

GROWING DOMINICA'S AGRICULTURE

Introduction.

This is not a technical bulletin designed to provide working recommendations on the fortunes and future of Dominica agriculture. It is not based on in-depth original research. It does not benefit from recent consultations with persons currently engaged in the business of agriculture in Dominica. It relies on available statistical information as published in official reports. The analyses are complemented by the author's knowledge of and exposure to conditions in the sector. The result, then, is one person's thoughts on various issues and possibilities related to agriculture in Dominica which, if pursued in a more rigorous manner, might be capable of pulling that sector out of the tailspin into which it has clearly descended.

Someone once said, "Economics is too important to be left solely to economists". The same might perhaps be said of agriculture and agriculturists, as indeed, of all professional disciplines. Citizens, in all walks of life must take possession (responsibility for and actions to improve) those conditions that affect their lives. We are all affected by the prospects for agriculture, to various degrees and in various ways, and have opinions which may be worthy of discussion. An "outsider's" spark may be the means of igniting such a flame.

This discussion combines perspectives born out of professional disciplines in economics, agricultural economics, rural and resource planning and environmental sciences, disciplines that are central to resolving "the agricultural problem" within the larger context of general economic growth and national development. Such an integrative approach should be informative in kick-starting a programming and regulatory culture still stuck in conceptual and design "silos" when approaching the challenge of development planning on the island of Dominica.

"The Problem".

The "agricultural problem" has been perceived by different people in various ways. It is not necessary to assess the merits of this diversity of opinions individually. Instead, this paper starts with the proposition that before any stakeholder can be satisfied that the development effort for rejuvenating agriculture is well-founded, there should at least be a meeting of the minds as to the national expectations for the agricultural sector. If there are several of these, there ought to be some prioritization of them as a guide to funding and programming at all levels.

In so doing, the true complexity of agriculture might be recognized within the vast public which rightfully demands to be involved in the course of its future. For reasons, some of which are highlighted below, the importance of this first step cannot be over-estimated for most developing countries, including Dominica:

1. Agriculture continues to be a significant contributing sector to the country's Gross Domestic Product (GDP).
2. It provides a major source of employment for the country's labor force.
3. It is one of the fundamental earners of foreign exchange.
4. It might once again be an important generator of surplus capital which might fuel economic diversification.
5. Its use, properly planned, is critical to maintaining the country's ecological stability and resource capacity for the future.

Yet, while there are demanding expectations for this sector to prove its worth in economic terms, agriculture has to be considered as more than a financial/business enterprise. It embodies a complex set of biological processes affecting the uniqueness of land, landscape, variety of crops, peculiarities of livestock, the imponderables of the natural elements and the needs, wants, desires, expectations and capacities of dependent human populations as producers and consumers. Despite impressive scientific improvements affecting agricultural productivity worldwide, agriculture is still subject to uncontrollable vagaries of nature and their attendant hazards and risks. Its production capacity is also limited by natural processes and conditions beyond which lies the specter of ecological collapse.

Agriculture, its successes and failures, is as much a reflection of cultural constraints, human sensitivities, trade practices and community taboos, all of which are sufficient to derail the most well-intended policies and programs. Each farmer is an independent decision-making unit, and no amount of organization or attempt at corralling such individuals will replace, simplify or short-circuit a trusting and respectful consultation process upon which consensus-building and successful policy implementation should occur.

Farmers and the rural communities dependent on them tend to exercise a political influence disproportionate to their numbers or contribution to the nation's wealth. As a result, too often, politicians tend to shovel programs and funding in their direction with too little regard for feasibility, viability and effectiveness. One only needs to look at the litany of schemes and projects (even excluding those following in the wake of disastrous storm events and can be considered primarily crop rehabilitation) for coconut, citrus, bananas, livestock and assess whether or not the results have justified the expenditures.

Goal-setting and Objectives.

If we are serious about reversing the downward slide in agricultural production and productivity, some rethinking of the basic planning and programming approach for this sector is necessary. An unavoidable starting point is some national consensus on the desired goals for agriculture. This must resolve the question, what is it that the country requires and can reasonably expect from agriculture? This should not be answered in some vague way. The answer must be clear, precise and the programs which will eventually implement it must be subject to structured monitoring to ensure

that the goals are being met. It should be remembered that even the most desirable objectives for agriculture may sometimes conflict with each other whether as to access to scarce funding, limited technical expertise, constrained land availabilities, incongruous staging etc. However, even so, we might start with identifying the following more general purposes agriculture may be called upon to serve from time to time. Suggested goals for agriculture, once established, do not remain constant but are subject to review, re-evaluation and revision as circumstances warrant.

1. **Provide a source of scarce foreign exchange earnings.** Local economic growth is a direct result of net infusions of new money (capital) into the economy and a resulting growth in agricultural exports whether in the form of staples or a broad range of traditional crops may be seen as capable of accomplishing that purpose.
2. **Reduce the outflow of needed capital caused by high import levels, through substituting locally-grown products.** The intention here is to direct these purchases to the benefit of local farmers and to retain this expenditure stream (and revenue circulation) locally, giving rise to an overall rise in domestic standards of living.
3. **Promoting investment generation.** In the course of achieving increased agricultural production through greater efficiencies, greater surpluses might accumulate within the agricultural sector sufficient to spawn new and expanded economic activity within and outside agriculture.
4. **The potential contribution of agriculture to local economic diversification cannot be under-estimated.** This has been the historical “model of growth” in most developed societies. Even though that edge (for countries such as Dominica) has been blunted by colonial policies of diversion of surplus wealth to metropolitan powers, opportunity still exists for agriculture to provide the springboard for economic growth and development.
5. **Agriculture and Food Stability/Security.** Increasingly, countries are becoming committed to an active policy of ensuring that as much of their food/nutritional requirements are produced domestically. This strategy applied to Dominica would require an aggressive policy of production of traditional food crops, the introduction of new crops and livestock (import substitution) as well as production of commodities for export in order to acquire nutritional supplements that cannot be produced locally. In reality, a territory by territory approach to the strategy of food stability and security is perhaps not feasible or even defensible within the Caribbean context, and this objective may have greater chances of success if pursued on a regional (CARICOM) scale.
6. An important objective of planning for agriculture might be to promote it as a **viable employment alternative for unemployed and under-employed labor in both urban and rural areas.** Currently, and for a number of reasons, Dominica

is experiencing an exodus of labor from rural areas to urban settlements within the country as well as to destinations overseas. Not only are these emigrants' typically young or middle-aged, able-bodied and ambitious persons, but with them is leaving a large, critically vital knowledge base on agricultural knowledge and practices which has been transmitted between generations, and which cannot easily be replaced.

7. **Lastly, a viable, profitable agricultural sector is critical for the maintenance of stable rural communities** and for all of the vital social and community institutions within them. Many of these communities have been the result of considerable public investments and perform important functions within the national economic and social development framework which would be in jeopardy were they to become "deserted villages" or primarily "bedroom communities".

Policy planning for agriculture must consider and weigh all of the above preceding issues to the extent of assigning them some order of importance as a guide to making the hard decisions required in programming, including priority-setting. Related to the priorities established, there should be enough current and reliable information on the current state of the sector (baseline data); the restructuring necessary to initiate change; the capacity and willingness of the country to initiate and maintain agreed and desirable changes; the means of implementing and monitoring how new measures affect agriculture, as well as impacted sectors outside agriculture; and, means for making adjustments as required.

This is not a process to be pursued by the country's administrative machinery and political directorate only. It demands the fullest involvement of all stakeholders in a continuing exercise of consultation, consensus building, coordinated implementation, program reporting, assessment and re-valuation.

The Issues of Size and Flexibility.

In reality, the above approach is subject to several limitations which must be taken into account. Dominica, like so many other developing countries, partly because of size and production capacity and also because of market constraints (including transportation, distribution and other restrictions) is a condition taker. Typically, it is unable and unlikely to dictate or even influence market conditions, even for the most exclusive crops, acting independently. This is truest for the major, internationally-destined agricultural staples, but that may become decreasingly the case as one considers locally and regionally significant traditional crops and exotic and niche commodities. Thus it is possible to address aspects of the size limitation.

Secondly, the large proportion of farmers who operate small holdings on the edge of subsistence living limits flexibility in moving between crops because of knowledge, transition costs and risk as well as a traditional resistance to change.. Tree crops that typically require some time from planting to maturity require strong government support during the "weaning" period. Thus farmers may be rightly hesitant to shift between crops without some assurance that agricultural planners know what they are doing, markets are

relatively assured and that their risks are reasonably covered. Thirdly, market opportunities for agricultural products may arise suddenly and local support services may find it hard to respond quickly in terms of research, land suitability, seed and nursery products, extension advice etc. Crop selection, market identification and program design/development should reflect a longer than an immediate (short term) opportunity for farmers. Fourthly, the territory continues to rely to an unholy and unacceptable extent on foreign funding of basic agricultural schemes and projects. Accordingly, there is little local security and control of quantity, regularity and consistency of funding. The revenues from successful agricultural schemes might then be the source of funding new program proposals. Fifthly, too little attention is paid to the twin issues of market intelligence and promotion, and product differentiation as to quality, presentation and packaging, seasonal variation (especially in shoulder months of the production cycle), marketing of products even to the extent of branding.

Program Design Criteria.

The significance of agriculture, whatever its assigned policy objectives, makes it too important to be left to chance. There are at least six (6) major areas where active and aggressive intervention by government would give rise to the revolution in thinking and action which is now required:

1. Up-to-date information on production, forecasts and market conditions.
2. Relevant research on crop conditions
3. Introduction of effective extension services and strategies
4. Establishment of realistic access to financing
5. Training and modernization of farmers and farm practices
6. Arresting the loss of high quality agricultural lands.

We will deal with these issues in reverse order.

1. Protecting good quality agricultural land resources.

Dominica possesses a relatively small land base and an even smaller cultivable land area. Historically, agriculture was centered on the gentler grades of the coastal slopes and along the river valleys and the plains carved out by the drainage systems. Here, the earliest colonial plantations were located providing opportunities for extensive cultivation, utilizing the upper hilly ridges for wood and slave operated gardens, the swiftly-flowing rivers for some irrigation and power for local processing mills. Post-emancipation agriculture and the advent of a wage-based economy resulted in the reduction of the outer margins of plantation/estate cultivation (without the simultaneous release of surplus land to the landless newly-created freed workers) with the consequent march of cultivation further up the steeper slopes by land-hungry peasant-squatters, using primarily slash-and-burn land clearing techniques.

Today, the issue of agricultural land availability is compounded by the problem of under-utilization of large estates and the deterioration of agricultural infrastructure in land and

structural improvements. For those estates still remaining in relatively large units, every effort should be made to ensure their integrity and limit further fragmentation especially in those districts of acknowledged high soil capability for agriculture.

One cannot be overly critical of private land management trends without commenting on the lamentable histories of public land acquisition programs. Two cases are illustrative. Over the years, the Dominica Social Security has acquired lands in the vicinity of the former Sunday Island Port Authority proposal in the Cabrits area, no doubt in anticipation of future tourism developments. For well over thirty (30) years these lands have been allowed to remain idle without any consideration of an interim or longer term agricultural purpose and despite “land hunger” in the adjacent Portsmouth to Toucarie area. The second even more disconcerting case surrounds the acquisition of lands at considerable cost for a future public purpose of a proposed airport in the Wesley area. Following the abandonment of that project (for reasons which are un-related to this paper), the lands are in a state of limbo. Some are reported to have been handed back to the former owners and some have been let to small agricultural operators (under unknown conditions). The issue is, if government is uncertain of the agricultural options for its own lands, what confidence can any landowner have in any government initiatives suggestive of agricultural land programming in the face of such monstrously indecisive decision-making? The essential challenge for government is one of instilling confidence in the public sector that policies are purposeful, reasonable and well-designed.

Even where parcels of land conducive to a modern agricultural economy exist, the absence of a national land utilization policy has led to anticipation and expectation of conversion to higher value non-agricultural uses. There needs to be greater certainty among land owners and greater direction from government as to where and when and subject to what conditions competing alternative uses will be allowed to enter and compete with agriculture within designated agricultural districts. Lands thus secure can then be the subject of modern agricultural improvement programs such as large-scale irrigation, large-scale livestock or intensive vegetable farming, to name a few options. Most land areas have potential for some agricultural uses, whether in direct production or by providing secondary supportive services. Use viability is related to appropriate crop selection, appropriate scale of operation, efficient production practices and conducive market conditions. Accordingly, policy does not end with the simple protection of agricultural land. It must concern itself with the competitive “shadow” cast on agricultural land by competing uses through higher than affordable land prices which agriculture will be asked to bear.

Indeed, even in districts of high capability for agriculture where considerable land fragmentation may have already occurred but having limited non-agricultural uses, all is not lost. The potential for land consolidation and/or co-operative agriculture in farming organization and practices may be feasible and realistic options, and need to be considered.

2 Modernization of Farming Practices.

While traditional forms of agriculture may have been acceptable under a protected marketing regime for crops produced, the conditions are now drastically changed. The present globalized international markets of standardized products, quality control, competitive pricing, efficient delivery demand greater attentiveness to issues of:

- (a) Available opportunities in crop selection, varieties and their production and distribution requirements;
- (b) The benefits technological innovations, intensive cropping/production practices. Specialization in niche products and markets.
- (c) Greater attentiveness in formal training of farmers in use of new products, practices and services including reaping, packaging and transportation methods.
- (d) Integration of animal husbandry and crop cultivation within a mutually supportive production system;
- (e) Supplementary income sources based on farm operations such as agro-tourism and agro-processing.
- (f) Greater reliance on research and experimentation.

Agricultural assistance programs should be geared to farmers who participate in designed programs and who are capable of combining the best of the old ways with the demands of modern technology, environmental consciousness and a more aggressive marketplace. In some cases such farmers will be established farm operators. In other cases, they may be products of formal post-secondary institutions.

3. Agricultural Financing.

It requires little research to be convinced of the enormity of financial resources that have been expended on a variety of ill-conceived and ill-managed agricultural schemes with little to show for the expenditure and worst yet, poor documentation to provide a learning tool for subsequent projects. It may well be that the problem lies in the fact that many such projects have been funded by external agencies with considerable reliance on local project administrators who are themselves the implementers and are disposed to report favorably even when the record reveals the contrary. Well implemented farm financing is crucial to the success of agriculture but it need not be exclusively or primarily be in the form of subsidy. Viable alternatives through low cost commercial loans, advances on the security of products, subsidized farm inputs (fertilizers, pesticides, planting material etc) with conventional farm credit vehicles all form part of the mix. The prime consideration is that of ensuring financially profitable operations by the farmer and assistance repayment to the greatest possible extent. Where this is not possible then the rationale for financing assistance must be questioned and a justification must be sought in another arena.

The scope of an agricultural assistance program would entail the following, among others:

- (a) In-field training of established farmers to the extent that they are capable and willing. Such training to be consolidated by demonstration projects.
- (b) Assistance to young, qualified, trained and motivated farmers desiring to make a career of farming.
- (c) Financial assistance may be in the form of direct cash payouts, value in kind for planting materials, stock and other materials.
- (d) Financing of buildings, equipment (purchase, lease, rent)
- (e) "Tide over" payments for living expenses pending product sales.

Farm records, including financial accounts, are essential to determining performance of individuals, their repayment capability and the overall success or failure of the program. Wherever possible, government should be a lender of last resort and only when venture are deemed feasible and commercial lenders are unwilling to render support. In addition, government must continue in its central role of providing the physical infrastructure such as feeder roads, irrigation or drainage works and in making available quality stock material, in addition to protection, extension and marketing services where they do not separately exist.

4. An Effective Agricultural Extension Service.

Advisory and support services to the farming community constitute a fundamental contribution to the success of the agricultural sector. This role covers both a formal and an informal relationship. It is technical in its requirement for anticipating, understanding and assisting in the resolution of problems in efficient food production. It also requires a significant level of confidence between farmer and extension worker arising out of a long term level of trust necessary in raising tree crops and livestock.

Agriculture in many developed societies has benefited from an individualized and specialized advisory service between farmers and commercial crop and livestock services (land preparation, planting material, fertilizer and pesticides, farm equipment and buildings, reaping and storage techniques, livestock, feeds, insemination, inoculation, milking etc). This is a relationship cemented by the test of yields and profit margins. Dominica cannot provide that level of service and a heavy responsibility rests upon our public extension services to attempt to fill that crucial gap.

One might suggest that using criteria of spatial distribution of prime agricultural districts, concentration of farmers and intensive agricultural investments and historical production areas, Dominica might, for example, be divided into at least three (3) agricultural Administrative Sub-districts (North, West and East, each staffed by a residential cadre of extension professionals with a range of experience including: General Livestock, Vegetables, Tree Crops including fruits, Major Staple crops such as Bananas/coconuts/citrus and exotic crops such as horticulture, pineapples, aromatics. How many and which would be stationed in each sub-district would depend on local conditions and production possibilities.

Meanwhile, there would continue a Central Agricultural Station with overall administrative responsibilities for information, promotion, analysis and research and with nationally available staff competencies and specialization available to the sub-districts whenever necessary. These specializations would cover: agricultural engineering, cattle (beef and dairy), poultry, pigs, fruits and vegetables. In addition, government must be the central source of propagation material. Livestock material and operate an effective agricultural research laboratory including veterinary services, soil analysis, disease control).

5. Agricultural Research.

Agricultural research has been separated from the related extension services function, not because it cannot be accommodated within it, but to emphasize the importance of obtaining on-going feedback from farmers, extension services and from the market/consumers so as to ensure a responsive and quality agricultural sector and product. Local stakeholders need to stay on top of their game and not lag behind trends and conditions. The performance of the sector, the profit returns to the farmers, the increasing satisfaction of the consumers and rising revenues to the country, all within the context of ecological sustainability, are the objectives of agricultural research. The sector needs to be continuously informed on the feasibility of new crop/livestock types, new varieties of old products, risks of viruses and other contaminants. The issue of changing environmental conditions and implications for productivity and natural habitats need to be monitored and quickly addressed. Feasibility of new equipment, methods and techniques should be a prime objective of this function.

Obviously, the range and depth of required research will be seriously affected by issues of technical competence, availability of testing facilities and attendant costs. It therefore makes eminent sense for the island to participate in a shared approach with other similar jurisdictions in a regional approach to collaboration and programming and so expand the capacity for responding to threats and contingencies affecting agriculture.

6. Production and Market Forecasting.

The ultimate success of astute investment in agriculture depends on the ability to sell the product at attractive prices and to realize rewarding profits. This relies on the ability to accurately forecast market demands and to produce the required product to satisfy those demands. Markets, whether local, regional or foreign need some assurance of the volume of products in the delivery system, their value and quality. In fact, it is not unusual that even for agricultural products signed agreements for delivery may occur several years before actual harvesting and for multi years in advance. Natural disasters aside, the producer must honor such agreements. No longer can the export market be played against the local consumer with freedom to first access whichever is more lucrative. Secondly, to the extent possible, every effort should be expended to minimize uncertainty in production by controlling conditions in production.

The forecasting of market conditions outside pre-arranged contracts is a much more difficult proposition without a coordinated and effective regional approach. One challenging element is to avoid dumping of external foreign surpluses on the regional market. A second is the removal of unnecessary regulatory controls in the entry of regional products to regional markets. A third requires major food consumers and distributors such as supermarkets, hotels and large institutions to commit to a “region first supply” policy.

An effective and satisfactory food production-distribution-consumption supply chain rests finally on the presence of the distribution system and facilities that minimizes costs through quick delivery and low rates of spoilage. Agricultural products must have quick passage throughout the regional area and must be delivered in a safe, sanitary and attractive manner. These conditions will be assisted by regularity of shipping, available air-cooled or refrigerated facilities, as required. The principle of maximum utilization of facilities (capacity volumes) should be the objective in order to reduce per unit costs.

Concluding Overview.

It must be recognized that Dominica, like similar small tropical jurisdictions with a heavily skewed small peasantry base faces certain particular programming dilemmas. A few can easily be identified:

1. Agriculture by small scale farmers is heavily diversified for risk reduction and subsistence food security reasons. As such, per unit production costs are high, quality is uncertain, depending on supply prices may be exorbitant and marketing difficult.
2. Translated to the national level this would normally be a re-assuring situation but for the fact that it becomes difficult, if not impossible to assure quality and regularity of supply to external markets..
3. The techniques of production tend to be rudimentary and incapable of easy modernization due to educational and literacy problems and prohibitive carrying costs. Serious agricultural programming may then have to recognize two markets and two separate supply systems with a priority assignment for support services and funding.
4. Extension services and program management are complicated by overlapping coverage (different projects, the same farmer, and the same areas) probably due to a high incidence of inter-planting. In such cases, it is difficult to accurately assess the effectiveness of individual crop development and production programs.
5. Dominica can receive all the benefits of tourism without being inundated by many of the negatives which have corrupted the economy and society of its neighbors. It can program and market itself as the “breadbasket of the southern Caribbean and supplant external sources in the supply of most conventional foodstuffs for the regional tourist market. (All this, while continuing to build its own exclusive niche market focused on eco-tourism, health and wellness tourism, cultural tourism and agro-tourism.)

6. Agriculture for the twenty-first century cannot be a slap-dash affair. International markets and consumers are becoming increasingly demanding and selective. But they can be called upon to pay more for quality and reliable products. The days of a national agricultural sector based on small scale rural family plots are fast disappearing. In its place must come an educated, professional, research-supported and market intelligence driven sector, recognized for its contribution and valued for its strategic importance to the nation.

These are not easy issues to be resolved or objectives to be achieved within a purely partisan political framework, and unless there is an acceptance of a national consensus on the future of agriculture, well-intentioned and well-designed programs run the risk of being exploited by negative forces for selfish, short-term ends. What is certain is that Dominican agriculture cannot continue in its current drift and decline without jeopardy to the entire fabric of the country's economy and society. Some attenuating factors may offer some hope that an informed and rational discussion can emerge and guide rational decisions on where we go from here.

The first is that a significant portion of agricultural land-owning interests rests in the hands of persons outside of agriculture. If the problem of markets, effective extension services and quality managers and labor were to be resolved, it might be possible to co-opt these interests and resources in the commercial business houses and the professions to participate in new policy directions. However, because many of these landowners do not presently look to agriculture as a sole or significant current or future income source, a high degree of persuasion may be necessary to gain support for the new agricultural agenda. But support, should it come, will be bolstered by a higher than average literacy base and the ability to carry the development costs from "outside agriculture" resources.

Secondly, large agricultural units continue to be tied up in family member control and in intra-family disputes thus effectively eliminating these lands from aggressive investment and purposeful management. Many such lands are within prime agricultural districts and effort must be taken to remove such obstacles and to release such areas.

Thirdly, there is also a prevalent tendency to fragment larger farm units and to use smaller portions as collateral to finance projects and purposes in and out of agriculture. Valid uses within agriculture should be accommodated within an agricultural finance program. Within high priority agricultural areas (so designated by regulation), critical lands coming on the market should be acquired by a suitably funded arms length (statutory) agency established by government and made available for continuing agriculture.

A fourth concern centers around the availability of labor in the amounts required and at the time required, the high factor cost of labor and the conditions of work, and the resulting productivity of labor when it is available. As the net of area trade agreements widen, Dominica is increasingly competing with low land cost, low wage, high economies of scale jurisdictions and while it may enjoy certain distribution advantages it

cannot lose such advantages in unsustainable production costs. The answer only partially lies in improved physical infrastructure. It must be supported by trained and motivated labor with mechanization where feasible and the most appropriate crop selections as to harvest times and quality.

Finally, there is the issue of security of tenure, un-authorized squatting on private lands, extensive incidence of praedial larceny and threats to personal property and safety which all make for an unstable sector and insecure investment. In that sense, the problems of agriculture are not exclusively agricultural but are more generally societal, and are to be addressed by the nation as a whole, among citizens of good will, without political posturing but with fairness and reason.

BACKGROUND STATISTICAL REFERENCES.

Table 1. Dominica--Population Change by Parishes, 1991 - 2001.

	<u>1991</u>	<u>2001</u>
St. George	20365	19825
St. John	4990	5327
St. Peter	1643	1452
St. Joseph	6183	5765
St. Paul	7495	8397
St. Luke	1552	1571
St. Mark	1943	1907
St. Patrick	8929	8383
St. David	6977	6758
St. Andrew	11106	10240
TOTAL	71183	69625

Notes on Table 1:

- (a) Overall, a slight decrease in population. However, may conceal known dynamics of net out-migration, compensated by net survivorship.
- (b) No significant shifts in patterns of population re-distribution, although only three parishes show an increase in population. So, if accompanied by significant loss of land to residential urbanization, may denote considerable opportunities for urban re-development.
- (c) Relatively stable rural populations may not be indicative of stable communities, if associated with high home-work commuting patterns.
- (d) Says nothing of age distribution and labor force composition.

Table 2. Dominica –Actual Agricultural Land Use, 1961 – 1995.

Year.	Acreage in Farms '000acs.	Cultivated '000acs.	%	Forest '000acs.	%	Other '000acs.	%
1961	76.2	33.7	44.2	37.1	48.7	5.4	7.1
1995	58	35.8	61.7	16.4	28.0	5.8	10.0

Notes on Table 2:

- (a) Farmland decreased by some 18,000 acres.
- (b) Cultivated land increased by some 2100 acres (61% of land in farms.)
- (c) Area under forest cover on farms decreased some 20,700 acres.
- (d) Farmland is being used more intensively. Ecological implications for run-off and increased incidence and virulence of flooding.
- (e) Unknown how much land came into private farmland from Crown Lands.

- (f) Presumed that the reduction in overall farmland is the result of urban and related uses.

Table 3. Dominica. Farms by size and acreage. 1961, 1976, 1995.

Farms, Class Size.	<u>1961</u>		<u>1976</u>		<u>1995</u>	
	Number	Acreage (‘000)	Number	Acreage (‘000)	Number	Acreage (‘000)
Less than .01acs	442	-	*	-	824	-
.01 – 4.5acs	6405	10.1	5957	9.0	6696	13.7
5.0 – 49.9acs	2087	20.3	1814	18.9	2448	24.1
50.0-99.9acs	78	5.1	67	3.8	61	4.0
More that 100acs	97	40.8	84	39.7	71	16.2
TOTAL	8667	76.3	7922	71.4	9276	58.0

Average Farm Sizes.

0.01-4.5acs	1.7acs	1.5acs	2.0acs
5.0-49.9acs	9.7	10.4	9.8
50.0-99.9acs	65.0	56.7	65.6
More than 100acs	420.6	472.6	228.2

Notes on Table 3:

- (a) Number of farms less than 0.01acs in size (1976) included with farms 0.01-4.5acs.
- (b) Important to consider for given crop and land productivity in particular areas, what is the minimum parcel size for viable cultivation.
- (c) Critical to note and consider the depletion of number of farms in the ‘More than 100acs category.
- (d) Reminder that above acreages are farm sizes and not cultivable or cultivated acreages!
- (e) Question. What should be the focus of agricultural policy? To farmers, generally---social policy; to viable, productive agricultural holdings – economic policy; to a sensitized combination of both, properly managed for both objectives---development policy?
- (f) A muddled focus may be part of the reason for such poor results to date in the light of on-going investment and effort.

Table 4. Gross Domestic Product at Factor Cost and Current Prices. (EC\$m)

	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
Agriculture	112.54	106.38	102.06	106.24	114.49
Crops	90.1	83.67	79.09	82.92	90.64
Livestock	8.27	8.35	8.43	8.53	8.6
Forestry	3.62	3.66	3.69	3.7	3.7

Fishing	10.55	10.7	10.85	11.19	11.5
TOTAL GDP	621.60	607.48	575.24	581.14	621.37

Notes on Table 4:

- (a) Agriculture continues to be focused primarily on crop production. However, in light of trends in land use, particularly fragmentation and escalating land prices) serious thought should be given to enhancing the opportunities and prospects for livestock production.
- (b) As can be determined the contribution of Agriculture to GDP has never surpassed 20%. Yet the performance of the economy (rate of change, year-on-year) has been a consistent reflection of trends in agriculture, or vice versa.
- (c) As will be seen, banana production has been the most significant component of “crop” production. With failing market access options, policy options for competing crops become a primary issue for policy.

Table 5. Dominica Major Agricultural Imports. 2001-2005. (US\$'000).

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Meat and Meat Products	4824	4840	4474	5433	6074
Milk and Dairy Products	3721	3327	3754	3873	4123
Edible Fish and Products	1260	1413	1319	1553	1650
Rice and Maize	603	550	554	612	683
Meal, Wheat, Flour, Cereals	4299	4182	4154	4191	4074
Fresh & Preserved Fruits, Nuts & Vegetables	1781	1817	1795	1791	2317
Fruit Juices	256	162	257	288	271
Sugars & Confectioneries	1698	1558	1726	1728	1844
Coffee, Teas, Chocolates and Cocoa	577	564	623	678	716

Notes on Table 5:

- (a) Even the most cursory examination will compel the question, “What replacements of imports are possible with local production?”
- (b) Obviously, total replacement is not possible in potential categories, yet there are some attractive candidates such as Meats, Milk, Fish, Fruits and Fruit Juices, Vegetables especially “fresh”, and Teas etc.
- (c) Sadly, in all cases under the years in review, the value of imports in all categories has increased, indicating no local policy interest or success in

import displacement. This is disappointing when viewed in the light of export capacity (Table 6).

Table 6. Dominica. Major Agricultural Exports. 2001 – 2005. (US\$'000)

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Fish, Fresh and Frozen			171		32
Vegetables (incl. roots & tubers)	1689	1613	1452	1841	
Fruits & nuts (excl. oil Nuts)	12188	12191	9669	11235	10450
Coffee, cocoa, teas	12	21	15	7	8
Sugars, molasses	19		8	5	18
Spices	289	342	375	355	264
Edible products, not elsewhere stated.	888	1455	903	526	383
Non-alcoholic Beverages	172	203	601	689	715
Alcoholic beverages	23	101	161	123	98
Tobacco manufactured	184	154	292	157	112

Indirect Agricultural By-Products.

Essential Oils	874	1190	948	486	509
Perfumes, Cosmetics & Toiletries	6488	5691	6280	5675	5798
Soaps, Cleaning & Polishing Preparations	13256	11786	12647	12652	11519

Notes on Table 6.

- (a) Although Dominica is not an exporter in several categories this should not discount the possibilities of such a prospect. The most promising is Meat and meat products.
- (b) From the above table, exports of fruits outside of the staple trade in bananas might be considered, along with a wide range of root crops and vegetables
- (c) The combination of fruits, nuts, spices, coffee, cocoa and a complementary sugar production together suggest the ingredients for an import replacement product in jams, jellies, preserves, condiments, non-alcoholic drinks and an eventual export market in such items.
- (d) Lastly, the attractive opportunity for forward linkages from agriculture into agro-processing industries is well illustrated in the three agricultural by-products indicated. This is not to suggest that all input requirements will be

supplied by a local agricultural sector but that a re-vitalized agriculture contributing to secondary processing might meet all of the possible stated objectives for the sector.