

The effectiveness of donor-funded nutritional community gardens in the city of Masvingo

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Abstract

This study to establish the effectiveness donor-funded nutritional community gardens in the city of Masvingo in light of the fact that most of them have stopped working. The objectives of the study were to identify the reasons for establishing nutritional gardens in the city of Masvingo; to establish the causes of abandonment of the nutritional gardens by the beneficiaries; and to establish how the dilapidated gardens can be improved. The study focused on 7 of the 10 wards in the city of Masvingo. Of the 210 members only 70 (10 from each of the 7 gardens) were sampled for the study. The data collection instruments used in this research were structured questionnaires. Overall respondents felt that nutrition gardens were not economically viable as they failed to meet their basic needs like payment of school fees for their children, paying for accommodation rent, and so on. Donor-funded nutritional community gardens in the city of Masvingo were found not to be as effective as anticipated when they were introduced. The study recommends that there should be engines to pump water because the boreholes are too heavy; a programme should be in place to train garden beneficiaries in basic productive skills including those for marketing; agricultural extension workers should avail themselves to supervise the operation of community gardens to boost the confidence and productivity of the gardeners; awareness campaigns should be rolled out which sensitise the gardeners about the nutritional value of certain varieties of vegetables; water canals should be constructed for easy watering; and the gardeners should device means to assign night watchers to prevent thievery.

Key words: nutritional gardens, donor-funded, community, Masvingo, malnutrition, Action Faim

1. Introduction

Masvingo province is a semi-arid area falling under agro-ecological region 5 of Zimbabwe. The province has seven districts namely Bikita, Chiredzi, Chivi, Gutu, Masvingo, Mwenezi and Zaka. The need for sustainable agricultural practice is vital as the region experiences perennial drought that exposes many vulnerable groups to malnutrition. Most of the people in the province's districts are poor, unemployed and are always migrating to the major urban centres of Masvingo and Chiredzi looking for employment as an alternative source of livelihoods. Because employment is not readily available in these urban centres some of these migrants resort to peri-urban farming. Peri-urban areas become the target because the open spaces that exist in the city vicinities are under the control of the city council which forbids the cultivation of crops for various administrative reasons.

A French-based donor agency named Action Contre La Faim (Action Faim' or ACF in short), translated to battling against hunger, came to the rescue of the vulnerable groups in selected communities of the province including the seven high density suburbs in the city of Masvingo. Action Faim has been in the province since 2006 (ACF, 2013). In its operations, the organisation has provided agricultural water as well as clean water for the promotion of sanitation and hygiene in both urban and rural villages. This study sought to establish the extent to which this initiative achieved the purpose for which it was intended; alleviating poverty among the urban poor in the city of Masvingo.

2. Statement of the Problem

The community gardens established by ACF were meant to provide income through selling of fresh garden produce, provide balanced diet to the targeted beneficiaries and to cushion them against food insecurity. Thus, ACF wanted to complement government efforts in food security by providing supplementary feeding to the vulnerable groups such as children, women and the elderly through the establishment of nutritional garden projects. Now that most of the established gardens in the city of Masvingo are defunct and the majority of the beneficiaries have deserted the gardens, it is not clear what caused this scenario and how it may be rectified. The researchers were touched by this state of affairs and wanted to ascertain the problems leading to the state of affairs.

3. Research Objectives

The objectives of the study were:

- to identify the reasons for establishing nutritional gardens in the city of Masvingo;
- to establish the causes of abandonment of the nutritional gardens by the beneficiaries; and
- to establish how the dilapidated gardens can be improved.

4. Literature Review

4.1 Global Overview of Community Gardens

The World Bank (2006) reports that most of Asia has practiced community gardening from antiquity and have retained this practice as a way of upholding their traditions. As a result, the kinds of plants grown in nutritional community

gardens in the Asiatic societies are generally culture-related. According to the World Bank (2007), Asian societies have a common practice of growing in their backyards such crops and plants which fulfil the dictates of their religions and traditional customs. For example, Hindi societies which are located in some parts of Asia are entirely vegetarian, so they do nutritional gardening to maintain their vegetarian culture.

In North America, people came together to form community gardens which are ornamental (Harvey, 2009). Fisher (2004) believes that community gardens in the US serve a general purpose of decoration. Hence, they mostly practice ornamental gardening as opposed to crop gardening. Others refer to these types of gardens as floral gardens and the kind of business they serve is called floriculture (Harvey, 2009). Thus, these gardens can take the form of market gardens which specialize in ornamental plants. These gardens are located in the outskirts of cities supplying the city-based markets with flowers and other ornaments such as perfumes. They can also be home gardens for those who take ornamental marketing as a source of livelihood or trade.

The challenges affecting communal gardens are somewhat common across the continents but there exist some peculiarities. In North America, the commonest challenge is that since the gardens are meant for prestigious purposes, the underprivileged citizens have little access to the gardening resources. Only those that are affluent enough to raise their own capital can start and run the communal gardens with their relatives and/or neighbours (Fisher, 2004). Community gardens in the US for example range from familiar Victory Gardens where people grow small plots of vegetables for the upper class, to large greening projects to preserve nature (Harvey, 2009). The common feature in these kinds of endeavours is that they are conducted for prestigious purposes and they happen to be unaffordable luxuries for the underclass.

In the United Kingdom and the rest of Europe, the most prevalent challenge is shortage of land. Municipalities and government may donate land to organised civil society and community-based organisations but the fact of the matter is that land is not readily available. First of all, a community has to go through bureaucratic formalities to register as an organisation before qualifying to apply for municipal or state land (Eshtayeh and Earis, 2006). Another closely related challenge is that there may be financial obligations to be met in order to continue using an allotted piece of land for communal gardening purposes. In most cases, a garden is rented and cannot be purchased for permanent ownership by a single community organisation (Carney, 2014). The rent is usually paid on annual basis implying that a community has to renew its contract with the landowning authority every year. Mostly, the size of the rented plots is diminutive and therefore does not permit the gardeners to grow as much as they may desire.

The most widespread limitation of community gardening in Latin America is unavailability of land among the needy populations. According to the World Bank (2007), the community groups in most of black America use as gardens some abandoned wastelands because fertile places to grow crops are owned by capitalist upper classes. This shortage of productive land among blacks dates back to the slave era. The land is still owned by descendants of the former slave masters or their relatives. Therefore, it is difficult for a community group in South America to own a quality piece of land for community gardening. Most communal gardens are acquired by scavenging in the derelict lands, some of which are swampy, rocky, sloppy or too arid (World Bank, 2006).

Among the Asiatic societies, the outstanding challenge is the frequent occurrence of frost which affects not only the community gardens but the entire agricultural system. Farmers are forced to practice agriculture in restricted time ranges because the normal agricultural season is flanked by harsh spells of cold weather which are unfavourable to crop production (World Bank, 2006). Community garden groups would want to variegate their crops but the climatic environments in Asian countries do not permit such variegation. So, the same kinds of crops are grown in over and over, making it seem like the Asians are fond of their traditional crops yet the climatic factor is limiting them from expanding their crop selection. Moreover, Asian community groups find it difficult to innovate towards producing new crops and devising new methods of gardening because of excessive religious and traditional convictions. Some communities would fare better by cropping tobacco and other high-fetching crops but their religions consider it a taboo to grow such crops or to trade in them. As a result, they end up practising what is known as monoculture, which is not only monotonous to the community groups but also damages the garden soils (World Bank, 2006).

4.2 Africa's experiences with nutritional community gardens

According to Taylor and Francis (2009) community gardens in Africa involved irrigation in home gardens since prehistoric times where they provided basic foodstuffs and vegetables for household consumption. The goal of community gardens was to increase household and community-level food security throughout the year. Thus, food insecurity and unemployment, which are major problems in most urban areas in contemporary Sub-Saharan Africa, have encouraged food production in backyards throughout the continent as a response by the urban poor populations to enhance food supply. The related increase in urban demand for food precipitated a litany of farming systems in African cities characterised by the formation of small agricultural groups (Sithole, 2013).

In Ghana the growing of vegetables in community gardens dates back to the arrival of the Europeans. The vegetables were grown in the gardens created around various fertile posts along Ghana's Gold Coast region as far back as the 16th century (UNDP, 1996). During the world wars, small-scale agricultural gardens were promoted everywhere in the country in order to help feed the allied forces in the Gold Coast as Ghana was known then. Around 1970 the government of Ghana supported urban agriculture to meet the growing popular demand for food in line with the growing national population. The World Bank (2007) discovers that backyard gardening remains a well-accepted activity in Ghana society just as in the rest of Africa especially among the middle income groups to supplement household incomes. Low income groups are the ones who often organise themselves to conduct community-level nutritional gardens to mitigate the impacts of incessant droughts and those of chronic illnesses such as HIV/AIDS.

African gardeners generally lack support and resources to run community-based gardens as groups. In South Africa, so many agricultural projects of this nature have sprouted to address issues like the growing food insecurity, the spreading of unhealthy foods and the biting levels of poverty especially among native populations. Grigg (1974) observes that a growing

number of black South Africans are vying for serious agriculture due to serious threats of poverty but they are restricted by the fact that the needed resources are not at their disposal. In this country as well as in the majority of other African countries, the other resource that is greatly lacking is that of inputs.

Another anomaly in African communal gardening is gender disparity in participation. While African women appear to be the backbone of smallholder agriculture across the region, their male counterparts do not treat this livelihood strategy seriously. According to the International Fund for Agriculture (IFAD, 2001), there is no unity of purpose among male and female members of institutions such as families and grassroots communities in as far as survival strategies are concerned. Men seem to be dogged to find really gainful businesses in the formal and mainstream sectors of the economy yet these have just remained as wishes for many decades now. On the other hand, women, who form the majority of not only national populations but also that of community-based organisations, are continually innovating towards fighting poverty with the little means and projects they can. The problem in this gender discrepancy is that for a very long time men may not be contributing to household or community revenue yet they are the typical breadwinners. When women come back home from the market with the proceeds of garden-ware or other small projects, men are generally found grabbing those returns and spending them in manners that affect both the family and the small gardening projects (Concern, 2009).

The other problem that causes abandonment of the nutritional gardens is the mobility of the members due to the fact that they do not take gardening as a fulltime commitment. Some members enter community groups on a seasonal basis while others only join when there is a seemingly lucrative business, and when that is no more they leave. According to Gukurume (2013), African gardeners have had a tendency to flee even the slightest experience of loss in the gardening projects. This may imply that people who are perhaps committed in other preoccupations conduct the business of nutritional gardening as a side business. This is mostly true among the youths who may enter community gardening groups as chancers or opportunists expecting quick personal gains.

Climate change is also another factor in the demise of nutritional community gardens in Africa. Gukurume (2013) identifies many gardening groups on the continent which crumbled due to tricky climatic patterns which leave the participants at a loss for the most part. In Zambia, for example, the author noted that many nutritional gardens are situated along river banks which are endowed with fertile alluvium. The problem comes when the rivers dry up due to drought so that the gardeners find it difficult to irrigate their crops. In most of East Africa, Kimwarata (2012:65) finds that there are community gardens which utilise "swampy areas which have ready water and contain nutrient-rich mud." These favourable conditions are also not permanent. In times of prolonged dry weather the ground gets too hard or crumbly making it difficult for crops to survive. Once a garden is faced with such a scenario the members tend to desert it and move to other areas or venture into other activities; but now the challenge is that it is not easy to find alternative livelihood activities in Africa given the dearth of resources discussed above.

There are also challenges related to poor planning among African nutritional community gardens. According to Leach (2013), the methods of doing community gardens in Sierra Leone for instance, are not worked out in advance implying poor or no planning at all. When members of a community converge to do a project without clear-cut objectives and strategies in place, they tend to abandon the project before long. Poor project planning is almost synonymous with poor management and is one of the major causes of failure for nutritional community gardens, not only in the mentioned West African country but also across the continent. Eshtayeh and Earis (2006) also note that most if not all community gardens in Africa are run without a constitution to guide the operations. Last but not least, another challenge for the survival of nutritional community gardens is that of pests. Pests cause havoc to gardens because most of the gardeners lack knowledge of how to fight pests (Harvey, 2009) and some of them do not afford to procure the chemicals suitable for protecting the fruits and vegetables (Fisher, 2004). A combination of these factors gradually leads to collapse of the gardens as the costs cannot be recovered without a harvest.

4.3 Status of community gardens in Zimbabwe

The foremost justification of doing nutritional community gardens in Zimbabwe is the occurrence of chronic droughts, which trigger food shortages. The Zimbabwe Vulnerability Assessment Committee (ZIMVAC) (2010) found that the practice of community gardening builds a base for food production for the vulnerable citizens in their communities. Community gardens are basically aimed at overcoming the challenges associated with food shortages which often lead to malnutrition. According to Bornnard (2010), the Zimbabwe government and some NGOs have consistently promoted community nutritional gardening activities as yield-augmenting technologies in light of persistent poor harvests of staples. That is why a significant proportion of the gardens are into the production of cereals (such as maize) and pulses (such as beans).

The second most prevalent explanation for the proliferation of nutritional community gardens in Zimbabwe is that they provide marketing opportunities to rural people. Recently mass establishment of community gardens was done by non-governmental organizations including Action Faim and CARE-Zimbabwe in a bid to maintain sustainable rural livelihoods among the rural households. Zimbabwean communities have been trying to balance off their subsistence needs with income needs. As a result they have tried to run communal gardens which produce both for food and for sale. As in their usual subsistence type of farming, peasants have tried to produce their own food in surplus and then sell the surplus garden produce to obtain household income. Bornnard (2010) observes that NGOs came in handy to assist in establishing small, irrigated vegetable gardens as they are a major component for the daily food supply as well as market wares. Middleton (2009) describes the role of government and NGOs in community gardens as that of capacity building of the participants so that they do not only meet their food needs but go on to generate wealth.

There are also ornamental gardens that specialize in the production of horticultural crops. These ones may indirectly serve the purposes of food supply and nutritional enhancement as well as income generation but their most defining feature is the predominance of ornamental crops. Ornamental crops may be herbs, medicinal plants, flowers, garlic and different types of vegetables, predominantly those meant for seasoning (Mutangi, 2010). A wide array of herbs and spices is

available in public markets in Zimbabwean towns and townships. Among the most popular seasonings in the country are mint, garlic, parsley, and cinnamon and, according to Rukuni et al (2006), they are increasingly being produced in nutritional community gardens.

One of the problems affecting nutritional gardens productivity in Zimbabwe is lack of irrigation equipment. The absence of appropriate technology in the gardens makes the participants even more vulnerable to frequent droughts because they are practically wasting precious time doing unproductive work (Rukuni et al, 2006).

There are also challenges related to the external relations of the community gardens. Machakaire and Hobane (2005) identify illegitimate forms of transferring land as the most disturbing forms of external relations for these gardens. In some instances, the members of the garden are found dealing in communally-owned garden land as if it was privately owned. Some go on to the extent of selling the land to non-members, and this practice is common among rural gardens where traditional village heads are often fingered in such acts (Taru, 2013). Inter-garden relations are also another variety of challenges affecting some gardens. This one often involves claims of one garden expanding too much into the area of another, causing the owners to quarrel. This is common in dambo gardens which are constructed next to one another such that they even share demarcations or are separated by thin hedges. Conflicts over control of land, competition between actors over use of scarce resources such as water because of population pressure are also common in community gardens.

According to Moyo and Tevera (2000) there are also problems associated with usurpation of powers of traditional leaders to manage land and other natural resources. These often lead to communal protest against established rules. Moyo and Tevera (ibid.) identify conflicts between national/municipal institutions and local people. For example, when a piece of land which used to belong to traditional authority is eventually transferred into municipal hands, people who used to benefit from it are found to make noise thereby stalling any progress that was supposed to be taking place including production. Often this is associated with change of membership structures because of change of controlling powers. New members may find their way into the schemes while some old members may lose their membership. Members who would have been severed from the scheme are sometimes found fighting the project to make sure it does not make progress in their absence.

According to Middleton (2009) community gardens in Zimbabwe often face management challenges. Most of the participants in community gardens lack gardening skills. Also, some community gardens sometimes attract members that are politically motivated, and who tend to influence decision-making to meet their malicious interests. Middleton (2009) also notes that community gardens also face the challenge of water to irrigate fruits and vegetable during summer.

According to Rukuni et al (2006) most community gardens in Zimbabwe have utilised wetlands as sources of water to irrigate their crops and vegetables. Communal gardens are also located in community centres to make it easy for members to travel and access the garden from various corners of the community. Moreover, some of them are organised and managed by community groups to share work and rewards equitably. In other groups, community gardens have resorted to limiting the number of participants to minimise the likelihood of internal discord and squabbles (IFAD, 2001).

5. Research Participants and Instruments

This research looked at the urban population of the city of Masvingo. The city has 10 administrative wards but not all of them are into gardening. The study focused on 7 of the 10 wards. In each of the targeted wards, the researcher noted that each ward had 1 well-resourced nutritional garden. So, the research population finally constituted the beneficiaries of these 7 gardens. Since each garden contained an average of 30 members, the total possible participants that the researcher was faced with are 210 community gardeners. Of these 210 members only 70 (10 from each of the 7 gardens) were sampled for the study.

The data collection instruments used in this research were structured questionnaires. The researchers distributed the questionnaires through hand delivery.

The following table presents the number of targeted participants against the number that returned filled questionnaires.

Table 1: Questionnaire return rate by number of respondents

Targeted	Returned	Percent
70	57	81.4%

As shown in Table 1, the study targeted 70 respondents out of which 57 responded and returned their questionnaires contributing to the response rate of 81.4%. This response rate was sufficient and representative.

6. Findings

6.1 Gender distribution of respondents

The following table illustrates the gender disaggregation of the participants. The table shows that the majority of the members of nutritional gardening initiatives in the urban community of Masvingo is largely a female domain.

Table 2: Gender distribution of respondents

	Frequency	Percentage
Female	40	70%
Male	17	30%
Total	57	100

6.2 Age distribution of the respondents

Table 3 shows the age distribution of respondents. The modal frequency was 47%. This modal age group was that

of the 31-40 years old. In fact, Table 3 shows that the nutritional gardening initiatives in the urban community of Masvingo were in capable hands in as far as age is concerned.

Table 3: Age distribution of the respondents

	Frequency	Percentage
18-30 years	3	5%
31-40 years	27	47%
41-50 years	16	28%
Over 50 years	11	20%
Total	57	100

6.3 Marital status of the respondents

Marital status of respondents was as in Table 4. The table shows that the majority (72%) of the respondents were married.

Table 4: Marital status of the respondents

	Frequency	Percentage
Married	41	72%
Single	16	28%
Total	57	100

6.4 Highest level of education of the respondents

The highest level of education of respondents was as in Table 5. The majority (56%) of the respondents were schooled up to secondary school level while 39% went to school up to primary school level.

Table 5: Highest level of education

	Frequency	Percentage
No education at all	0	0%
Primary school	22	39%
Secondary school	32	56%
Post-secondary school	3	5%
Total	57	100

6.5 Occupation of the respondents

The respondents were requested to indicate their other occupations or preoccupations. The idea was to check if the gardening business clashed with any other occupational interests with the view that such conflicting interests could jeopardise the conducting of the clashing priorities. Distribution of occupation of respondents was as in Table 6. The table shows that the majority (44%) of the respondents were vendors. Some of them could have been trading in the commodities that they produced in the nutritional community gardens.

Table 6: Occupation of the respondents

	Frequency	Percentage
Vending	25	44%
None	9	16%
Community volunteer	8	14%
Casual labourer	6	11%
Cross-border trading	5	9%
Other	4	6%
Total	57	100

6.6 Reasons for establishing community nutritional gardens

The following pie chart depicts the outcome of the responses that were given by the respondents to the question on whether community nutritional gardens were initially intended to serve the poor residence of the community.

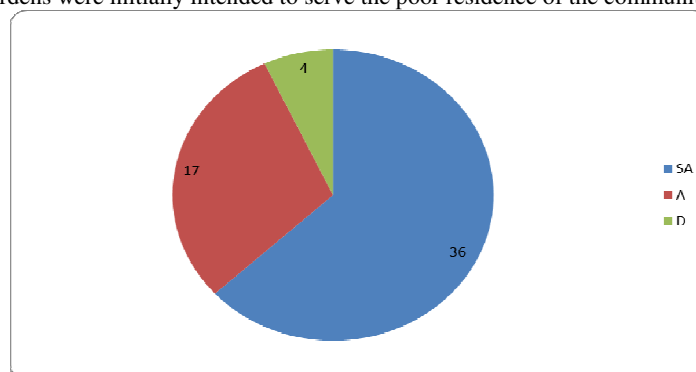


Fig 1: Respondents views on whether the community nutritional gardens were meant for the poor.
 (Source: Primary data)

About 93% of the respondents thought that the initial purpose of establishing the nutritional community gardens was to serve the poor. Those who disagreed with the statement mentioned that they noted some corruption and dishonesty in how the project was implemented. One of them said that the project was benefiting the officers from the donor agency more than it was benefiting the community members because the former were more in control and understood the project better.

Responses to whether community nutritional gardens were meant to fight food insecurity were as in Fig 2. Eighty four percent of the respondents agreed that community nutritional gardens were meant to fight food insecurity.

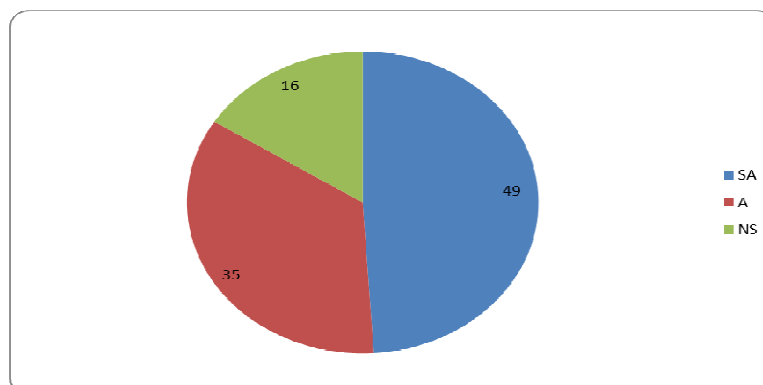


Fig 2: Respondents' opinions on whether community nutritional gardens were meant to fight food insecurity
(Source: Primary data)

Asked about what benefits they had realised from the gardens, 23 of the 57 responses indicated that they cherished the fact that they could now produce food for direct consumption. These ones formed the majority (40%) followed by those who said that the garden projects, especially the fact that they came with boreholes, brought them the opportunity to enjoy clean water for domestic use (33%). Fourteen percent of the respondents indicated that they took delight in entering into the food trade market which they could not have achieved without the opportunity brought about by the nutritional gardening initiative. The remainder saw the gardening project as having brought them the opportunity to exercise and keep fit and others felt that they could utilise their membership in the gardens by renting out some of their beds to non-members.

6.7 Challenges of community nutritional gardens

The major challenge that contributed to a significant number of members withdrawing from nutritional gardens was the market issue. Most respondents (90%) felt that there was no ready market for their produce. In fact, competition was very high as they competed with established commercial farmers from the surrounding commercial farms for small market of the city of Masvingo. Thus, respondents felt that nutrition gardens were not economically viable as they failed to meet their basic needs like payment of school fees for their children, paying for accommodation rent, and so on. Thus those members who had left the gardens might have been decided to focus on other economic activities that pay back enough for their upkeep.

Most respondents felt that the labour demanded was not commensurate with productivity and gains accrued. They felt that watering vegetables and cereals from the borehole was too demanding. Thus labour involved in pumping borehole water was a significant cause for the gardeners to tire and end up not working in the gardens.

Also respondents said sometimes they would find their vegetables stolen during the night. This was common during public holidays.

5.3 Conclusions

- Not all nutritional gardens had gone dormant. In a few gardens, beneficiaries were producing various vegetables efficiently.
- The fence in most gardens was still intact showing that there was little vandalism and more custodianship regarding the care of the gardens.
- Boreholes were found to be too heavy for the gardeners.
- Although there were sentiments on the demanding labour, it seemed that most of the gardens had scaled down their operations due to several other reasons like mobility of some gardeners other than simply abandoning the gardens.
- Sometimes members would wake up to find their vegetables stolen.
- Although the market was said to be flooded, gardeners no longer had problems of cucumber, butternut, sugar-beans, cabbages and other vegetables for their own family consumption.
- Overall respondents felt that nutrition gardens were not economically viable as they failed to meet their basic needs like payment of school fees for their children, paying for accommodation rent, and so on.
- Donor-funded nutritional community gardens in the city of Masvingo were found not to be as effective as anticipated when they were introduced.

5.4 Recommendations

Based on the above conclusions the study recommends that:-

- there should be engines to pump water because the boreholes are too heavy;
- a programme should be in place to train garden beneficiaries in basic productive skills including those for marketing;
- agricultural extension workers should avail themselves to supervise the operation of community gardens to boost the confidence and productivity of the gardeners;
- awareness campaigns should be rolled out which sensitise the gardeners about the nutritional value of certain varieties of vegetables;
- water canals should be constructed for easy watering; and
- the gardeners should device means to assign night watchers to prevent thievery.

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