The first North America, Central America and Caribbean Track and Field Coaches Association Congress
Ocho Rios, Jamaica
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Bill Glad

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A total of 84 coaches attended the first Congress of the North America, Central America and Caribbean Track and Field Coaches Association (NACACTFCA) which was held in Ocho Rios, Jamaica from the 17th through to the 20th of October 1991. The Congress was staged under the auspices of the Jamaica Athletic Association and the North America, Central America and Caribbean Athletic Association. The themes of the Congress were the Sprint, Endurance, Hurdle and Jumping Events.

NACACTFCA, which is modelled on the European Athletic Coaches Association, is the first regional coaches association to be formed and to begin activities since the IAAF Development Commission announced its policy to encourage and support these bodies (see NSA Volume IV, issue 4). Of the participants in this initial NACACTFCA activity, 33 were from Jamaica; 25 were from other countries in the Caribbean; and 26 were from the USA, Canada and Europe.

In the Congress Opening Ceremony welcome speeches were made by NACACTFCA President Victor Lopez, President of the Jamaica AAA Mr Teddy
McCook and other national dignitaries. Bill Glad, representing the IAAF Development Department, spoke on The IAAF’s Development Strategy and Coaches Education and Certification System. The Keynote Speaker was IAAF Council Member Dr Amadeo Francis who spoke on The Coach of the '90s.

Following the opening ceremonies, 10 presentations were made by the invited speakers over the 2 days. Brief summaries of these presentations are given below.

Donald Quarrie (JAM) - Training Methodology and Periodization for the High Performance Sprinter

Olympic gold medallist Don Quarrie, who now works as a coach and athletics consultant, drew on his experiences to discuss a variety of issues relating to the sprint events. These included nutrition; warm up and stretching; technical aspects; the importance of drills during all periods of the year; and the role of the coach. He also gave a practical demonstration of various exercises and technical points.

Emphasizing the fact that many athletes have trouble adapting to new situations, particularly changes in environment, Quarrie said that coaches must bring out talent by correctly guiding the athlete’s mental and physical preparation. He gave examples for working on an athlete’s focus (relaxation, visualization, mental preparation); technique (drills - stressing a high knee lift - running in front of a mirror; teaching proper technique to young athletes); and enjoyment (group training, goal setting, baton practice).

In the question period at the end of the presentation, Quarrie said that part of the reason for Jamaica’s past success in the sprint events lay in the fact that Jamaican children are not as sedentary as children in the USA or European countries. Daily unstructured running, skipping, tree climbing and other ‘play’ activities build up a valuable foundation of strength, better than an early training programme which might lead to ‘burn-out’. Responding to a question about strength training, he added that during his own athletic career he had rarely done weight training. Instead, he preferred to rely on a daily regime of press ups and sit ups which he also felt contributed to his self-discipline.

Brent McFarlane (CAN) - A Training System for the Hurdle Events

Canadian National Hurdles Coach Brent McFarlane, author of the highly regarded book The Science of Hurdling, outlined the aspects and principles of the training system which he uses for hurdlers as well as sprinters. He covered the elements of physical preparation which he called ‘the 5 Ss’: Suppleness, Strength, Speed, Stamina and Skill. For each of these he identified component elements and specific training means which can be used. He pointed out that, as hurdlers are essentially sprinters, young athletes should be trained for speed first and then introduced to the hurdles. He also emphasized the importance of lower leg strength and stability for hurdlers.

McFarlane then discussed such aspects as warm up, fault analysis and correction, skill development and periodization. He said that it was important to adapt training to the athlete’s environment without deviation from fundamental principles in order to achieve overall objectives. He also spoke about the motivation of athletes, listing techniques such as progress charts, training diaries, objectives and written descriptions of exercises as means of maintaining interest in the training process. His presentation included a practical session in which the participants were coached in the basic elements of cor-
rect running technique and in the identification of faults.

**Dr Doug Clement (CAN) - The Transition from 400 metres to 800 metres: Can Every Athlete Do It?**

Dr Doug Clement, a respected expert on sports medicine and a Canadian National Middle Distance Coach, addressed the issues involved in converting fairly successful 400 metres specialists to the 800 metres. Drawing on his experiences with a number of Canada’s top male and female athletes, he stated that the key to such a transition is to avoid moving the training too far from the athlete’s particular strengths. Emphasizing over-distance work in the training programme while forgetting the elements which had made the 400 metres runner successful would only tend to teach that athlete to run slower. As a practical example he contrasted the characteristics of athletes Charmaine Crooks and Simon Hoogewerf; and, based on their differences, the separate elements he incorporated into their training programmes.

Speaking about the development of a training programme, Clement emphasized the importance of recovery and control of intensity. He said that he used a computerized running tables points system to monitor intensities of training systems. He claimed that he liked to use what he called a ‘Brazilian’ circuit. This contains roughly 10 stations for activities such as bounding, press ups and ‘burpees’ with about 100m between stations. The activities can be adjusted to suit the athlete’s particular needs. During early stages of the training cycle, sessions would include a series of runs over the circuit, such as 1000m - 1600m - 1000m at about 75% effort. As the athlete moves into the specific preparation phase the distance between the stations would be reduced and intensity of both the individual activities and the circuit would be increased.

**Loren Seagrave (USA) - Integration of Specific Strength and Power Training with Speed Development Training for Potentiation of Maximum Velocity and Acceleration**

Loren Seagrave has coached a number of world-class athletes and has also developed audio-visual and technical tools to assist coaches in their work. In this very thorough presentation he reviewed the main aspects of a training programme, specific terminology and the concept of momentum loading in plyometric training. The discussion which followed was concerned with the system of ‘contrast training’ for neuromuscular, elastic strength, and other technical aspects of sprinting and hurdling. He explained that contrast training is comprised of the elements of resistance, assistance and ‘the real deal’.

Under resistance Seagrave said the most valuable forms of training involve a plyometric element to give the athlete the ability to produce a greater force output. He said that sprinting is, in fact, the most specific plyometric for sprinting. He then detailed the effects, advantages and disadvantages of other training forms such as sprinting against the wind; uphill sprinting; sprinting while towing various load forms; weighted sprinting; and sprinting on sand or other soft surfaces.

Moving on to assistance training Seagrave acknowledged the controversies among coaches surrounding training methods which allow the athlete to attain very high velocities. He said that the effects of this type of training include enhanced nervous system function and intramuscular co-ordination. These can help the athlete to improve the position of the centre of mass in each stride and therefore to take advantage of the surface ‘bounce back’ time. He then covered the effects of such methods as sprinting downhill, sprinting with the wind and towing.
Seagrave explained that 'the real deal' refers to actual sprinting, and is the final phase of the system. He covered specific training methods such as 'in-and-outs' (breath control over segments of a run designed to improve nervous system function), short fly-in sprints and even relay exchange work as components of training in this phase.

**Joe Vigil (USA) - The Rational Basis of Distance Running**

A former USA National Coach, Dr Joe Vigil has also worked as a coaching consultant in a number of countries in both Central and South America. His first presentation at this congress was entitled *Volume-Intensity Relationship in Endurance Training*. After outlining very basic principles of training (stimulation-response-adaptation), he presented a schematic description of the coaching process and relationship between an elite athlete and coach. The bulk of his presentation consisted of a number of charts with volume and intensity information for all levels of 3,000 metres, 5,000 metres and 10,000 metres athletes. These charts included information on longer runs as well as repetition work. His discussion focused on the practical application of these charts in a training programme.

**Mike Conley (USA) - Specific Components and Factors relating to the Training of Horizontal Jumpers**

Mike Conley, an Olympic silver medallist in the Triple Jump who set the best combined Long and Triple Jump distance in history, works as an assistant coach at the University of Arkansas. His presentation was based on his experiences both as an athlete and as a coach. In giving an overview of training for both the horizontal jumps he covered, among others, the aspects of strength, speed, mental preparation and warm up.

Conley stated that all triple jump styles require speed, strength and above all technique. He said that, when choosing a technique, an athlete should consider his own personal strengths, then work to improve his weaknesses, never forgetting technique training. He described examples of the drills and strength exercises which he uses.

In the question period, Conley said he felt that competing in the sprint events while at university had been beneficial to his speed. He also said that his tendency to produce big jumps in the later rounds of competitions owed as much to his lack of proper warm up and mental preparation for early rounds as to his competitiveness.

**Joe Vigil (USA) - Physiological Changes in Training and Performance Capacities Induced by Exposure to Rarefied Atmosphere**

Although there is still controversy regarding the benefits of altitude training, Vigil contends that the advantages outweigh the disadvantages. His second presentation at the congress, based on his 20 years of experience of coaching at 2200m above sea-level, contained a programme of acclimatization and training for distance runners. After describing the effects of altitude on body function, training and performance, he outlined an altitude training programme. This programme contains 3 phases: acclimatization (4-6 days); training (12-14 days); and recovery before return to sea-level (4-5 days). Training activities as well as volume and intensity adjustments for each phase were detailed. After listing the body's compensating mechanisms affected by altitude training, he said that the aim of altitude training was not to prepare directly for competition, but to develop the prerequisites for higher training loads and performance capacity. He concluded by stating that these objectives could be
met through proper training methodology.

Loren Seagrave (USA) - Multi-tract Approach in the Training of Long Sprinters with the Goal of the 400 metres Hurdles

In his second presentation Seagrave started by outlining the task demands and the performance limiting factors of the 400 metres. These include maximum velocity; speed endurance; special endurance; aerobic competency; and biomechanical implications. Turning to the 400 metres Hurdles, he added specific strength and power, and the technical considerations of hurdling. He stated that the main limiting factor is the athlete’s maximum velocity capacity; and that, without ignoring the other necessary aspects of training, this calls for a greater development of speed in the training for both events. He emphasized that, as he had pointed out in his previous presentation, sprinting was a skill and that technical and metabolic systems needed to be trained simultaneously.

Seagrave outlined selection criteria and evaluation procedures for 400m hurdlers, contrasting them with those for 400 metres runners. He then discussed the application of training theory for the 400 metres Hurdles, starting with macrocycles and moving through mesocycles, microcycle development and the daily management of a 400m hurdler. He concluded by discussing the role of the coach in the competitive setting, with emphasis on understanding and reacting to feedback from the athlete.

Doug Clement (CAN) - What can the Coach do to Avoid and Recognize Injuries in his Athletes?

For his second presentation, Dr Clement concentrated on the practicality of dealing with lower extremity injuries, particularly stress fractures and hamstring pulls. He urged extreme caution with suspected stress fractures, particularly in less developed countries where access to proper medical advice could be limited. He said that the athlete with stress fractures or suspected stress fractures should refrain from weight-bearing activities until 2 weeks after all pain has ceased.

Clement outlined a rehabilitation protocol for stress fractures which is based on attaining a goal of 5 min. of jogging on grass within 38 days. The process starts with 30 sec. of jogging and 4 min. 30 sec. of walking on grass; then 48 hours of non-weight-bearing activities to recover and assess the effects. In each succeeding session the jog is increased by 30 sec., while the walking is increased by the same. The 48-hour break is maintained. After 10 sessions the athlete reaches the goal and can begin a training programme again.

Turning to hamstring pulls, Clement stated that these take place during the higher velocity phases of races and that there is no documented case of a healthy athlete tearing a hamstring in the first 30m of a race, the period when maximum strength is exerted. He said that rehabilitation from hamstring injuries will be quicker if the athlete begins strength work almost immediately.

The rehabilitation protocol for hamstring injuries which he outlined starts with 2-3 days of icing. The athlete then runs 10 x 10m segments, turning around after each, with 2 min. rest between 6 sets or a total of 600m. As the discomfort is reduced, the segments are lengthened to 15m, then 20m, the 30m up to 100m (staying within the 600m total), until the athlete is ready to begin normal training again. He said that, even with a significant hamstring injury, it is possible to have a 400 metres runner back in full training in 14-21 days, and a 100 metres runner back in 21-30 days.
Brent McFarlane (CAN) - Strength and Conditioning for the Hurdle Events

McFarlane started his second presentation with a number of definitions and terminology regarding strength, before moving on the role of circuit training in the overall training programme for the hurdle events. He said that circuit training sessions can be adjusted according to the point in the training cycle, and then meet various objectives for each athlete. He said that in order to do this it is important for the coach to have a specific goal in mind for each exercise - such as working the back, legs, abdomen or combinations of these. He also said that the coach must be aware of the various physiological qualities required during the phases of the training cycle. He then gave a number of practical examples for planning circuit routines with specific objectives.

McFarlane also discussed the use of various games to promote co-ordination and flexibility, saying that while this training form is particularly useful when working with youngsters it can also be used with older and more experienced athletes. He also covered the progression from circuit training to weight training within the annual plan for hurdlers.