EUROPEAN COMMUNITIES – MEASURES CONCERNING MEAT AND MEAT PRODUCTS (HORMONES)

ORIGINAL COMPLAINT BY THE UNITED STATES

RE COURSE TO ARBITRATION BY THE EUROPEAN COMMUNITIES UNDER ARTICLE 22.6 OF THE DSU

DECISION BY THE ARBITRATORS

The Decision of the Arbitrators on European Communities - Measures Concerning Meat and Meat Products (Hormones) - Recourse to arbitration by the European Communities under Article 22.6 of the DSU - is being circulated to all Members, pursuant to the DSU. The report is being circulated as an unrestricted document from 12 July 1999 pursuant to the Procedures for the Circulation and Derestricion of WTO Documents (WT/L/160/Rev.1).
TABLE OF CONTENTS

I. INTRODUCTION ........................................................................................................................................................1

II. PRELIMINARY ISSUES ...........................................................................................................................................2
   A. THIRD-PARTY RIGHTS.................................................................................................................................................2
   B. BURDEN OF PROOF AND THE ROLE OF ARBITRATORS UNDER ARTICLE 22 OF THE DSU .................................2
   C. PRODUCT COVERAGE OF THE US PROPOSAL TO SUSPEND CONCESSIONS........................................................4
      1. The EC request for a definite list of products........................................................................................................4
      2. The EC objection to a “carousel” type of suspension of concessions..................................................................6

III. CALCULATION OF THE LEVEL OF NULLIFICATION AND IMPAIRMENT CAUSED BY
     THE EC HORMONE BAN .................................................................................................................................................7
   A. SUMMARY OF THE PARTIES’ BASIC METHODOLOGIES ..................................................................................7
      1. United States..........................................................................................................................................................7
      2. European Communities .......................................................................................................................................8
   B. GENERAL APPROACH OF THE ARBITRATORS.......................................................................................................9
   C. GUIDELINES FOR THE CALCULATION OF NULLIFICATION AND IMPAIRMENT .................................................9
   D. THE VALUE OF “CURRENT EXPORTS” .........................................................................................................................11
   E. NULLIFICATION AND IMPAIRMENT IN RESPECT OF HIGH QUALITY BEEF.............................................................12
      1. Volume of the tariff quota..................................................................................................................................12
      2. Estimated utilisation of the 11,500 tonnes tariff quota ........................................................................................13
      3. Estimated tariff quota share of the US ..................................................................................................................13
      4. Estimated prices under the counterfactual ............................................................................................................14
      5. Estimated value of “current exports” to be deducted ........................................................................................14
      6. Estimate of nullification and impairment in respect of HQB ...........................................................................14
   F. NULLIFICATION AND IMPAIRMENT IN RESPECT OF EDIBLE BEEF OFFAL.........................................................14
      1. Estimated volume of US EBO exports under the “counterfactual” ..................................................................14
      2. Estimated price of US EBO exports under the “counterfactual” .......................................................................15
      3. Estimated value of “current exports” to be deducted ........................................................................................15
      4. Adjustment requested by the EC for US EBO exports used not for human consumption but in pet food ..16
      5. The US claim in respect of exports that would have resulted from foregone marketing campaigns...16
      6. Estimate of nullification and impairment in respect of EBO...........................................................................16
   G. TOTAL NULLIFICATION AND IMPAIRMENT ............................................................................................................16

IV. ASSESSMENT OF THE PROPOSED LEVEL OF SUSPENSION OF CONCESSIONS ................17

V. AWARD OF THE ARBITRATORS .............................................................................................................................17

ANNEX I .................................................................................................................................................................................18

ANNEX II ..............................................................................................................................................................................19
I. INTRODUCTION

1. On 17 May 1999, the United States ("US"), pursuant to Article 22.2 of the DSU, requested the Dispute Settlement Body ("DSB") to authorize the suspension of the application to the European Communities ("EC") and its member States of tariff concessions covering trade in an amount of US$ 202 million per year. 1 In a letter dated 2 June 1999, the EC objected to the level of suspension proposed by the US and requested that the matter be referred to arbitration. In its submissions, the EC quantified the level of trade impairment caused by the hormone ban on US bovine meat and meat products at a maximum of US$ 53,301,675. The EC also asked that the arbitrators request the US to submit a list with proposed suspension of concessions equivalent to the level of nullification or impairment, once this level had been determined by the arbitrators.

2. At its meeting of 3 June 1999, the DSB - referring to both the US and the EC request - noted that, pursuant to Article 22.6 of the DSU, the matter shall be referred to arbitration. Article 22.6 provides as follows:

"When the situation described in paragraph 2 occurs [if the Member concerned fails to bring the measure found to be inconsistent with a covered agreement into compliance therewith or otherwise comply with the recommendations and rulings within the reasonable period of time determined pursuant to paragraph 3 of Article 21], the DSB, upon request, shall grant authorization to suspend concessions or other obligations within 30 days of the expiry of the reasonable period of time unless the DSB decides by consensus to reject the request. However, if the Member concerned objects to the level of suspension proposed … the matter shall be referred to arbitration. Such arbitration shall be carried out by the original panel, if members are available, or by an arbitrator appointed by the Director-General and shall be completed within 60 days after the date of expiry of the reasonable period of time. Concessions or other obligations shall not be suspended during the course of the arbitration". 2

The arbitration was carried out by the original panel (hereafter referred to as "the arbitrators"), namely:

Chairman: Mr. Thomas Cottier
Members: Mr. Peter Palecka
           Mr. Jun Yokota

3. The jurisdiction of the arbitrators and the effect of this arbitration report is set out in Article 22.7 of the DSU:

"The arbitrator acting pursuant to paragraph 6 shall not examine the nature of the concessions or other obligations to be suspended but shall determine whether the level of such suspension is equivalent to the level of nullification or impairment … The parties shall accept the arbitrator's decision as final and the parties concerned shall not seek a second arbitration. The DSB shall be informed promptly of the decision of the arbitrator and shall upon request, grant authorization to suspend concessions or other obligations where the request is consistent with the decision of the arbitrator, unless the DSB decides by consensus to reject the request". 3

The substantive provision at issue here is contained in Article 22.4 of the DSU:

1 WT/DS26/19.
2 Footnote omitted and emphasis added.
3 Ibid.
"The level of the suspension of concessions or other obligations authorized by the DSB shall be equivalent to the level of the nullification or impairment".

4. In this case, the arbitrators are called upon to "determine whether the level of … suspension [of tariff concessions, as proposed by the US] is equivalent to the level of nullification or impairment" caused to the US by the EC ban on imports of hormone treated beef and beef products.

5. The organisational meeting at which time-table and working procedures were adopted, was held on 4 June. On 7 June we received a paper from the US explaining the methodology it applied in calculating the proposed level of suspension. First written submissions were received from both parties on 11 June. Rebuttals were filed on 18 June. A meeting with the parties was held on 22 June. On 25 June we received answers to a list of questions we had submitted to the parties.

6. The main arguments of the parties are summarized below when examining each of the claims before us.

II. PRELIMINARY ISSUES

A. THIRD-PARTY RIGHTS

7. Following a request by Canada for third-party rights and after careful consideration of the parties' arguments made at the organisational meeting of 4 June 1999 and in their written submissions, the arbitrators ruled as follows:

The US and Canada are allowed to attend both arbitration hearings, to make a statement at the end of each hearing and to receive a copy of the written submissions made in both proceedings.

The above ruling was made on the following grounds.

- DSU provisions on panel proceedings, referred to by analogy in the arbitrators' working procedures, give the arbitrators discretion to decide on procedural matters not regulated in the DSU (Article 12.1 of the DSU) in accordance with due process. The DSU does not address the issue of third-party participation in Article 22 arbitration proceedings.

- US and Canadian rights may be affected in both arbitration proceedings:

First, the estimates for high quality beef ("HQB") exports, foregone because of the hormone ban, are to be based on a tariff quota that allegedly needs to be shared between Canada and the US. A determination in one proceeding may thus be decisive for the determination in the other.

---

4 Article 22.7 of the DSU, emphasis added.
5 In this respect see footnote 138 in the Appellate Body Report on EC – Measures Concerning Meat and Meat Products (Hormones), adopted on 13 February 1998, WT/DS26/AB/R, WT/DS48/AB/R: "[T]he DSU, and in particular its Appendix 3, leave panels a margin of discretion to deal, always in accordance with due process, with specific situations that may arise in a particular case and that are not explicitly regulated. Within this context, an appellant requesting the Appellate Body to reverse a panel's ruling on matters of procedure must demonstrate the prejudice generated by such legal ruling".
Second, several methodologies are proposed to calculate lost export opportunities. Given the fact that the product scope (HQB and edible bovine offal ("EBO")) and relevant trade barriers (hormone ban and HQB tariff quota) are the same in both proceedings, both arbitration panels (composed of the same three individuals) may consider it necessary to adopt the same or very similar methodologies. This is all the more necessary because the arbitrators are called upon to arrive at a specific determination on the amount of nullification and impairment caused by the ban. They are therefore not limited, as in most panel proceedings, to ruling only on the consistency of the amounts proposed by the US and Canada with DSU provisions.  

Due process thus requires that all three parties receive the opportunity to comment on the methodologies proposed by each of the parties.

- In contrast, the EC has not shown how third-party participation would prejudice its rights. No specific arguments were made demonstrating that third party participation would substantially impair the EC's interests or due process rights.

### B. BURDEN OF PROOF AND THE ROLE OF ARBITRATORS UNDER ARTICLE 22 OF THE DSU

8. Both parties made extensive submissions on the question of who bears the burden of proof in Article 22 arbitration procedures. Each party submitted that the burden of proof rests on the other party.

9. WTO Members, as sovereign entities, can be presumed to act in conformity with their WTO obligations. A party claiming that a Member has acted inconsistently with WTO rules bears the burden of proving that inconsistency. The act at issue here is the US proposal to suspend concessions. The WTO rule in question is Article 22.4 prescribing that the level of suspension be equivalent to the level of nullification and impairment. The EC challenges the conformity of the US proposal with the said WTO rule. It is thus for the EC to prove that the US proposal is inconsistent with Article 22.4. Following well-established WTO jurisprudence, this means that it is for the EC to submit arguments and evidence sufficient to establish a prima facie case or presumption that the level of suspension proposed by the US is not equivalent to the level of nullification and impairment caused by the EC hormone ban. Once the EC has done so, however, it is for the US to submit arguments and evidence sufficient to rebut that presumption. Should all arguments and evidence remain in equipoise, the EC, as the party bearing the original burden of proof, would lose.

10. The same rules apply where the existence of a specific fact is alleged; in this case, for example, where a party relies on a decrease of beef consumption in the EC or the use of edible beef offal as pet food. It is for the party alleging the fact to prove its existence.

11. The duty that rests on all parties to produce evidence and to collaborate in presenting evidence to the arbitrators -- an issue to be distinguished from the question of who bears the burden of proof -- is crucial in Article 22 arbitration proceedings. The EC is required to submit evidence showing that the proposal is not equivalent. However, at the same time and as soon as it can, the US is required to come forward with evidence explaining how it arrived at its proposal and showing why its proposal is equivalent to the trade impairment it has suffered. Some of the evidence - such as data on trade with third countries, export capabilities and affected exporters - may, indeed, be in the sole possession of the US, being the party that suffered the trade impairment. This explains why we requested the US to submit a so-called methodology paper.

---

6 See paragraph 12.
7 See paragraph 5.
12. There is, however, a difference between our task here and the task given to a panel. In the event we decide that the US proposal is not WTO consistent, i.e. that the suggested amount is too high, we should not end our examination the way panels do, namely by requesting the DSB to recommend that the measure be brought into conformity with WTO obligations. Following the approach of the arbitrators in the *Bananas* case – where the proposed amount of US$ 520 million was reduced to US$ 191.4 million -- we would be called upon to go further. In pursuit of the basic DSU objectives of prompt and positive settlement of disputes, we would have to estimate the level of suspension we consider to be equivalent to the impairment suffered. This is the essential task and responsibility conferred on the arbitrators in order to settle the dispute. In our view, such approach is implicitly called for in Article 22.7:

"The parties shall accept the arbitrator's decision as final and the parties concerned shall not seek a second arbitration. The DSU shall be informed promptly of the decision of the arbitrator and shall upon request, grant authorization to suspend concessions or other obligations where the request is consistent with the decision of the arbitrator, unless the DSU decides by consensus to reject the request".

C. PRODUCT COVERAGE OF THE US PROPOSAL TO SUSPEND CONCESSIONS

13. The US proposal to suspend tariff concessions vis-à-vis the EC and its member States includes a list of products that covers trade in an amount significantly higher than the proposed US$ 202 million. As stated in the request itself, the US intends to implement the suspension by directing the U.S. Customs Service to impose duties in excess of bound rates on a list of products to be drawn from the list attached to this request. The trade value of the final list of products subject to increased duties will be equivalent, on an annual basis, to US$202 million.

The US has not yet determined the final list of EC products that will be subject to the suspension of tariff concessions. Answering questions by the arbitrators, the US stated that the degree of the suspension (i.e. the level of the tariff to be imposed) would be 100 per cent on each of the selected products.

1. The EC request for a definite list of products

14. In its objection to the US proposal for suspension, as well as at the DSB meeting during which this case was referred to arbitration, the EC complained about the above outlined US approach. The EC asks us "to request the United States to submit a list with proposed suspension of concessions equivalent to the level of nullification or impairment, once this level has been determined by the arbitrator". In other words, the EC requests the arbitrators to first decide on the amount of trade

---

8 See Articles 3.3 and 3.7.
9 If this were not done, the Member requesting suspension would need to make new estimates and arguably submit a new proposal. This proposal could again meet objections and might be referred back to arbitration. To avoid this potentially endless loop, the arbitrators - in the event they find that the proposal is not equivalent to the trade impairment - have to come up with their own estimate, i.e. their own figure.
10 According to US Exhibit 35, the proposed list of products covers trade in an amount of US$ 918.073 million (see also Annex II).
11 US answer to arbitrators' questions 9 and 10.
12 WT/DS26/20.
impairment, to then request a specific product list from the US and to finally determine whether both are "equivalent". The US objects to this EC request.\(^{13}\)

15. The arbitrators are unable to follow the EC request. No support for this request can be found in the DSU.

16. The authorization given by the DSB under Article 22.6 of the DSU is an authorization "to suspend [the application to the Member concerned of] concessions or other obligations [under the covered agreements]".\(^{14}\) In our view, the limitations linked to this DSB authorisation are those set out in the proposal made by the requesting Member on the basis of which the authorisation is granted. In the event tariff concessions are to be suspended, only products that appear on the product list attached to the request for suspension can be subject to suspension. This follows from the minimum requirements attached to a request to suspend concessions or other obligations. They are, in our view: (1) the request must set out a specific level of suspension, i.e. a level equivalent to the nullification and impairment caused by the WTO inconsistent measure, pursuant to Article 22.4;\(^{15}\) and (2) the request must specify the agreement and sector(s) under which concessions or other obligations would be suspended, pursuant to Article 22.3.\(^{16}\)

17. Neither can support for the EC request be found in other provisions of Article 22. Instead, they prescribe the following: (1) the "DSB shall not authorize suspension of concessions or other obligations if a covered agreement prohibits such suspension" (Article 22.5); (2) "[c]oncessions or other obligations shall not be suspended during the course of the arbitration" (Article 22.6 \textit{in fine}); and (3) the suspension "shall only be applied until such time as the measure found to be inconsistent with a covered agreement has been removed, or the Member that must implement recommendations or rulings provides a solution to the nullification or impairment of benefits, or a mutually satisfactory solution is reached" (Article 22.8).

18. In our view, the determination of other aspects related to the suspension remain the prerogative of the Member requesting the suspension. We note, in particular, that the Member in respect of whom concessions or other obligations would be suspended, can object to "the level of suspension proposed"\(^{17}\) and that an arbitrator has to "determine whether the level of such suspension is equivalent to the level of nullification or impairment".\(^{18}\) Arbitrators are explicitly prohibited from

\(^{13}\) In contrast to this case, in the \textit{Bananas} dispute the list of products attached to the US request for suspension corresponded, at least according to US calculations, to the US estimate of trade impairment of US$ 520 million. Once the arbitrators had lowered the level of trade impairment to US$ 191.4 million, the US submitted a new request to the DSB meeting. At that meeting the US received authorisation to suspend concessions equivalent to an amount of US$ 191.4 million. Subsequently, the US selected a number of products from the original list that, according to US calculations, were equivalent in value to the authorized US$ 191.4 million. The EC objected to the US approach of not providing a definite product list at the DSB meeting during which authorisation was granted. The US stated that there was nothing in the DSU to the effect that such a list should be attached to a request for authorization to suspend concessions (Minutes of the DSB meeting of 19 April 1999, WT/DSB/M/59).

\(^{14}\) Article 22.6 of the DSU. Bracketed text added is from Article 22.2 of the DSU.

\(^{15}\) In respect of the first requirement see further paragraph 21.

\(^{16}\) The more precise a request for suspension is in terms of product coverage, type and degree of suspension, etc., the better. Such precision can only be encouraged in pursuit of the DSU objectives of "providing security and predictability to the multilateral trading system" (Article 3.2) and seeking prompt and positive solutions to disputes (Articles 3.3 and 3.7). It would also be welcome in light of the statement in Article 3.10 that "all Members will engage in [DSU] procedures in good faith in an effort to resolve the dispute".

\(^{17}\) Article 22.6, emphasis added.

\(^{18}\) Article 22.7, emphasis added.
"examining the nature of the concessions or other obligations to be suspended"19 (other than under Articles 22.3 and 22.5).

19. On these grounds, we cannot require that the US further specify the nature of the proposed suspension. As agreed by all parties involved in this dispute20, in case a proposal for suspension were to target, for example, only biscuits with a 100 per cent tariff *ad valorem*, it would not be for the arbitrators to decide that, for example, cheese and not biscuits should be targeted; that a 150 per cent tariff should be imposed instead of a 100 per cent tariff; or that tariff increases should be levied on a product weight basis, not *ad valorem*. All of these are *qualitative* aspects of the proposed suspension touching upon the "nature" of concessions to be withdrawn. They fall outside the arbitrators' jurisdiction.

20. What we do have to determine, however, is whether the overall proposed level of suspension is *equivalent* to the level of nullification and impairment. This involves a *quantitative* - not a qualitative - assessment of the proposed suspension. As noted by the arbitrators in the *Bananas* case, "[i]t is impossible to ensure correspondence or identity between two levels if one of the two is not clearly defined".21 Therefore, as a prerequisite for ensuring equivalence between the two levels, we have to be able to determine, not only the "level of the nullification and impairment", but also the "level of the suspension of concessions or other obligations". To give effect to the obligation of equivalence in Article 22.4, the Member requesting suspension thus has to identify the level of suspension of concessions it proposes in a way that allows us to determine equivalence.

21. In this case the US has to – and did -- identify the products that may be subject to suspension in a way that allowed us to attribute an annual trade value to each of these products when subject to the additional tariff proposed, namely a 100 per cent tariff (assuming this tariff is prohibitive). We have carried out that task in Section IV below. Once this is done, however, the US is free to pick products from that list -- not outside the list -- equalling a total trade value that does not exceed the amount of trade impairment we find. In our view, this obligation to sufficiently specify the level of suspension flows directly from the requirement of ensuring equivalence in Article 22.4, the substantive provision we have to enforce here. It is part of the first element under the minimum requirements we outlined above, namely to set out a specific level of suspension, i.e. a level equivalent to the nullification and impairment caused by the WTO inconsistent measure.

2. The EC objection to a "carousel" type of suspension of concessions

22. The EC raised an additional objection in respect of the product coverage of the US proposal for suspension. Referring to statements made by the US Trade Representative, the EC submits that the US claims to be free to resort to a "carousel" type of suspension where the concessions and other obligations subject to suspension would change every now and then, in particular in terms of product coverage. The EC claims that in doing so the US would decide not only which concessions or other obligations would be suspended, but also unilaterally decide whether the level of such suspension of concessions or other obligations is in fact equivalent to the level of nullification and impairment determined by arbitration. Replying to our questions, the US submitted that "[a]lthough nothing in the DSU prevents future changes to the list [of products subject to suspension] ..., the United States has no current intent to make such changes".22 We thus assume that the US -- in good faith and based upon this unilateral promise -- will not implement the suspension of concessions in a "carousel" manner. We therefore do not need to consider whether such an approach would require an adjustment in the way in which the effect of an authorized suspension is calculated.

19 Ibid.
20 Answers to arbitrators' Question 1.
21 WT/DS/ARB, para. 4.2.
22 US answer to arbitrators' Question 11.
23. As explained above, we do not have jurisdiction to set a definite list of products that can be subject to suspension. It is for the US to draw up that list. In our view, it has to do so within the bounds of the product list put before the DSB. We also agree with the EC that once this list is made or once the US has defined a method of suspension, that list or method necessarily needs to cover trade in an amount not exceeding (i.e. equivalent to or less than) the nullification and impairment we find. This matter of equivalence is not one to be determined exclusively by the US. The US has an obligation to ensure equivalence pursuant to Article 22.4 of the DSU. In its reply to our questions, the US submitted that it "will scrupulously comply with the requirement that the level of suspension of concessions not exceed the level of nullification or impairment to be found by the Arbitrator".

III. CALCULATION OF THE LEVEL OF NULLIFICATION AND IMPAIRMENT CAUSED BY THE EC HORMONE BAN

A. SUMMARY OF THE PARTIES' BASIC METHODOLOGIES

1. United States

24. The US submits that the EC hormone ban impairs US exports in two respects. First, because of the ban US high quality beef ("HQB") that has been treated with hormones, cannot be imported into the EC market. More particularly, US hormone-treated HQB does not qualify for importation under the 11,500 tonnes tariff quota for HQB granted by the EC.

25. Second, because of the ban US edible beef offal ("EBO") for human consumption that has been treated with hormones is not allowed for importation into the EC. For such imports the EC does not apply a tariff quota.

26. The US adopted the following approach in respect of both HQB and EBO: (1) it examined relevant actual US exports during a recent period in which the EC was, in the US view, failing to comply with its WTO obligations; and (2) it estimated the relevant exports that would have existed during the same period if: (a) the EC were acting in compliance with its WTO obligations; (b) the long-term economic adjustments resulting from compliance were reflected; and (c) all other factors were held constant. The US refers to the estimate in (2) as "the counterfactual". Harm to US exports is estimated as the difference between the actual value of exports in (1) and the estimated value in the counterfactual (2).

27. In respect of the amount to be deducted as actual value of exports ("current exports") -- entering the EC notwithstanding the hormone ban -- the US submits that the existing level of US exports of beef and beef offal will not continue in the future due to the EC’s decision of 30 April 1999. This decision implied a ban on all imports of US beef and beef products -- including those that, according to the US, have not been treated with hormones -- as of 15 June 1999. It was taken by the EC following sampling and analyses for the detection of residues of hormones in fresh bovine meat and liver imported from the US that had shown the presence of xenobiotic growth

---

23 See paragraphs 18-19.
24 See paragraphs 20-21.
25 See Section IV below.
26 US answers to arbitrators’ Questions 1, 2, 4, 9, 10 and 11, Introduction, p. 1.
27 EBO treated with hormones is considered by the EC as unsuitable for human consumption. It cannot enter the EC market under the tariff headings summed up in footnote 44. However, such beef offal – treated with hormones – still enters the EC for use in pet food under other tariff headings, not subject to the ban.
promoting hormones. On 15 June 1999, the EC suspended the imposition of a total ban until 15 December 1999. It did so in order to allow US establishments and authorities to make the necessary adaptations to ensure the absence of residues of xenobiotic growth promoting hormones. In the interim, however, the EC has instituted a procedure to test 100 per cent of all US beef and beef products shipments at the port of entry and to hold these products until test results are available ("100 per cent test and hold procedure"). Noting that the EC had not yet published the 15 June 1999 decision in the Official Journal, the US argued that even after the Commission Decision had been published and after US exports of non-treated beef and beef products would again be permitted, the 100 per cent test and hold procedure would continue to stop virtually all US exports of such products because of the delays and expenses involved.

28. For these reasons, the US requests that no amount be deducted for "current exports" in respect of either HQB or EBO.

29. With regard to HQB, the US calculation of lost exports is based on two figures: (a) the quantity of US exports, but for the ban, under the EC’s market-access commitments; and (b) the average export price at which the exports would be sold. The US argues that it would have fully filled the tariff quota of 11,500 tonnes but for the EC import ban. It estimates the price of US HQB but for the ban at US$ 5,342 per tonne, a figure that it qualifies as a "conservative estimate". Following this methodology, the US estimates the level of nullification and impairment with regard to HQB at US$ 61.4 million.

30. In respect of EBO, the US calculation of lost US exports to the EC market involved a two-step process. In a first step - to calculate what US exports would have been but for the ban - the US estimated total beef offal production and, taking into account trade data, it calculated EC beef offal consumption (using the so-called "balance sheet approach"). The US used the eight-year period 1981-88 prior to the ban as a base period. It stressed that this approach significantly underestimates very favourable world-wide export trends in the period subsequent to the ban. In a second step, the US calculated additional trade benefits to US beef offal exports if market development investments had continued but for the import ban. As a result of these calculations, the US estimates the level of nullification and impairment with regard to EBO for human consumption at US$ 140 million.

2. European Communities

31. In respect of HQB, the EC submits that the US, together with Canada, can export HQB to the EC market as long as it complies with the conditions linked to the tariff quota. The approach followed by the EC is to compare the situation that existed before the introduction of the import ban with the current situation. The EC submits that possible short-term effects were eliminated by taking the average figures and data of the period 1986 to 1988 and 1996 to 1998. The value of US exports to the EC was obtained by converting ECU into US$ by applying the conversion rates as they were recorded during the years concerned. The level of nullification and impairment identified by the EC in respect of HQB using this approach is US$ 1,683,350.

32. In respect of EBO, the EC notes that edible offal is a by-product of meat production. It submits that consumer behavior in respect of offal follows the same pattern as that observed for meat. If consumption of meat declines, for example, because of a negative perception of the meat produced, a similar decline will take place in the consumption of offal. The EC refers to the constant drop in beef consumption within the EC in recent years, as well as to the BSE crisis, and argues that this decline is also reflected in a drop of consumption of bovine offal. The EC submits that only offal for human consumption is affected by the import ban. It adds that overall production of offal in the EC

---

29 Growth promoting hormones not naturally occurring in cattle.
over the last 12 years increased significantly, while the consumption of offal decreased. As a result, the EC, originally a net importer of offal, became a net exporter.

33. The EC estimates US exports of EBO but for the ban, using the 1986-1988 average value as a base from which to deduct "current exports", defined as the 1996-98 average value of US exports of EBO to the EC. The EC further notes that EC imports of EBO were subject to a general downward trend irrespective of the origin of the products, warranting a downward adjustment in value of 25.47 per cent. It also submits that the prohibition of growth hormones only concerns the quantities of EBO actually used for human consumption, not those used for pet food. For these reasons, the EC makes an additional downward adjustment in quantities of 31.7 per cent. The EC accordingly estimates the level of nullification and impairment with regard to EBO for human consumption to be US$ 51,618,325.

B. GENERAL APPROACH OF THE ARBITRATORS

34. We carefully examined the claims, arguments and evidence submitted by the parties in light of the rules on burden of proof and the role of arbitrators under Article 22 of the DSU outlined above. 30

35. Based upon the record before us, in particular evidence submitted by the EC demonstrating that the US assessments were not always appropriate, we consider that the EC established a *prima facie* case that the level of suspension proposed by the US is not equivalent to the level of nullification and impairment caused by the ban. In our view, the US failed to rebut this presumption. We were, therefore, not able to accept in full the estimates proposed by the US. We were not convinced either by all of the EC alternatives. We could, however, accept certain elements of both the US and the EC methodologies. As explained earlier 31, in such circumstances, the essential task and responsibility of the arbitrators is to make their own estimate, on the basis of all arguments and evidence submitted by the parties. In doing so, we follow the rules on burden of proof set out in paragraphs 9-11.

C. GUIDELINES FOR THE CALCULATION OF NULLIFICATION AND IMPAIRMENT

36. To determine whether the proposed level of suspension (US$ 202 million) is "equivalent" to the level of nullification and impairment caused by the hormone ban, we have, of course, to determine what this level of nullification and impairment is.

37. The US does so by estimating the value of foregone US exports arising from the EC's failure to comply with the recommendations and rulings of the DSB. The EC submits that the calculation of nullification and impairment can only be based on the situation in which the US would have found itself if the EC had withdrawn, or otherwise had brought into conformity, the inconsistent trade measure.

38. Upon careful consideration of the claims and arguments set forth by the parties, we consider that our starting-point is as follows: what would annual prospective US exports of hormone-treated beef and beef products to the EC be *if the EC had withdrawn the ban on 13 May 1999?* 13 May 1999 is the date of expiration of the reasonable period of time granted to the EC to implement the panel and Appellate Body reports. In accordance with DSU provisions, it was by 13 May 1999 that the EC had to bring its beef import regime into conformity with the SPS Agreement. We cannot assume that the EC from 1989 onwards, i.e. from the time it imposed the ban, was under a legal obligation to withdraw the ban. We note, in this respect, that the violations found were violations of the SPS

---

30 See Section II.B.
31 See paragraph 12.
Agreement, an agreement only in existence from 1 January 1995 onwards.\textsuperscript{32} The EC does not contest that it has not brought the measure into conformity with its WTO obligations. Nor does it contest that the "counterfactual" we need to look at in these proceedings is a situation without the ban. The EC did not propose that we examine any other alternative that would meet its obligations under the SPS Agreement.

39. We are, furthermore, of the view that the effect of suspending concessions should not exceed that of the EC bringing the measure into conformity with WTO rules on 13 May 1999. This stems directly from the DSU itself. The DSU characterizes full and prompt implementation of DSB recommendations as the \textit{first} objective and \textit{preferred} solution. The suspension of concessions, in contrast, is only a temporary measure of last resort to be applied only until such time as full implementation or a mutually agreed solution is obtained.\textsuperscript{33} To allow the effect of suspension of concessions to exceed that of bringing the measure into conformity with WTO rules would not be justifiable in view of DSU objectives.

40. We note further that we agree with the arbitrators in the \textit{Bananas} case that

"the authorization to suspend concessions or other obligations is a temporary measure pending full implementation by the Member concerned. \ldots this \textit{temporary} nature indicates that it is the purpose of countermeasures to \textit{induce compliance}. But this purpose does not mean that the DSB should grant authorization to suspend concessions beyond what is \textit{equivalent} to the level of nullification or impairment. In our view, there is nothing in Article 22.1 of the DSU, let alone in paragraphs 4 and 7 of Article 22, that could be read as a justification for counter-measures of a \textit{punitive} nature".\textsuperscript{34}

41. The question we thus have to answer here is: what would annual prospective US exports of hormone-treated beef and beef products to the EC be if the EC had withdrawn the ban on 13 May 1999? An answer to this question, like any question about future events, can only be a reasoned estimate. It is necessarily based on certain assumptions. In making those estimates and assumptions, we need to guard against claims of lost opportunities where the causal link with the inconsistent hormone ban is less than apparent, i.e. where exports are allegedly foregone not because of the ban but due to other circumstances.\textsuperscript{35}

42. In this sense, our task of estimating nullification and impairment is very different from that of a panel examining the WTO conformity of certain measures. Once a panel has found a WTO inconsistency, it can \textit{presume} – pursuant to Article 3.8 of the DSU – that the inconsistency has caused nullification and impairment. On that ground the panel can give redress to the winning party under Article XXIII of GATT 1994 or corresponding provisions in other WTO agreements. What normally

\textsuperscript{32} It might be argued that the ban also violated GATT 1947. However, no legal findings on this were ever made.

\textsuperscript{33} See Articles 3.7, 21.1, 22.1 and 22.8 of the DSU.

\textsuperscript{34} Op. cit., para. 6.3.

\textsuperscript{35} In this respect, see the Decision by the Arbitrators in \textit{EC – Regime for the Importation, Sale and Distribution of Bananas}, Recourse to Arbitration by the EC under Article 22.6 of the DSU (hereafter "the \textit{Bananas} case"): "We are of the view that the benchmark for the calculation of nullification or impairment of US trade flows should be losses in US exports of goods to the European Communities and losses by US service suppliers in services supply in or to the European Communities. However, we are of the opinion that losses of US exports in goods or services \textit{between the US and third countries} do not constitute nullification or impairment of even \textit{indirect} benefits accruing to the US under the GATT or the GATS for which the European Communities could face suspension of concessions" (circulated on 6 April 1999, WT/DS/ARB, para. 6.12, italics in original).
counts for a panel is competitive opportunities and breaches of WTO rules, not actual trade flows. A panel does not normally need to further assess the nullification and impairment caused; it can presume its existence. We, in contrast, have to go one step further. We can take it for granted here that the hormone ban is WTO inconsistent. What we have to do is to estimate the nullification and impairment caused by it (and presumed to exist pursuant to Article 3.8 of the DSU). To do so in the present case, we have to focus on trade flows. We must estimate trade foregone due to the ban's continuing existence beyond 13 May 1999.

43. Both products referred to by the US – high quality beef and edible beef offal – once certified as not having been treated with hormones, do currently enter the EC market, with the ban in place. To assess the trade impairment caused by the hormone ban, we first estimate, for each product category, the total value of US beef or beef products – hormone treated or not -- that would enter the EC annually if the ban would have been withdrawn on 13 May 1999. To estimate the nullification and impairment caused by the hormone ban we then deduct from that total value the current value of US exports of HQB and EBO, i.e. those that have not been treated with hormones. We assume that these "current exports", adjusted for other factors as explained below, are representative of the exports that will occur in the future with the ban in place. The end result provides us the estimated value of hormone treated HQB and EBO exports that would enter the EC but for the ban's continuing existence beyond 13 May 1999.

44. Our calculations are based on exports at the f.o.b. stage - excluding insurance and freight - an approach which all parties have used in their calculations. We use f.o.b. prices to ensure comparability with the customs valuation method of the suspension of concessions proposed by the US.

D. THE VALUE OF "CURRENT EXPORTS"

45. With reference to the EC Decision on test and hold, the US requests that no amount be deducted for "current exports". The EC submits that the full amount of "current exports", i.e. annual average 1996-1998 exports, should be deducted. The test and hold effect on US exports has been alleged by the US. It is thus for the US to prove it. According to US export certificates issued for May and June 1999, exports of US HQB to the EC declined by about 75 per cent compared to the same period in 1998. The decline in respect of EBO is on the order of 98 per cent.

46. It is difficult to assess the lasting trade impact of the recent EC measures. The available data relates to a short period of time. The sudden drop of EC imports from the US may be temporary but so should the suspension of concessions. If the parties reach an agreement on appropriate control and oversight, trade flows may normalise. Referring to the EC statement that "[t]he Commission does not plan to stop the existing imports of hormone-free bovine meat" and the US intention to meet current EC import requirements, we are hopeful that such agreement can be reached. In the meantime, we consider it reasonable to assume that the 100 per cent test and hold procedure will have a certain dampening effect on EC imports from the US.

47. We thus consider that 1996-1998 figures are not representative, in casu, overestimate, the exports that will actually occur in the future with the ban in place. On these grounds we decided to reduce current exports (annual 1996-1998 average) by 25 per cent in our estimates for both HQB and EBO.

---

36 This includes so-called "non-violation nullification and impairment" claims under Article XXIII:1(b) of GATT 1994.
37 See paragraphs 28-29.
38 See paragraph 10.
E. NULLIFICATION AND IMPAIRMENT IN RESPECT OF HIGH QUALITY BEEF

1. Volume of the tariff quota

48. All parties, including Canada as a third party, agree that the EC market for HQB exports from the US and Canada -- with or without the ban -- is limited by a tariff quota of 11,500 tonnes at an in-quota tariff rate of 20 per cent ad valorem. This quota is to be shared between the US and Canada. The out-of-quota rate is considered by all parties to be prohibitive.

49. In addition, the US considers that whatever the amount of Canadian imports under the tariff quota, that amount needs to be topped up with the US share under the tariff quota so that the US alone is allowed to export a total of 11,500 tonnes. The US submits that it has this right to an annual amount of 11,500 tonnes as a consequence of bilateral US-EC and US-Austria agreements in this respect. For 10,000 tonnes of the 11,500 tonnes, the US refers, in particular, to an 1981 US-EC exchange of letters confirming that even if Canada would take a share of the quota, the US could still count on exporting the full amount of 10,000 tonnes. In respect of the remaining 1,500 tonnes, the US refers to the fact that this volume was originally negotiated bilaterally between the US and Austria and was only later, as a consequence of Austria’s accession to the EC, added to the 10,000 tonnes tariff quota opened by the EC in favour of the US and Canada.

50. We cannot agree that but for the ban, i.e., the situation we have to consider here, the US would be allowed to export a total of 11,500 tonnes irrespective of the amount exported by Canada. The autonomous quota rights claimed by the US -- irrespective of their legal status and consistency with WTO rules -- are not rights under any of the WTO agreements covered by the DSU. The rights thus alleged are derived from bilateral agreements that cannot be properly enforced on their own in WTO dispute settlement. If the EC were to agree that it would grant these independent rights, i.e., that 11,500 tonnes of US HQB could be exported to the EC once the ban is lifted, we could be required to take this autonomous quota amount into account in our estimates as a matter of fact, provided that these rights are consistent with WTO rules. However, the EC contests that the US has such rights. Moreover, the legal validity and enforceability of such rights and bilateral agreements invoked by the US is questionable for the following reasons.

51. Both bilateral agreements were concluded before the relevant EC schedules that explicitly allocated the quota to both the US and Canada. Moreover, both bilateral agreements were negotiated in a GATT/WTO context where concessions are normally negotiated first on a bilateral level and then "multilateralized" through binding schedules. Once this is done, the bilateral agreement, as a result of which the concession is granted, is superseded by the multilateral schedule. Both the bilateral agreements and the relevant parts of the EC schedule deal with the same subject-matter. Considering the GATT/WTO specific circumstances of their conclusion, the bilateral agreements would appear to be incompatible with the multilateral EC schedule -- a quota allocated to only one Member as opposed to a quota allocated to two Members. On these grounds we consider it appropriate to conclude that

---

39 The tariff classification for this category in respect of which the US alleges trade impairment is: HS 0201 (Meat of Bovine Animals, Fresh or Chilled), HS 0202 (Meat of Bovine Animals, Frozen), HS 0206 1095 (Edible Offal of Bovine Animals, Fresh or Chilled, Thick Skirt and Thin Skirt) and HS 0206 2991 (Edible Offal of Bovine Animals, Frozen, Thick Skirt and Thin Skirt).

40 Letter dated 28 July 1981 by Mr. Villain, then Director-General of Agriculture at the EC Commission, to the US Agricultural Counsellor in Brussels, US Exhibit 19.

41 In this respect see the Appellate Body Report on EC – Measures Affecting the Importation of Certain Poultry Products, adopted on 23 July 1998, WT/DS69/AB/R, paras. 77-85. Of course, even though the bilateral agreements themselves cannot be enforced through the DSU, the performance of these agreements could give rise to a valid claim under WTO rules.
the EC schedule, in accordance with Article 30 of the Vienna Convention on the Law of Treaties\(^{42}\), has superseded and prevails over the bilateral agreements.

52. Recalling that, as outlined above in paragraph 10, the US -- as the party that invoked the bilateral agreements -- bears the burden of proving to the arbitrators that these bilateral agreements exist and are enforceable, we consider that the US has not met its burden. We cannot, therefore, take any autonomous quota rights into account when estimating US HQB exports to the EC but for the ban.

53. On these grounds, we consider that a ceiling of 11,500 tonnes is applicable in respect of the combined US and Canadian exports of HQB to the EC.

2. Estimated utilisation of the 11,500 tonnes tariff quota

54. The US submits that the entire tariff quota would be filled but for the ban. The EC, referring to the fact that the tariff quota has never been filled in the past - not even before the ban - argues that the tariff quota would only be filled to the same extent as before the ban (1986-1988 average).

55. In this respect, we considered, in particular, the following elements: (1) the fact that the tariff quota represents only a negligible portion of total EC beef consumption; (2) the fact that all HQB tariff quotas allocated by the EC to other countries such as Argentina, Australia, Brazil, New Zealand and Uruguay have over the years been fully or almost fully utilised; and (3) the high production and export capacities of the US beef industry. On these grounds, we can reasonably expect that under the "counterfactual" the tariff quota would be 100 per cent filled.

3. Estimated tariff quota share of the US

56. Given our conclusions above, we next have to estimate the US share in the 11,500 tonnes tariff quota.

57. Our approach here is based on the US' and Canada's past performance with respect to HQB exports as well as beef exports in general. We considered, in particular, the following elements. Firstly, the proportions of US and Canadian HQB exports in third country export markets, such as Japan, Korea, Switzerland and Taiwan. The US share of HQB exports has been above 94 per cent in these markets in the 1996-98 period, except in Taiwan where US exports averaged 90 per cent over the last three years. Secondly, the general proportions of US and Canadian beef exports. The US share of North American beef exports to the rest of the world was 96 per cent on average in 1996-98, although the US share, including US-Canada trade, was approximately 70 per cent. Thirdly, the proportions of US and Canadian beef exports to the EC (a 94 per cent share for the US in 1998). Fourthly, changes in the relative proportions of US and Canadian exports. The general tendency in both the EC and third country markets in recent years has been an increase of Canada's share at the expense of the US.

58. Taking these elements into account, we consider a US share of 92 per cent a reasonable estimate.

\(^{42}\) Article 30, entitled "Application of successive treaties relating to the same subject-matter", in its paragraph 3, states: "When all the parties to the earlier treaty are parties also to the later treaty but the earlier treaty is not terminated or suspended in operation under article 59, the earlier treaty applies only to the extent that its provisions are compatible with those of the later treaty".
4. **Estimated prices under the counterfactual**

59. In this respect, we consider the US suggestion of US$ 5,342 per tonne (f.o.b.) to be reasonable.

60. We note that this price is higher than current unit values of US beef entering the EC. A substantial share of current US exports are whole carcasses, not treated with hormones. We consider it reasonable to expect that without the hormone ban a considerable share of the tariff quota would be filled with high quality hormone-treated cuts to maximize the trade value of the tariff quota. If the ban were lifted, an increase in price could thus be reasonably expected.

61. Consequently, we calculate the total value of US HQB exports to the EC under the counterfactual to be US$ 56,518,360.

5. **Estimated value of "current exports" to be deducted**

62. As noted earlier\(^43\), to estimate the nullification and impairment caused by the hormone ban we have to deduct from the total value of US exports under the counterfactual, the current value of US exports of non-hormone treated HQB.

63. The EC suggests that US exports in the 1996-1998 period are representative for exports that would occur in the future with the ban in place. The main US argument in this respect was dealt with in paragraphs 45-47. We decided to reduce current US exports by 25 per cent. In other words, we assumed that only 75 per cent of current exports would enter the market in the future due to the 100 per cent test and hold procedure recently imposed by the EC. As a base from which to deduct these 25 per cent we follow the EC suggestion and use the average annual 1996-1998 exports.

64. On this basis we calculate the value of current exports to be deducted from the estimated exports under the counterfactual to be US$ 23,853,584.

6. **Estimate of nullification and impairment in respect of HQB**

65. Following our estimates developed above, we calculate the total amount of nullification and impairment caused by the hormone ban on US exports of HQB to be **US$ 32,664,776**.

F. **NULLIFICATION AND IMPAIRMENT IN RESPECT OF EDIBLE BEEF OFFAL**

1. **Estimated volume of US EBO exports under the "counterfactual"**

66. Unlike the EC import market for HQB, US exports of EBO to the EC are subject to tariffs only, not to a tariff quota\(^44\). The tariff levied on imports of EBO – according to the US, 4 per cent *ad valorem* -- is also much lower than the in-quota tariff for HQB (20 per cent *ad valorem*). Therefore, a different methodology to calculate trade impairment in respect of EBO is warranted. In respect of HQB, we could assume that imports but for the ban would be subject to a ceiling of 11,500 tonnes. In

\(^43\) See paragraph 43.

\(^44\) The tariff classification for this category in respect of which the US alleges trade impairment is: HS 020610 (Offal of Bovine Animals, Edible, Fresh or Chilled), HS 020621 (Tongue of Bovine Animals, Edible, Frozen), HS 020622 (Livers of Bovine Animals, Edible, Frozen), HS 020629 (Offal of Bovine Animals, Not Elsewhere Specified, Edible, Frozen, e.g., Hearts, Kidneys, Sweetbreads), but excluding HS 0206 1095 and 0206 2991, tariff items that are covered by the HQB tariff quota (see footnote 39 above).
respect of EBO, one of the major tasks is to estimate potential exports of US EBO in the absence of the ban. The US and EC arguments in this respect are summarized above.35

67. We consider average US exports of EBO in 1986-1988 to be a representative starting-point for our calculations of total exports under the counterfactual, i.e. assuming the ban would have been lifted on 13 May 1999. However, it is clear to us that these pre-ban figures reflect a market situation that is quite different from the current market situation for EBO in the EC. We must therefore make certain adjustments.

68. We consider it reasonable to make a downward adjustment to the pre-ban exports to take account of the demonstrated decline in “apparent consumption” of EBO in the EC market since the imposition of the ban.46 At the same time, we note that part of this decline in apparent consumption was caused by the hormone ban itself. Data for 1988 compared to 1989 - when the ban was first imposed - show a sharp drop in EBO imports. In order to take account of this decline related to the ban, we calculated the absolute difference between (i) the trend import volumes for the years 1989-91 (estimated by way of an extrapolation of the actual import volumes for the period 1981-88) and (ii) the actual import volumes for the years 1989-91. The annual average of this difference was then added to actual imports in each of the years 1995-97. The apparent consumption of edible beef offal for 1995-97 was calculated on the basis of these adjusted import figures. As a result of this approach, we estimate the downward adjustment factor for apparent consumption to be 18.4 per cent. We assume that the volume of US exports to the EC but for the ban would have declined in proportion to the decline in apparent consumption.

69. On this basis, we estimate annual US exports of EBO in case the ban had been lifted on 13 May 1999 to be 53,503 tonnes.

2. Estimated price of US EBO exports under the "counterfactual"

70. We consider the US suggestion of an export price of US$ 1,689 per tonne (f.o.b.) to be reasonable. This price is lower than the average 1996-1998 unit price of current US exports with the ban in place (US$ 2,420 per tonne). This is so because EBO prices would be expected to fall should the ban be lifted, as a result of an increased volume of imports. The EC uses a 1986-1988 average price of US$ 1684 per tonne, a price very similar to the US suggestion we use.

71. Consequently, we calculate the total value of US EBO exports to the EC under the counterfactual to be US$ 90,367,391.

3. Estimated value of "current exports" to be deducted

72. As noted earlier47, to estimate the nullification and impairment caused by the hormone ban we have to deduct from the total value of exports under the counterfactual, the current value of US exports of EBO.

73. The EC suggests that US exports in the 1996-1998 period are representative for exports that would occur in the future with the ban in place. The main US argument in this respect was dealt with in paragraphs 45-47. We decided to reduce current US exports by 25 per cent. In other words, we assumed that only 75 per cent of current exports would enter the market in the future due to the

---

35 See Section III.A of this report.
46 The consumption figures we used were calculated following the balance sheet approach, i.e. consumption equals production plus imports minus exports, assuming no change in stocks. This is referred to as the "apparent consumption".
47 See paragraph 43.
100 per cent test and hold procedure recently imposed by the EC. As a base from which to deduct these 25 per cent we follow the EC suggestion and use the average annual 1996-1998 exports.

74. On this basis we calculate the value of current exports to be deducted from the estimated exports under the counterfactual to be US$ 1,845,569.

4. Adjustment requested by the EC for US EBO exports used not for human consumption but in pet food

75. All data provided by the parties in respect of EBO - on the basis of which both the estimated total value of US exports but for the ban and current US exports with the ban in place, were calculated - do not distinguish between EBO for human consumption and EBO for pet food. In contrast, the US claim of trade impairment caused by the ban only extends to EBO for human consumption, not that used for pet food. This is so because the hormone ban itself does not apply to - and therefore does not hamper trade in - EBO used for pet food. It is difficult to estimate how much of the EBO ends up in pet food since both categories of EBO are imported under the same tariff heading. The EC estimates the share of EBO imports from the US that is used in pet food at 31.7 per cent. The US agrees that 5 per cent of all EBO is used in pet food.\(^48\) Neither party has provided documentary evidence in support of these figures. In particular, the EC – the party claiming that a deduction should be made because of EBO use in pet food – has not substantiated its allegation of 31.7 per cent. For these reasons, we made an adjustment of 5 per cent only.

5. The US claim in respect of exports that would have resulted from foregone marketing campaigns

76. The US submits that additional US exports of EBO to the EC – worth US$ 20.1 million -- would have been realized from US marketing and promotional efforts that would have taken place but for the hormone ban. These foregone expenditures, according to the US, a minimum average of US$ 1.189 million each year, would allegedly have continued after 1989 – the year the ban was imposed -- under US government-funded marketing programmes of proven success.

77. We decided not to take these allegedly lost exports into account. As noted in paragraph 38, the estimate we have to make is based on what would have happened had the hormone ban been withdrawn on 13 May 1999. We cannot assume, under the "counterfactual", that the ban was never imposed and, therefore, that US marketing efforts would have continued after 1989 until now. Moreover, even assuming that US marketing efforts would have resumed had the ban been lifted on 13 May 1999, we consider the causal link between the hormone ban and the allegedly lost exports since 13 May 1999 to be too remote. Taking such lost exports into account would, in our view, be too speculative.\(^49\)

6. Estimate of nullification and impairment in respect of EBO

78. Following our estimates developed above, we calculate the total amount of nullification and impairment caused by the hormone ban on US exports of EBO to be \textbf{US$ 84,095,731}.

G. TOTAL NULLIFICATION AND IMPAIRMENT

79. As a result of both calculations developed above, we estimate the total nullification and impairment caused by the EC hormone ban on US exports of beef and beef products at \textbf{US$ 116.8 million}. The elements of this estimate are reproduced in Annex I to this report.

\(^{48}\) US first submission, footnote 37.

\(^{49}\) See paragraph 41.
IV. ASSESSMENT OF THE PROPOSED LEVEL OF SUSPENSION OF CONCESSIONS

80. In reply to questions by the arbitrators, the US submitted for each product on the proposed suspension list the average import value of EC exports to the US over a three-year period (1996-1998). We consider the calculations thus provided to be reasonable. They are reproduced in Annex II to this report.

81. As noted in paragraph 21 above, the US is free to pick products from the proposed list as long as the total trade value is lower than or equivalent to the amount of nullification and impairment we have found, namely US$ 116.8 million. In this respect, we also refer to paragraph 22.

82. We received confirmation from the US that the actual level of suspension once implemented will be equivalent to the level of nullification and impairment we have found. All we can do at this stage is to encourage the US to stand by this confirmation and to abide by Article 22.4 of the DSU. In the event of a future dispute on this issue, we note that the EC could start normal -- or arguably even expedited -- DSU procedures challenging the consistency of the level of US suspension with Article 22.4.

V. AWARD OF THE ARBITRATORS

83. For the reasons set out above, the arbitrators determine that the level of nullification or impairment suffered by the United States in the matter European Communities – Measures Concerning Meat and Meat Products (Hormones) is US$ 116.8 million per year.

84. Accordingly, the arbitrators decide that the suspension by the United States of the application to the European Communities and its member States of tariff concessions and related obligations under GATT 1994 covering trade in a maximum amount of US$ 116.8 million per year would be consistent with Article 22.4 of the DSU.
## ANNEX I

<table>
<thead>
<tr>
<th></th>
<th>High quality beef</th>
<th>Edible beef offal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US$ 32,664,776</td>
<td>US$ 84,095,731</td>
</tr>
</tbody>
</table>

### High quality beef:

\[
= [(11,500 \times 1) \times 0.92 \times 5,342] - (31,804,779 \times 0.75)
\]

<table>
<thead>
<tr>
<th>TRQ</th>
<th>TRQ fill</th>
<th>US share</th>
<th>price/t (f.o.b.)</th>
<th>current exports (f.o.b.)</th>
<th>25% reduction for &quot;test &amp; hold&quot;</th>
</tr>
</thead>
</table>

### Edible beef offal:

\[
= [(65,568 \times 0.816 \times 1,689) - (2,460,759 \times 0.75)] \times 0.95
\]

<table>
<thead>
<tr>
<th>av. 86-88 exports</th>
<th>price/t (f.o.b.)</th>
<th>current exports (f.o.b.)</th>
<th>25% reduction</th>
<th>5% reduction for &quot;test &amp; hold&quot;</th>
<th>pet food usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.4% adjustment for decline in consumption</td>
<td>but for the ban</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Total: High quality beef and Edible beef offal

US$ 116.8 million
### ANNEX II

**List of products for suspension of concessions proposed by the US**

<table>
<thead>
<tr>
<th>Tariff Item or Heading</th>
<th>Description</th>
<th>Average import value (1996-98) '000 US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0201</td>
<td>Meat of bovine animals, fresh or chilled</td>
<td>1,210</td>
</tr>
<tr>
<td>0202</td>
<td>Meat of bovine animals, frozen</td>
<td>317</td>
</tr>
<tr>
<td>0203</td>
<td>Meat of swine (pork), fresh, chilled or frozen</td>
<td>119,677</td>
</tr>
<tr>
<td>0206</td>
<td>Edible offal of bovine animals, swine, sheep, goats, horses etc., fresh, chilled or frozen</td>
<td>1,588</td>
</tr>
<tr>
<td>0207</td>
<td>Meat and edible offal of poultry (chickens, ducks, geese, turkeys and guineas), fresh, chilled or frozen</td>
<td>5</td>
</tr>
<tr>
<td>02101100</td>
<td>Hams, shoulders and cuts thereof with bone in, salted, in brine, dried or smoked</td>
<td>2,469</td>
</tr>
<tr>
<td>02101200</td>
<td>Bellies (streaky) and cuts thereof of swine, salted, in brine, dried or smoked</td>
<td>546</td>
</tr>
<tr>
<td>02102000</td>
<td>Meat of bovine animals, salted, in brine, dried or smoked</td>
<td>21</td>
</tr>
<tr>
<td>02109020</td>
<td>Meat and edible offal of chickens, ducks, geese, turkeys and guineas, salted, in brine, dried or smoked; flour and meal of these animals</td>
<td>5</td>
</tr>
<tr>
<td>02109040</td>
<td>Meat and edible offal nesoi, salted, in brine, dried or smoked; flour and meal, nesoi</td>
<td>1</td>
</tr>
<tr>
<td>04064020</td>
<td>Roquefort cheese in original loaves, not grated or powdered, not processed</td>
<td>3,780</td>
</tr>
<tr>
<td>04064040</td>
<td>Roquefort cheese, other than in original loaves, not grated or powdered, not processed</td>
<td>489</td>
</tr>
<tr>
<td>05040000</td>
<td>Guts, bladders and stomachs of animals (other than fish), whole and pieces thereof</td>
<td>28,209</td>
</tr>
<tr>
<td>06039000</td>
<td>Cut flowers and flower buds, suitable for bouquets or ornamental purposes, dried, dyed, bleached, impregnated or otherwise prepared</td>
<td>3,776</td>
</tr>
<tr>
<td>06049100</td>
<td>Foliage, branches and other parts of plants without flowers or flower buds, and grasses, suitable for bouquets or ornamental purposes, fresh</td>
<td>3,614</td>
</tr>
<tr>
<td>06049930</td>
<td>Foliage, branches, parts of plants without flowers or buds, and grasses, suitable for bouquets or ornamental purposes, dried or bleached</td>
<td>3,038</td>
</tr>
<tr>
<td>07020020</td>
<td>Tomatoes, fresh or chilled, entered during Mar.1 to July 14, or the period Sept.1 to Nov.14 in any year</td>
<td>38,926</td>
</tr>
</tbody>
</table>

---

50 See WT/DS26/19 and US answer to arbitrators' question 10.

51 Note by the US: “The product descriptions supplied below for the items of the Harmonized Tariff Schedule of the United States ("HTS") are for the convenience of the reader and are not intended to delimit in any way the scope of the products that would be subject to increased duties.”
<table>
<thead>
<tr>
<th>Tariff Item or Heading</th>
<th>Description</th>
<th>Average import value (1996-98) '000 US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>07020040</td>
<td>Tomatoes, fresh or chilled, entered during July 15 to Aug. 31 in any year</td>
<td>9,597</td>
</tr>
<tr>
<td>07020060</td>
<td>Tomatoes, fresh or chilled, entered from Nov. 15 thru the last day of Feb. of the following year</td>
<td>17,374</td>
</tr>
<tr>
<td>07031040</td>
<td>Onions, other than onion sets or pearl onions not over 16 mm in diameter, and shallots, fresh or chilled</td>
<td>5,505</td>
</tr>
<tr>
<td>07095200</td>
<td>Truffles, fresh or chilled</td>
<td>3,219</td>
</tr>
<tr>
<td>07129010</td>
<td>Dried carrots, whole, cut, sliced, broken or in powder, but not further prepared</td>
<td>3,010</td>
</tr>
<tr>
<td>07129074 and 07129078</td>
<td>Dried tomatoes, in powder</td>
<td>5,137</td>
</tr>
<tr>
<td></td>
<td>Dried tomatoes, whole, cut, sliced or broken but not further prepared</td>
<td></td>
</tr>
<tr>
<td>08024000</td>
<td>Chestnuts, fresh or dried, shelled or in shell</td>
<td>9,098</td>
</tr>
<tr>
<td>09042020</td>
<td>Paprika, dried or crushed or ground</td>
<td>10,252</td>
</tr>
<tr>
<td>10040000</td>
<td>Oats</td>
<td>36,477</td>
</tr>
<tr>
<td>11041200</td>
<td>Rolled or flaked grains of oats</td>
<td>513</td>
</tr>
<tr>
<td>11042200</td>
<td>Grains of oats, hulled, pearled, clipped, sliced, kibbled or otherwise worked, but not rolled or flaked</td>
<td>1,024</td>
</tr>
<tr>
<td>15059000</td>
<td>Fatty substances derived from wool grease (including lanolin)</td>
<td>4,853</td>
</tr>
<tr>
<td>1601</td>
<td>Sausages and similar products, of meat, meat offal or blood; food preparations based on these products</td>
<td>5,952</td>
</tr>
<tr>
<td>16021000</td>
<td>Homogenized preparations of meat, meat offal or blood, nesoi</td>
<td>2</td>
</tr>
<tr>
<td>16022020</td>
<td>Prepared or preserved liver of goose</td>
<td>1,072</td>
</tr>
<tr>
<td>16022040</td>
<td>Prepared or preserved liver of any animal other than of goose</td>
<td>347</td>
</tr>
<tr>
<td>16023100</td>
<td>Prepared or preserved meat or meat offal of turkeys, nesoi</td>
<td>4</td>
</tr>
<tr>
<td>16023200</td>
<td>Prepared or preserved meat or meat offal of chickens, nesoi</td>
<td>0</td>
</tr>
<tr>
<td>16023900</td>
<td>Prepared or preserved meat or meat offal of ducks, geese or guineas, nesoi</td>
<td>26</td>
</tr>
<tr>
<td>16024110</td>
<td>Prepared or preserved pork ham and cuts thereof, containing cereals or vegetables</td>
<td>0</td>
</tr>
<tr>
<td>16024120</td>
<td>Pork hams and cuts thereof, not containing cereals or vegetables, boned and cooked and packed in airtight containers</td>
<td>56,437</td>
</tr>
<tr>
<td>16024190</td>
<td>Prepared or preserved pork hams and cuts thereof, not containing cereals or vegetables, nesoi</td>
<td>590</td>
</tr>
<tr>
<td>16024220</td>
<td>Pork shoulders and cuts thereof, boned and cooked and packed in airtight containers</td>
<td>27,101</td>
</tr>
<tr>
<td>16024240</td>
<td>Prepared or preserved pork shoulders and cuts thereof, other than boned and cooked and packed in airtight containers</td>
<td>57</td>
</tr>
<tr>
<td>16024910</td>
<td>Prepared or preserved pork offal, including mixtures</td>
<td>16</td>
</tr>
<tr>
<td>16024920</td>
<td>Pork other than ham and shoulder and cuts thereof, not containing cereals or vegetables, boned and cooked and packed in airtight containers</td>
<td>6,437</td>
</tr>
</tbody>
</table>

52 By 1999, "Tomatoes, dried" (tariff heading 07129075) was sub-divided in the two current sub-headings (07129074 and 07129078). For the new two sub-headings no separate 1996-1998 import data is available. The figure in this table represents the average 1996-1998 import value of the former tariff heading 071129075.
<table>
<thead>
<tr>
<th>Tariff Item or Heading</th>
<th>Description</th>
<th>Average import value (1996-98) '000 US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>16024940</td>
<td>Prepared or preserved pork, not containing cereals or vegetables, nesoi</td>
<td>3,466</td>
</tr>
<tr>
<td>16024960</td>
<td>Prepared or preserved pork mixed with beef</td>
<td>4,222</td>
</tr>
<tr>
<td>16024990</td>
<td>Prepared or preserved pork, nesoi</td>
<td>219</td>
</tr>
<tr>
<td>16025005</td>
<td>Prepared or preserved offal of bovine animals</td>
<td>0</td>
</tr>
<tr>
<td>16025009</td>
<td>Prepared or preserved meat of bovine animals, cured or pickled, not containing cereals or vegetables</td>
<td>47</td>
</tr>
<tr>
<td>16025010</td>
<td>Corned beef in airtight containers</td>
<td>36</td>
</tr>
<tr>
<td>16025020</td>
<td>Prepared or preserved beef in airtight containers, other than corned beef, not containing cereals or vegetables</td>
<td>118</td>
</tr>
<tr>
<td>16025060</td>
<td>Prepared or preserved meat of bovine animals, not containing cereals or vegetables, nesoi</td>
<td>0</td>
</tr>
<tr>
<td>16025090</td>
<td>Prepared or preserved meat of bovine animals, containing cereals or vegetables</td>
<td>12</td>
</tr>
<tr>
<td>17041000</td>
<td>Chewing gum, not containing cocoa, whether or not sugar-coated</td>
<td>4,556</td>
</tr>
<tr>
<td>17049025</td>
<td>Sugar confectionary cough drops, not containing cocoa</td>
<td>56,577</td>
</tr>
<tr>
<td>18063100</td>
<td>Chocolate and other cocoa preparations, in blocks, slabs or bars, filled, not in bulk</td>
<td>17,853</td>
</tr>
<tr>
<td>19054000</td>
<td>Rusks, toasted bread and similar toasted products</td>
<td>9,800</td>
</tr>
<tr>
<td>20021000</td>
<td>Tomatoes, whole or in pieces, prepared or preserved otherwise than by vinegar or acetic acid</td>
<td>18,876</td>
</tr>
<tr>
<td>20029040 and 20029080</td>
<td>Tomatoes, in powder, prepared or preserved otherwise than by vinegar or acetic acid</td>
<td>11,290(^{51})</td>
</tr>
<tr>
<td></td>
<td>Tomatoes (including paste and puree) prepared or preserved otherwise than by vinegar or acetic acid, nesoi</td>
<td></td>
</tr>
<tr>
<td>20079905</td>
<td>Lingonberry and raspberry jams</td>
<td>3,063</td>
</tr>
<tr>
<td>20083042</td>
<td>Satsumas, prepared or preserved, in airtight containers, aggregate quantity n/o 40,000 metric tons/calendar yr</td>
<td>18,934</td>
</tr>
<tr>
<td>20083046</td>
<td>Satsumas, prepared or preserved, in airtight containers, aggregate quantity o/40,000 metric tons/calendar yr</td>
<td>5,163</td>
</tr>
<tr>
<td>20084000</td>
<td>Pears, otherwise prepared or preserved, nesoi</td>
<td>2,841</td>
</tr>
<tr>
<td>20087000</td>
<td>Peaches (excluding nectarines), otherwise prepared or preserved, nesoi</td>
<td>10,994</td>
</tr>
<tr>
<td>20096000</td>
<td>Grape juice (including grape must), concentrated or not concentrated</td>
<td>8,669</td>
</tr>
<tr>
<td>20098060</td>
<td>Juice of any other single fruit, nesoi, (including cherries and berries), concentrated or not concentrated</td>
<td>21,360</td>
</tr>
</tbody>
</table>

\(^{51}\) By 1999 “Tomato paste” (tariff heading 20029000) was sub-divided in the two current sub-headings (20029040 and 20029080). Since the US provided 1996-98 import value data only for one of the two current sub-headings, notably sub-heading 20029080 (value: '000 US$ 1,687), the above represents the average import value 1996-98 for the former tariff heading 20029000. The amount of '000 US$ 918,073 provided by the US in Exhibit 35 includes the import value for sub-heading 20029080 in addition to the import value for the tariff heading 20029000.
<table>
<thead>
<tr>
<th>Tariff Item or Heading&lt;sup&gt;51&lt;/sup&gt;</th>
<th>Description</th>
<th>Average import value (1996-98) '000 US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>20099040</td>
<td>Mixtures of fruit juices, or mixtures of vegetable and fruit juices, concentrated or not concentrated</td>
<td>6,546</td>
</tr>
<tr>
<td>21013000</td>
<td>Roasted chicory and other roasted coffee substitutes and extracts, essences and concentrates thereof</td>
<td>3,935</td>
</tr>
<tr>
<td>21033040</td>
<td>Prepared mustard</td>
<td>5,462</td>
</tr>
<tr>
<td>121041000</td>
<td>Soups and broths and preparations thereof</td>
<td>5,748</td>
</tr>
<tr>
<td>22011000</td>
<td>Mineral waters and aerated waters, not containing added sugar or other sweetening matter nor flavoured</td>
<td>125,261</td>
</tr>
<tr>
<td>23099010</td>
<td>Mixed feed or mixed feed ingredients used in animal feeding</td>
<td>44,024</td>
</tr>
<tr>
<td>35061050</td>
<td>Products suitable for use as glues or adhesives, nesoi, not exceeding 1 kg, put up for retail sale</td>
<td>26,299</td>
</tr>
<tr>
<td>55041000</td>
<td>Artificial staple fibers, not carded, combed or otherwise processed for spinning, of viscose rayon</td>
<td>25,539</td>
</tr>
<tr>
<td>55101100</td>
<td>Yarn (other than sewing thread) containing 85% or more by weight of artificial staple fibers, singles, not put up for retail sale</td>
<td>30,462</td>
</tr>
<tr>
<td>85102000</td>
<td>Hair clippers, with self-contained electric motor</td>
<td>15,176</td>
</tr>
<tr>
<td>87112000</td>
<td>Motorcycles (incl. mopeds) and cycles, fitted w/ recip. internal-combustion piston engine w/capacity o/50 but n/o 250 cc</td>
<td>7,914</td>
</tr>
<tr>
<td>87113000</td>
<td>Motorcycles (incl. mopeds) and cycles, fitted w/ recip. internal-combustion piston engine w/capacity o/250 but n/o 500 cc</td>
<td>10,152</td>
</tr>
</tbody>
</table>