the agriculture sector already has several instruments at its disposal (Maetz, 1998). These can be classified as market-related, resource base-related and institution-related. It should be highlighted that these are macro- and not microlevel tools, which means that they can have a more generic impact on vulnerability.

Market-related instruments include minimum wages, interest rates and floor/ceiling prices, among many others. A number of these could be relevant. For example, a minimum wage or floor price for a product can guarantee a minimum income to a poor household which, in turn, would lead to migration taking place under better circumstances and conditions.

Resource base-related instruments, such as infrastructure facilities for storage or development of human capital through training, could also reduce vulnerability. The storage of crops so that sales could be better timed in relation to market changes would have a favourable impact on the income of rural households and reduce seasonal vulnerability between crops. Training and the provision of survival skills are essential for orphans in order to protect them from exploitation and abuse. It is conceivable that, at the same time, there may be opportunities to introduce positive changes in agricultural techniques.

Institution-related instruments, such as promoting the participation of stakeholders in decision-making or improving legislation on property rights, could reinforce existing efforts through empowerment processes which could, in turn, have positive spin-off effects on the pandemic. Farming partnerships with the private sector, whether they be commercial or non-profit, would be an essential dimension here.

### CONCLUSIONS

The agriculture and health sectors need to become aware not only of the pandemic's impact on production, food security and institutions, but also of the existing policy and programme tools that could be effective in reducing the vulnerability of rural populations to HIV/AIDS. However, this is still uncharted territory which needs to be systematically explored in order to identify the most effective policy and programme instruments available to the agriculture sector in this area. Policy-makers have to decide that, in the face of the present and potential damage of the pandemic, it is worth

making the effort of mobilizing the agricultural institutions, both public and private, in an effective manner. ♦

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**AIDS and agriculture in Africa: can agricultural policy make a difference?**

While there are many dimensions to the AIDS pandemic, FAO has focused on the impact of the disease on agricultural production and household food security. This article presents a framework for analysing the problems and highlights key effects on farm households and larger production units. HIV/AIDS depletes both human resources and capital, leading to a reduction in land area cultivated, changes in crop patterns and declines in yields. Reduction in the formal and informal training of children and changing migration patterns can have negative consequences for development.

Agricultural policies attempt to influence yields, commercial crop outputs, etc. Whether such policies can affect the spread and level of the HIV/AIDS pandemic or mitigate its impact have not been explored. The agriculture and health sectors need to become aware of the impact of the pandemic on production, food security and institutions. They also need to recognize that there already exist a number of policy and programme tools that could be effective in reducing the vulnerability of rural populations to HIV/AIDS. At this stage, the most effective policy and programme instruments available need to be explored systematically. Efforts to mobilize agricultural institutions, both public and private, are worthwhile in the face of the present and potential damage of the pandemic. Reducing vulnerability influences the risks, but does not eliminate them. Policies to reduce vulnerability would not replace risk reduction ones, but should create positive synergies.

**Le SIDA en Afrique: la politique agricole peut-elle apporter une aide?**

La pandémie de SIDA revêt de multiples aspects et la FAO a centré son attention sur les conséquences de cette maladie pour la production agricole et la sécurité alimentaire des ménages. Ce document présente un cadre pour l'analyse des problèmes et décrit leurs principaux effets sur les ménages et exploitations agricoles. Le VIH/SIDA épuise les ressources humaines et financières, ce qui entraîne une réduction des superficies cultivées, des modifications des pratiques culturelles et des baisses de rendement. La réduction de la formation scolaire et non scolaire des enfants et l'évolution des schémas de migration peuvent avoir des conséquences négatives sur le développement.

Les politiques agricoles s'efforcent d'influer sur les rendements, la production des cultures commerciales, etc. On ne s'est pas encore demandé si ces politiques peuvent affecter la diffusion et l'intensité de la pandémie VIH/SIDA ou, au contraire, en atténuer l'impact. Les secteurs de l'agriculture et de la santé doivent se sensibiliser davantage aux effets de la pandémie sur la production, la sécurité alimentaire et les institutions. Ils doivent aussi reconnaître qu'il existe un certain nombre d'outils liés aux politiques et programmes qui pourraient être utilisés pour réduire la vulnérabilité des populations rurales en matière de VIH/SIDA. À ce stade, il convient d'étudier de manière plus systématique les instruments disponibles liés aux politiques et programmes qui seraient le plus efficaces. Des efforts visant à mobiliser les institutions agricoles, tant publiques que privées, sont justifiés face aux dégâts actuels et potentiels de cette pandémie. La réduction de la vulnérabilité a une influence sur les risques, mais ne les élimine pas. Des politiques visant à réduire la vulnérabilité ne remplaceraient pas les politiques visant à réduire les risques, mais elles pourraient créer des synergies positives.

**El SIDA en África: ¿pueden obtenerse mejoras mediante las políticas agrarias?**

Aunque hay muchos aspectos en la pandemia del SIDA, la FAO ha centrado su atención en la repercusión de la enfermedad en la producción agrícola y en la seguridad alimentaria familiar. En este artículo se presenta un marco para analizar los problemas y se destacan los efectos esenciales en los hogares agrícolas y otras unidades de producción más grandes. El VIH/SIDA agota tanto los recursos humanos como el capital, lo que causa la reducción de la tierra cultivada, cambios en los sistemas de cultivo y la disminución de la producción. La reducción de la capacitación formal e informal de los niños y la variación de las pautas migratorias pueden tener consecuencias negativas para el desarrollo.

Las políticas agrarias intentan influir en los rendimientos y la producción de los cultivos comerciales. Aún no se ha analizado si tales políticas pueden influir en la propagación y el nivel de la pandemia, o paliar su impacto. Es menester que en los sectores agrario y sanitario se tome conciencia de las repercusiones que tiene la pandemia en la producción, en la seguridad alimentaria y en las instituciones.

También se ha de reconocer que hay distintos instrumentos de políticas y programas que podrían ser eficaces en la reducción de la vulnerabilidad de la población rural. En esta etapa, han de examinarse sistemáticamente los instrumentos de política y de programas más eficaces de que se dispone. Vale la pena realizar esfuerzos para movilizar a las instituciones agrícolas, tanto públicas como privadas, habida cuenta de los daños actuales y potenciales de la pandemia. La reducción de la vulnerabilidad influye en los riesgos, pero no los elimina. Las políticas encaminadas a mitigar la vulnerabilidad no podrán sustituir a las de reducción de riesgos, pero habrán de crearse sinergias positivas. ♦