natives in the 1980 five-year plan. That plan is aimed ultimately at doubling the production of technology-intensive industry by 1990.

Even so, the \$296 million that NRC spent in 1981–82 was a 30 per cent increase over the previous year, allowing NRC to go ahead with several new programmes, including the Industrial Materials Research Institute in Boucherville, Quebec, an ice research project in Newfoundland and a small tokamak fusion research programme in cooperation with Hydro-Quebec.

NRC officials are worried, however, that the government will not be able to

sustain the annual 30 per cent increases called for in the plan. Since budget items can be approved by the government throughout the fiscal year, the 1982–83 budget will not be known until the year is over, but officials are predicting that it will fall significantly short of the planned figure. The big worry is that what NRC calls "core support" is going to suffer the most. This is the reserve of expertise and backbone research facilities (analytical chemistry laboratories, for example) that NRC says must be built up if the government is to be able to address problems as they arise.

NRC officials say the tendency has been for immediate needs — such as the recent "fire-fighting" operation on the health-effects of urea-formaldehyde foam insulation — to draw personnel and resources away from the core. This, they say, "jeopardizes the viability of NRC as Canada's national laboratory". It seems likely also to jeopardize the nation's effort to boost its overall research and development by 1985 from 1.07 per cent of gross national (GDP) to 1.5 per cent — and thus to bring it closer in line with the more industrialized countries of Western Europe.

Stephen Budiansky

Bilingual planners disagree

Brussels

Two separate plans to create an advanced electronics industry in Belgium have just been announced, one by the new Flemish regional government and the other by the central government's Minister for Science, Philip Maystadt. Although there are claims that the two plans complement one another, it seems likely that Belgian research and development policy will again become a source of conflict between the country's two communities.

Like the French plan and the European Commission's *Esprit* programme, the new initiatives spring from fears that European industry is in danger of missing the boat for the "Third Industrial Revolution" as the Flemish are calling it.

Since last December, Belgium's already complex political arena has been further complicated by the delegation of much of central government's power to two separate regional governments, one for Flanders and the other for Wallonia. The micro-electronics strategy presented by the president of the Flemish "government", Gaston Geens, is one of the first fruits of this constitutional change.

It will cost some BF 4,000 million (£44 million) over the next four years. Unlike the French plan, it is strongly orientated towards stimulating private industry and differs in its emphasis on the production of customized chips. A large part of the funds will go towards establishing with Bell Telephone (a Belgian affiliate of ITT) a silicon foundry manufacturing customized microchips. The Belgian company is putting up half the cost of BF 2,800 million (£32.5 million) and the Flemish government the remainder.

The second element will be the major expansion of the research facilities at Leuven University, led by Professor Overstraeten, into a laboratory for advanced research into micro-electronics at a cost of some BF 1,500 million. This will be complemented by a programme of grants to engineers already working in industry or finishing doctorates to improve their knowledge of the state of the art of very large-scale integrated chips and other fields. To help industry directly, there will be a consultancy centre where companies

can receive advice on how to computerize either their products or their production.

The Flemish micro-electronics programme has strong backing from the region's political parties, and industry has organized itself into pressure groups such as FLORA — Flemish companies interested in the development of the information technology industry.

The central government plan, still to be officially adopted, concentrates on creating a receptive environment for companies in the forefront of electronics. Above all, Maystadt proposes to use the public purchasing power of the state in the defence and telecommunications sectors to favour Belgian companies, particularly those seeking their first customer. This is

not strictly permitted under EEC or GATT rules, but Belgium awards more public works contracts to foreign companies than any other EEC country.

BF 200 million will also be set aside for subsidizing research and development work in companies involved in developing customized chips, in the belief that Belgium will never be able to compete with the French or Americans in producing standardized chips. A further BF 240 million will be spent on a study on the sociological impact of micro-electronics in an effort to calm the Walloon trade unions hostile to the changes their use will bring.

The central government's programme is estimated to cost BF 820 million a year but this figure may be revised in the light of efforts to cut the large government deficit.

Jasper Becker

US medical profession

Fight against anti-trust laws

Washington

The first of October may turn out to have been a decisive date for the medical profession in the United States, ending a shoot-out between the profession and the Federal Trade Commission (FTC), the government agency that seeks to monitor anti-competitive, anti-consumer practices in the medical profession (as well as others).

The issue, according to FTC's chairman, James C. Miller III, is whether the professions should be immune from the normal inquisitiveness of the agency empowered to protect consumers. "Admission to a profession should be a guarantee of competence, not a guarantee of immunity from the laws the rest of us must obey", Miller has said.

As long ago as December 1975, FTC issued a complaint against the American Medical Association (AMA), the profession's powerful umbrella organization, barring it from prohibiting advertising by doctors, among other things. Since then, AMA has fought the complaint in the courts. But when the US Supreme Court was deadlocked on the issue earlier this year, the FTC order automatically became effective on 1 October, the first day of fiscal year 1983.

But AMA has not given up. Having failed in the courts, it seeks relief in Congress by amending FTC's authorizing legislation to prevent it from proceeding against the professions. The changes stood a good chance of being passed — reflecting AMA's considerable power in Washington — until Congress went into recess. AMA spokesmen still say they can change the law when Congress returns in November. But Congress's huge agenda, its lame-duck status and the Reagan Administration's support for FTC in this matter may combine to frustrate AMA's plans.

The fight has been long because several interlocking issues are involved: whether professionals can be the subject of anti-trust action, whether FTC has the power to regulate the professions, whether AMA has reformed itself sufficiently in the past seven years to be considered now above reproach. To complicate matters, FTC has issued related orders against the American Dental Association (which agreed to be bound by the outcome of the AMA battle), the ophthalmologists, and several state and local medical societies. All these support AMA in its fight with FTC.

But the central issue is who should determine medical practice locally in the United States. FTC's position is that state and

local medical societies have enormous influence over doctors and over state legislatures and courts. Thus they can facilitate doctors' boycotts of hospitals that charge too little, prevent physicians from working on a salary instead of the more lucrative fee-for-service basis and decide whether to encourage or to discourage advertising.

Regulation of these professional groups is traditionally the job of the states. But, FTC argues, it is hard for state authorities to rule against these powerful groups. Many consumer groups believe that the influence of these professional associations is connected with their powerful political fund-raising ability. In May, a bill introduced by Thomas A. Luken (Democrat, Ohio) that would place a moratorium on all FTC action against the professions had 155 co-sponsors in the House of Representatives. According to Congress Watch, a public interest group, those 155 co-sponsors had received \$599,000 in campaign contributions from AMA, \$191,000

from the American Dental Association and \$41,000 from the ophthalmologists. By October, the bill had 221 co-sponsors.

A more limited measure was attached to FTC's authorizing legislation last May by the Senate Committee on Commerce, Science and Transportation. It would declare that FTC has no jurisdiction over state-regulated professionals and their professional associations. This measure may well remain in the final Senate bill.

William Rial, president of AMA, is unsparing in his criticism of FTC's allegedly blundering intrusion into the medical profession which, he writes, is "threatening the future of medical practice in this country". The drain on medical societies' resources because of FTC administrative procedures, Rial says, "can hinder these groups from performing their most important functions. . . The standards of quality established by the American Medical Association and other medical societies . . . are being undermined by a federal

agency that possesses no medical qualifications." AMA spokesmen point out that FTC has investigated some professional groups only to find nothing at all wrong after a great expense of time and money. An AMA spokesman in Washington says the profession is already feeling the chill of the FTC order. Local cost-containment groups, he says, are afraid to meet "for fear FTC will investigate them for price-fixing".

But this seems to be just what FTC wants. It cites the case of fees for eye glasses and optometry, where the agency won the right to promote advertising. In a short time, the price of eye glasses and contact lenses fell by as much as a half. The cost of health care in the United States continues to rise in double figures, even though inflation now stands at approximately 6 per cent. FTC is not promising that it can lower the overall costs but it now has a licence to try to do so.

Deborah Shapley

Commonwealth agriculture

More journals mean more food

The Commonwealth Agricultural Bureaux (CAB) are among the first beneficiaries of the British government's new International Organizations' Act passed early last year. Incorporation under the new act has given CAB full international status and thus removed some of the previous obstacles to legal agreements between the bureaux and national governments. Hence a new station for the Commonwealth Institute of Biological Control in Kenya can now go ahead because the Kenyan government has a legal entity with which to sign a contract. The new act also means that CAB member governments, which contribute to the financial upkeep of the bureaux, need no longer fear that part of their contribution will end up in the British exchequer. CAB employees, most of whom work in Britain, no longer pay income tax.

After nearly 30 years gestation, CAB was finally born in 1930, since when it has grown into a major international information service for agricultural scientists. It offers three basic services — identification of biological specimens, advice on biological control and the publication of agricultural abstracts and some primary journals. Three Commonwealth institutes — those of entomology, helminthology and the mycological institute — provide identification services. The Commonwealth Institute of Biological Control, the only CAB institution based outside Britain, provides advice on biological control from its headquarters in Jamaica. The four institutes and a further ten bureaux prepare abstracts of the literature in their own specialities and conduct literature searches for enquirers.

Until 1975, CAB had been largely financed by contributions from member

governments. Since then, however, the publishing activity has been made self-financing by substantially increasing the charge for journals. The biological control service also earns half its keep from contracts. But the identification and taxonomy services are financed from member governments' contributions.

Of the £6 million needed to run CAB each year, £4.5 million is now earned, mainly from journal sales and charges for literature searches. (CAB's abstracts data-

base is now available on-line on the world's major host computers.) The remaining £1.5 million is provided by member governments which contribute roughly according to their means. Thus, Britain makes the largest contribution of about £400,000 (or just 30 per cent of £1.5 million), Canada, Australia and New Zealand come next and many of the smaller Commonwealth nations contribute only a little.

Member nations are entitled to a quota of free journals depending on the size of their contributions, and to a slightly discounted rate for extra journals, on-line services and advice on biological control. Non-member nations may also take advantage of CAB's services — but they must pay slightly over the odds. The identification service, however, is free for all, members and non-members alike.

The United States and Japan, two non-member nations, have in fact made greater use of CAB's services than any other nation. Thus, CAB are open to the criticism that many developing countries are subsidizing services which the developed countries are best equipped to use. That criticism was reinforced when CAB made their abstracts available on-line on the world's major host computers, all of which are in the industrialized north.

At a conference in 1980 to review CAB's work and celebrate their golden jubilee, developing countries expressed a wish for greater access to CAB's services but also their appreciation of them. For although the developed countries may benefit most — Britain as the host country most of all — CAB often provide developing countries with their only access to the world agricultural literature or to advice on agricultural pests. The alternative for developing countries — to finance their own identification and biological control services and establish their own libraries — would in most cases be prohibitively expensive.

Judy Redfearn

This weevil, *Elaeidobius kamerunicus*, should save Malaysian agriculture around \$115 million a year if things go according to plan. The weevil (actual length 4 mm) has been introduced into Malaysia from West Africa and has already greatly increased the fruit production of Malaysia's oil palms and eliminated the need for hand pollination of the trees. Since its introduction in 1981 the weevil has spread throughout the Malaysian peninsula and increases of 20 per cent in yield have been obtained. As a spin-off from this work, based on a study by Dr R.A. Syed of CAB's Commonwealth Institute of Biological Control, growers in West Africa are now keen to find means of controlling oil palm pests biologically — since the continued use of insecticides will inevitably limit the effectiveness of the pollinating weevils.